



UNRISD CLASSICS
V O L . I I I



Revisiting Sustainable Development

Compiled and introduced by **Peter Utting**



UNRISD

United Nations Research Institute for Social Development

Revisiting Sustainable Development

Compiled and introduced by Peter Utting

About the Cover Art

Human Nature by Kuros Zahedi (Iran, 1973) is a 3-D collage that reflects his particular artistic language, addressing “the human being’s connection to the natural world”. According to Zahedi, “we are simultaneously one with nature and separate from it. We apprehend, quantify and classify the world and thereby gain mastery over it, but in a very real way, we are nature.”

Zahedi’s piece consists of a circular disposition of nature elements with a human element in the middle, representing the equilibrium between them. It represents, in his own words, “a tension between the organic elegance of the natural elements and the ordered arrangement of the grid—culture, civilization, a city or agriculture from above—the intellect, empiricism, and categorization.”

The UNRISD *Visions of Change* call encouraged creative thinkers from all over the world to submit artwork illustrating key social development values and themes of equity, sustainability, inclusion, and progressive social change.

About UNRISD

The United Nations Research Institute for Social Development (UNRISD) is an autonomous research institute within the United Nations system that undertakes multidisciplinary research and policy analysis on the social dimensions of contemporary development issues. Through our work, we aim to ensure that social equity, inclusion and justice are central to development thinking, policy and practice.

UNRISD depends entirely on voluntary contributions from national governments, multilateral donors, foundations and other sources. The Institute receives no financial support from the regular budget of the United Nations. In supporting UNRISD, our donors contribute to the crucial but often neglected goal of assuring a diversity of views and voices on development issues at the highest level in the global system.

UNRISD gratefully acknowledges support from its institutional and project donors. For details, see www.unrisd.org/funders.

UNRISD, Palais des Nations
1211 Geneva 10, Switzerland
T: (41 22) 9173020
info@unrisd.org
www.unrisd.org

Book compilation © United Research Institute for Social Development (UNRISD).

Permission to reuse previously published work is gratefully acknowledged as follows: chapters 2, 10 and 16—Zed Books; chapters 3 and 4—Taylor&Francis; chapter 9—Oxford University Press; chapter 11—Wiley Blackwell; chapter 14—Palgrave Macmillan.

For rights of to print, reproduce or translate, apply to UNRISD, Palais des Nations, 1211 Geneva 10, Switzerland.

The designations employed do not imply the expression of any opinion whatsoever on the part of UNRISD concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

ISBN 978-9-290-85094-6

Contents

<i>Acronyms/Abbreviations</i>	v
<i>Foreword: Social Justice with Resource and Ecological Sustainability</i> Jomo Kwame Sundaram	ix
<i>Note from UNRISD Director: UNRISD Classics: Celebrating 50 Years of Research for Social Change,</i> Sarah Cook	xi
<i>Introduction: Sustainable Development Revisited</i> Peter Utting	1
PART I: INTEGRATIVE DEVELOPMENT	15
<i>Chapter 1: Social Development and the International Development Strategy</i> UNRISD (1979)	17
<i>Chapter 2: Why “Elusive” Development?</i> Marshall Wolfe (1996)	27
<i>Chapter 3: Sustainable Development and Popular Participation: A Framework for Analysis</i> Michael Redclift (1992)	43
<i>Chapter 4: Markets in Principle and Practice</i> Cynthia Hewitt de Alcántara (1993)	61
<i>Chapter 5: Rural Development and the Environment: Towards Ecologically and Socially Sustainable Development in Rural Areas</i> Solon Barraclough, Krishna Ghimire and Hans Meliczek (1997)	75
<i>Chapter 6: Breaking the Mould: An Institutionalist Political Economy Alternative to the Neoliberal Theory of the Market and the State</i> Ha-Joon Chang (2001)	89
<i>Chapter 7: Information Technology, Globalization and Social Development</i> Manuel Castells (1999)	111
<i>Chapter 8: Social Dimensions of Green Economy</i> UNRISD (2012)	125
PART II: THE ENVIRONMENT AND RURAL DEVELOPMENT	137
<i>Chapter 9: Seeds of Plenty, Seeds of Want: Social and Economic Implications of the Green Revolution</i> Andrew Pearse (1980)	139
<i>Chapter 10: The New Frontier: Farmers’ Response to Land Degradation—A West African Study</i> Kojo Sebastian Amanor (1994)	159
<i>Chapter 11: Ecological Conflicts and the Environmental Movement in India</i> Madhav Gadgil and Ramachandra Guha (1994)	187
<i>Chapter 12: Gender, Environment and Poverty Interlinks in Rural India: Regional Variations and Temporal Shifts, 1971–1991</i> Bina Agarwal (1995)	217
<i>Chapter 13: Parks, People and Professionals: Putting “Participation” into Protected-Area Management</i> Michel P. Pimbert and Jules N. Pretty (1997)	239
<i>Chapter 14: Constraints and Opportunities for Sustainable Forest Use</i> Solon L. Barraclough and Krishna B. Ghimire (1995)	267
<i>Chapter 15: Biodiversity and Human Welfare</i> Piers Blaikie and Sally Jeanrenaud (1996)	291
<i>Chapter 16: Corporate Environmentalism in the South: Assessing the Limits and Prospects</i> Peter Utting (2002)	357
<i>Chapter 17: Unsustainable Development: The Philippine Experience</i> Karina Constantino-David (2004)	383

Tables

Table 3.1: Conflicts over resource management: Forms of resistance	54
Table 12.2: Average annual income derived from village commons by poor and non-poor households in different regions (1982–1985)	225
Table 12.3: Time taken and distance travelled for firewood collection in different regions	228
Table 13.1: Biodiversity conservation and natural resource management paradigms: Contrasting blueprint and learning-process approaches	244
Table 13.2: A typology of participation	249
Table 14.1: Total and agricultural population changes 1975–1988 per capita GNP 1987 and annual rates of deforestation 1981–1985	274
Table 15.1: Rates of conversion of natural habitat to agriculture	295
Table 15.2: Estimates of extinctions of species per decade	296
Table 15.3: Interest groups and stakeholders in grassland conservation in the Terai	303
Table 15.4: Interest groups, a national park and wildlife policy in Zambia	334
Table 15.5 Three conservation paradigms	347

Figures

Figure 8.1: The policy paradox	132
Figure 15.1: Loss of wildlife habitat	296
Figure 15.2: Common property resources and land classification in Tamil Nadu, India	332

Boxes

Box 8.1: UNRISD Research on the Social Dimensions of Green Economy and Sustainable Development	126
Box 8.2: Gender and land rights in South Africa	128
Box 8.3: Integrated local development in Brazil	131

Acknowledgements

The production of these three volumes has been a monumental task to which many people have contributed. We are very grateful for their input and would like to recognize them here.

The idea of re-issuing “classic” UNRISD texts—some of the Institute’s most influential and ground-breaking research that remains highly relevant to today’s development debates—came from Rheem Al-Adhami; the thematic three-volume approach came from Peter Utting, who also made the initial selection.

Overall coordination of UNRISD Classics was ensured by the UNRISD Communications and Outreach Unit, led by Jenifer Freedman.

Adrienne Smith, Sylvie Brenninkmeijer-Liu and Inês Schølberg Marques helped get the production process off the ground, scanning pre-digital-age printed publications, converting them using optical character recognition software and reviewing the results.

Rhonda Gibbes did several rounds of copyediting and compared electronic versions with the original printed products, ensuring we stayed as close as possible to the original published texts.

Suroor Alikhan took charge of the final copyediting and page layout, and proofread, with Jenifer Freedman, the online versions.

When they first see UNRISD Classics, many readers will be taken by the striking cover art. The covers are the winning entries from UNRISD’s 2013 *Visions of Change* competition, coordinated by Jordi Vaqué. We thank everyone who submitted their work, and especially the artists whose work was selected: Ima Montoya (Spain), *De paso* (“Passing”) for Volume I; Sana Jamlaney (India), *The Silent One* for Volume II; and Kuros Zahedi (Iran), *Human Nature* for Volume III. Sergio Sandoval Fonseca produced the covers for the online versions based on an original concept by Jordi Vaqué.

UNRISD is indebted to all its collaborating researchers—not only those whose work is reproduced here but all those who have contributed to the Institute’s work over five decades, helping to create the rich legacy represented in UNRISD Classics.

We are also grateful to the United Nations: UNRISD is able to achieve what it does because of its unique institutional location and the opportunities provided by close engagement with others in the UN family.

UNRISD thanks the publishing partners who enthusiastically supported this initiative and gave us permission to reuse work: Oxford University Press, Palgrave Macmillan, Practical Action Publishing, Taylor&Francis, Wiley-Blackwell and Zed Books.

We also acknowledge our supporters worldwide who regularly tell us that UNRISD has such a wealth of relevant work, and people need to be reminded of it.

Last, but by no means least, UNRISD is grateful for support from the following governments over the last five decades, without whose contributions our work would not have been possible: Australia, Austria, Canada, Cuba, Cyprus, Denmark, Finland, France, Germany, Hungary, Iran, Iraq, Italy, Jamaica, Mexico, the Netherlands, Nicaragua, Norway, South Africa, Sweden, Switzerland, the United Kingdom, the United States of America and Yugoslavia. It was thanks to a special grant of \$1 million from the government of the Netherlands that UNRISD was established in 1963.

Editors' Note

Some changes have been made to standardize the presentation of chapters in this volume. The original texts have been reset to fit the present format. Boxes, figures and tables have been renumbered. There has been some light copyediting, mainly to standardize usage throughout the volumes and in some cases, for clarity.

Acronyms/Abbreviations

ADB	Asian Development Bank
AE	Agro-Ecosystems Analysis
AIDS	Acquired immunodeficiency syndrome
ALPAC	Alberta-Pacific Forest Industries Inc.
BALCO	Bharat Aluminium Company
BHC	Benzene hexachloride
BMZ	Federal Ministry for Economic Cooperation and Development
BOSTID	Board on Science and Technology in International Development
BP	(formerly) British Petroleum
CASID	Center for Advanced Study of International Development
CBS	Copenhagen Business School
CEO	Chief Executive Officer
CEPAL	Comisión Económica para América Latina y el Caribe (<i>Economic Commission for Latin America and the Caribbean—ECLAC</i>)
CGIAR	(formerly) Consultative Group on International Agricultural Research
CIFOR	Centre for International Forestry Research
CIP	Centro Internacional de la Papa (<i>International Potato Center</i>)
CIPR	Collective intellectual property rights
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNPPA	Commission on National Parks and Protected Areas
CSD	United Nations Commission on Sustainable Development
CSE	Centre for Science and Environment
CSERGE	Centre for Social and Economic Research on the Global Environment
CSR	Corporate social responsibility
D&D	Diagnosis and Design
DANIDA	Danish International Development Agency
DDR	Diagnóstico Rural Rápido
DDT	Dichlorodiphenyltrichloroethane
DGSM	Dashauli Gram Swarajya Mandal (<i>Dasholi Society for Village Self-Rule</i>)
ECLA	United Nations Economic Commission for Latin America (<i>now ECLAC—United Nations Economic Commission for Latin America and the Caribbean</i>)
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
EEC	European Economic Community
EPW	Economic and Political Weekly
ESG	Environmental, social and governance
ETAG	Ethical Trading Action Group
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign direct investment
FSC	Forest Stewardship Council
GAE	Golden age economics
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GEF	Global Environment Facility
GIS	Geographic Information System
GNP	Gross national product
GOI	Government of India
GRAAP	Groupe de Recherche et d'Appui pour l'Autopromotion Paysanne
HDI	Human Development Index
HIV	Human immunodeficiency virus
HRG	Housing and Resettlement Group
HYV	High yielding variety
ICDP	Integrated conservation and development project
ICIMOD	International Centre for Integrated Mountain Development
ICPQL	Independent Commission on Population and Quality of Life
ICRAF	International Council for Research in Agroforestry
ICT	Instituto Costarricense de Turismo (<i>Costa Rican Tourism Board</i>)
ICTs	Information and Communications Technologies
IDRC	International Development Research Centre
IDS	Institute of Development Studies
IFBWW	International Federation of Building and Wood Workers

IFC	International Finance Corporation
IIED	International Institute for Environment and Development
ILEIA	Information Centre for Low External Input and Sustainable Agriculture (<i>now known as the Centre for Learning on Sustainable Agriculture</i>)
ILO	International Labour Organization
IMF	International Monetary Fund
INBio	Instituto Nacional de Biodiversidad (<i>National Biodiversity Institute</i>)
INDERENA	Instituto Nacional de los Recursos Naturales Renovables y del Medio Ambiente (<i>National Institute for Renewable Natural Resources and the Environment</i>)
IP	Intellectual property
IPE	Institutionalist political economy
IPR	Intellectual property rights
ISNAR	International Service for National Agricultural Research
ISO	International Organization for Standardization
ISST	Institute of Social Studies Trust
ITT	Ishpingo-Tambococha-Tiputini
ITTA	International Tropical Timber Agreement
IUCN	The World Conservation Union (<i>formerly the International Union for Conservation of Nature</i>)
IUF	International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations
JVA	Jan Vikas Andolan (<i>Peoples' Development Movement</i>)
KFRI	Kerala Forest Research Institute
KSSP	Kerala Sastra Sahitya Parishad (<i>Kerala Forum for Science Literature</i>)
LAB	Latin American Bureau
LGU	Local Government Unit
MARP	Méthode Accélérée de Recherche Participative (<i>Rapid Rural Appraisal</i>)
MDG	Millennium Development Goal
MIDC	Maharashtra Industrial Development Corporation
MMI	Mapfura Makhura Incubator
MST	Movimento dos Trabalhadores Rurais Sem Terra (<i>Landless Rural Workers' Movement</i>)
NAFCO	National Agriculture and Food Corporation
NAFTA	North American Free Trade Agreement
NFF	National Fisherworkers Forum
NGO	Non-governmental organization
NIE	New institutionalist economics
NIMBY	Not in my backyard
NORAGRIC	Norwegian Centre for International Agricultural Development
NTFP	Non-timber forest produce
ODA	Official development assistance
ODA	Overseas Development Administration (<i>now known as the Department for International Development—DFID—United Kingdom</i>)
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OFCOR	On-farm Client-oriented Research
PALM	Participatory Analysis and Learning Methods
PAR	Participatory action research
PES	Payment for ecosystem services
PRA	Participatory rural appraisal
PRAP	Participatory Rural Appraisal and Planning
PRM	Participatory research methodology
PSM	People's Science Movement
PTA	Alternative Technologies Project
PTD	Participatory technology development
PUA	Participatory urban appraisal
PUCL	People's Union for Civil Liberties
PUDR	Peoples Union for Democratic Rights
R&D	Research and development
RA	Rapid Appraisal
RAAKS	Rapid Appraisal of Agricultural Knowledge Systems
RAP	Rapid Assessment Programme
RAT	Rapid Assessment Techniques
RCA	Rapid Catchment Analysis
REA	Rapid Ethnographic Assessment

REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD+	Reducing Emissions from Deforestation and Forest Degradation, enhancement of carbon stock and sustainable management of forests in developing countries initiative
RFSA	Rapid Food Security Assessment
Rio+20	United Nations Conference on Sustainable Development
RMA	Rapid Multi-Perspective Appraisal
ROA	Rapid Organisational Assessment
RRA	Rapid Rural Appraisal
SAREC	Swedish Agency for Research Cooperation with Developing Countries (<i>now the Department for Research Cooperation</i>)
SIDA	Swedish International Development Agency (<i>now the Swedish International Development Cooperation Agency—Sida</i>)
SITRAP	Sindicato de Trabajadores de las Plantaciones
SSA	Sub-Saharan Africa
SSM	Soft Systems Methodology
TFAP	Tropical Forestry Action Plan
TNC	Transnational corporation
UK	United Kingdom
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UN-Habitat	United Nations Human Settlements Programme
UN-NGLS	United Nations Non-Governmental Liaison Service
UNA	Universidad Nacional de Costa Rica (<i>National University of Costa Rica</i>)
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNRISD	United Nations Research Institute for Social Development
UP	Uttar Pradesh
US	United States
USSR	Union of Soviet Socialist Republics
VCs	Village commons
VIPP	Visualisation in Participatory Programmes
WBCSD	World Business Council for Sustainable Development
WCED	World Commission on Environment and Development
WCMC	World Conservation Monitoring Centre
WHO	World Health Organization
WRI	World Resources Institute
WTO	World Trade Organization
WWF	World Wide Fund for Nature (<i>formerly the World Wildlife Fund</i>)

Foreword

Social Justice with Resource and Ecological Sustainability

Even today, most economic development analyses rarely acknowledge their social and political determinants. The establishment of UNRISD in 1963 by Nobel economics laureates Gunnar Myrdal and Jan Tinbergen sought to redress this persistent marginalization of the social dimension. Efforts leading to and following from the 1972 Stockholm environment summit and the 1992 Rio Earth Summit subsequently secured greater attention to environmental and natural resource concerns. Since the 1970s, UNRISD has given attention to the different implications, for various social groups, of economic development as well as of ecological and resource constraints.

The last quarter-century has seen the growing acceptance of the sustainable development discourse. But the core equity elements of sustainable development have often been lost or obscured, despite the increasing acceptance of the discourse, as seen by the greater attention given to, say, “climate action” compared to “climate justice”. Meanwhile, with neoliberal economic ideology, hegemonic from the 1980s, eschewing attention to inequality, the social pillar of the Millennium Development Goals was reduced to poverty reduction.

The post-2015 United Nations development agenda discourse recognizes the need for a more integrated approach to the social, economic and environmental dimensions of development, emphasizing inequality, employment and livelihoods. Sustainable production and consumption are also getting far more attention as resource and ecological constraints become more pronounced.

Yet, much recent work on sustainable development has focused on resource and ecological issues, often neglecting social and political challenges. In response, there is growing attention to issues of “popular participation”, “inclusion”, “exclusion”, “marginalization” and related notions, as well as to the potential and limits of various organizational forms of collective action and other expressions of the “social and solidarity economy”, such as cooperatives.

Recent decades have also seen the rise of influential civil society organizations demanding voice in policy making. However, environmental and social justice movements have also been fragmented, sometimes diverging rather than converging. North-South and other differences account for some of the different strands. And while rather heterogeneous social movements have ensured lip-service to people-centred

sustainable development, much more needs to be done to transform this into meaningful commitments and policies.

The social perspective on sustainable development has given much needed attention to power relations. Clearly, “political will” requires more than “greater awareness” or “motivation” by policy makers, taking into consideration vested interests, beliefs and parameters. Interests, ideologies and institutions all shape policy making and choice, often explaining why seemingly superior “top-down”, “technocratic” solutions are not adopted, or fail to be successfully implemented.

Conventional policy wisdom, including ostensibly universal “best practice” solutions regardless of context and palliative “quick-fix” programmes to avoid needed transformational change, often have little basis in experience. Not surprisingly, privatization, marketization and deregulation in recent decades have exacerbated inequalities without accelerating growth.

Recent decades have seen growing attention to the potential contribution of the private sector, through “corporate social responsibility” (CSR) initiatives. The recent advocacy of “win-win”, “green economy” solutions tends to ignore the problems of such voluntary initiatives, which have mainly benefited more powerful vested interests at the expense of others. The recent promotion of “partnerships” in the international development discourse has emphasized ostensible benefits while obscuring power relations and the gaps between rhetoric and realities. Instead, much better corporate accountability frameworks, enhanced government regulatory and enforcement capacities as well as appropriate public policies are needed.

Reforms to achieve sustainable development and social justice often require collective action, involving not only those like-minded, but others as well. Broad coalitions promoting sustainable development can work if appropriate incentives ensure compliance. Research has identified the terms on which business elites may contribute to broad coalitions to embrace bold social and environmental reforms. But while weaker groups may gain “voice”, they typically do not become stakeholders who are taken seriously. Furthermore, success in building broad, inclusive coalitions may not be enough to ensure effective implementation.

This volume is therefore most welcome, as it highlights UNRISD’s pioneering, agenda-setting work in integrating the social and environmental dimensions of development, advancing the analysis of sustainable development and related resource and environmental issues from the perspective of social justice norms. In recent years, for example, such work has refocused attention on inequality. Similarly, UNRISD’s major project on social policy in the last decade helped pave the way for the 2012 UN adoption of the universal concept of a social protection floor. In both strong and subtle ways, this body of work has been crucial in influencing United Nations processes which are key to mobilizing requisite political will.

Jomo Kwame Sundaram
Assistant Director-General
Coordinator for Economic and Social Development
Food and Agriculture Organization of the United Nations (FAO)

Rome, April 2015

Note from UNRISD Director

UNRISD Classics: Celebrating 50 Years of Research for Social Change

UNRISD Classics, three volumes of selected UNRISD publications prepared to celebrate 50 years of research on social development, prompts reflection on the role research plays in processes of social change and, more specifically, within the United Nations system.

Established in 1963, UNRISD was the inspiration of two intellectual giants of the United Nations: Nobel Laureates Jan Tinbergen and Gunnar Myrdal. These leading thinkers understood that neglect of social questions in development thinking and practice would compromise the “development project” itself. They also recognized the importance of an independent research function at the heart of the UN, separate from advisory and operational work, but able to feed directly into “action programmes of the United Nations system”. In its founding Bulletin, UNRISD was granted autonomous status within the United Nations system by the then Secretary-General, U Thant, to ensure that it could freely conduct critical research, even on politically sensitive issues.

Today’s realities demonstrate the continued importance of this founding vision—the need for research on social issues that is independent, directed to policy making, and responsive to changes in the global context. Equity, rights and social justice—issues that put people at the heart of the development process—have returned as the foundational principles of a new global “sustainable development” framework. But today’s realities also remind us that such an agenda must be continually revisited and renegotiated, priorities redefined and supported with new evidence. For example, in the early years, “dethroning GDP” through developing and incorporating social indicators into measures of “development” seemed a possibility; the political and ideological struggles at the heart of such an agenda appear more formidable today. Likewise, progress made in areas such as sexual and reproductive rights encounters resistance and needs to be continually defended. Autonomous spaces, such as that represented by UNRISD, for revisiting and renegotiating priorities, fostering debate and presenting alternatives are thus worth protecting.

Over five decades, UNRISD has worked—indeed, at times struggled—to keep alive the vision that drove its founders. It has expanded the ideas of “social development”, taking on more radical issues, often challenging the discourse of powerful actors, playing “David with the Goliaths of international development”. Along the way it has posed questions to the work of the United Nations itself—UNRISD work on a unified approach

to development during the 1960s and 1970s “was a reaction to the way policy makers dealt with social issues as an add-on to economic policy rather than an integral part of a development strategy”, foreshadowing current discussions about “coherence”. The Institute has also shown the value of an independent space for raising critical questions and generating the evidence to challenge dominant policies and practices when they have adverse social effects—as in its work on the Green Revolution, structural adjustment and globalization.

The three volumes of UNRISD Classics bring together a selection of critical writing, produced since the 1960s, illustrating some of the enduring themes and issues that have been central to UNRISD’s work and have shaped the UN’s social development agenda. Grouped around the contemporary themes of social policy, gender, and sustainable development, the essays present work evolving from the Institute’s early focus on social indicators and measurement issues which fed into economic planning processes, through rural and community development, environmental issues, participation and empowerment, to pioneering work on women and gender in development; studies that brought new—and at the time controversial—perspectives to formidable challenges such as illicit drugs, ethnic conflict and political violence; influential research that brought social policy back onto the development agenda; examination of the distributional impacts of macroeconomic and trade policies, and—more recently, in advance of the global community—highlighting inequality as a development problem and obstacle to poverty reduction.

These landmark publications by researchers associated with UNRISD—staff, participants in research projects, commissioned authors—illustrate the breadth, significance and relevance of the Institute’s research over 50 years. In making this selection, a vast body of UNRISD research was reviewed: the choice reflects works that have an enduring value and message, where we see the reflection in contemporary concerns, where past research and evidence have significantly shaped new ideas or policy debates that are widely accepted today, or have contributed to the generation and diffusion of alternative development thinking around the globe. The selection also illustrates key features of how the Institute works : from the early days, UNRISD developed a strong emphasis on empirical research conducted, where possible, by researchers based in developing countries, providing opportunities for them to work with researchers from other countries concerned with similar issues and to channel their findings to an international audience.

UNRISD Classics are being launched in 2015, a pivotal moment for the international community as it works towards a new global consensus on a universal sustainable development agenda. Reflections on these “50 years of research for social change” raise fundamental questions—about the social costs and consequences of economic development paths that cannot be sustained ecologically, economically or socially. The volumes remind us that today’s questions and concerns are not new, though they may now be more urgent. There is greater technical and technological know-how, and possibly more political will, to address them: but there is also awareness of the limitations of technological or “quick fix” solutions in the light of greater complexity. The essays remind us above all that development requires social progress, but that such progress is reversible; that change in other domains (economic growth, demographic transition, environmental degradation) has consequences—often unforeseen or unintended; that such change is rarely if ever neutral with regard to different social groups (by gender, ethnicity or age for example); and that processes of social change are

fundamentally entangled with power relations and with politics. Continued progress requires eternal vigilance: a modest price to pay is the support of institutional spaces—often small, often fragile—with the mandate and autonomy to remain vigilant.

We hope these essays also remind readers of the legacy of United Nations ideas that have shaped and changed the world, and the role of UNRISD within this. Assessing the impact of the intellectual endeavor represented by any body of research is not easy. Research outputs and ideas rarely translate in any immediate or easily measurable way into changes in policies, attitudes or practices. The historical record provided here shines a light on the enduring relevance and impact of such research over the long term. It provides insights for those who believe that we must continue to push the boundaries of political discourse beyond a focus on economic growth and poverty reduction towards a broader understanding of development that includes human well-being, equity, sustainability, democratic governance and social justice. It also demonstrates the continued necessity of preserving the spaces—such as UNRISD—where difficult questions can be raised and debated, bringing into the conversation diverse voices, marginalized viewpoints and different forms of knowledge in our shared efforts to make the world a more just place.

Sarah Cook

Director, UNRISD

Geneva, April 2015

Introduction

Sustainable Development Revisited

Peter Utting

More than a quarter of a century has passed since the idea of sustainable development was catapulted onto the world stage by the Brundtland Commission. The uptake of the term globally has been nothing short of remarkable. While other terms—such as rights-based development, human security and even social development—struggle in the comprehension stakes, it seems that virtually all development actors and organizations, and the public at large, have bought into the narrative of sustainable development. But core elements of the concept related to needs and intergenerational equity often got lost in translation. Worse still, the challenge of “meet[ing] the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987:41) was contradicted by policies and processes that some justified from the perspective of economic growth and efficiency.

Fast forward 25 years and the international community is now trying to craft a response to deal with climate change and the heightened risks and vulnerability associated with crises linked to finance, food and fuel. This process is repositioning sustainable development at the centre of the development agenda. Furthermore, given its focus on not only economic and environmental objectives but also the so-called social pillar, sustainable development has become the normative catch-phrase that can also address contemporary challenges of poverty reduction.

The UN mandate to design a set of sustainable development goals by end-2015 to succeed the Millennium Development Goals (MDGs) explicitly recognizes the need for a more integrated approach that reconnects economic, social and environmental dimensions of development in ways that minimize trade-offs and are more complementary and synergistic. Issues (apart from the environment) that received short shrift in the MDG process—notably inequality, employment, livelihood (and food) security and accountability—are now receiving more attention. So too is the structural question of how to transform production and consumption patterns that degrade the environment.

In the context of this rethinking about development, it is instructive to revisit what went wrong in relation to analysis and policy and what can be done differently. Over five decades, a significant body of UNRISD research has examined the challenge of better integrating economic, social and environmental dimensions of development and understanding the relationship between social development and environmental change.

From this body of work emerge numerous insights related to social, political and structural dimensions of environment and social change that can inform contemporary discussions and debates.

This volume presents 17 texts that emerged from research carried out by UNRISD since the 1970s. Reflecting the main thematic focus of UNRISD work in this field, the chapters are divided into two sections. The first contains texts related to the integrative nature of development, that is, the connections between economic, social and environmental dimensions. The second deals more specifically with particular sectoral or thematic issues and case studies from developing countries. These address issues related to agricultural modernization, rural development, food policy, forest destruction and protection, biodiversity conservation, urban sustainability and corporate environmental responsibility.

The remainder of this introduction briefly reviews the trajectory of UNRISD work related to integrated and sustainable development and then summarizes some of the main insights that emerge from this body of work. These are analysed in terms of three sets of contributions, namely (i) analytical frames and methods of inquiry that are key to understanding environmental and social change and impacts; (ii) the need to critically appraise public policy and expose contradictory policies; and (iii) thinking about strategies for change conducive to sustainable development and social justice.

50 Years of Research on Integrated and Sustainable Development

Perhaps the most obvious limitations in applying the term sustainable development concerned the tendency both to reduce sustainable development to environmental protection and to focus primarily on the relationship between economic development and the environment. *Social dimensions* related to how individuals, groups, social relations and institutions affect and are affected by natural resource management and environmental change, were often marginalized. So too were the *political underpinnings* of change related to social mobilization, interest group bargaining, participation, coalitions and alliances. Policies purporting to promote sustainable development often attempted to find wriggle room within the existing rules of the game, not questioning, for example, *structural determinants* of unsustainable development, including growth and consumption patterns, commodification, skewed or unjust social (and power) relations, and patterns of resource and surplus distribution. Macroeconomic and trade and investment policies associated with economic liberalization and financialization also tended to remain off the radar. It was through these social, political and structural lenses that UNRISD undertook a vast body of research on sustainable development over several decades.

Concerns about the integrated nature of different dimensions of development underpinned much of the impetus behind the First United Nations Development Decade in the 1960s. They also informed the creation of UNRISD in 1963. Indeed, the Institute was established to examine the relationship between economic growth and social development in a context where fairly rapid growth often failed to translate into improvements in well-being for many in the “Third World”. The Institute’s early work not only highlighted the importance of social development for development in general but also examined from a critical perspective certain institutions and processes that, on paper at least, attempted to address multiple dimensions of development in a more integrated way. Such institutions included government planning and micro-level

organizations that had explicit economic and social objectives, namely cooperatives. The concern with both balanced development and the need for alternative development strategies led to an ambitious project in the 1970s—the “unified approach to development analysis and planning”—that was “mandated to bring all the different aspects of development together in a set of viable objectives and policy approaches” (Iglesias and Barraclough 1981).

UNRISD also turned its attention to examining the interconnected nature of development in relation to concrete development processes and geographical settings. In the 1970s, the Institute embarked on a large-scale inquiry into the multiple effects of the “green revolution” that was transforming agriculture in certain commodity sectors and geographical regions (see chapter 9 by *Andrew Pearse*). This, and subsequent work, on food security and forest issues, adopted a systems approach that examined the complex connections between multiple dimensions of development and the interacting relationships and processes that operate in different subsystems. These are dealt with explicitly by *Solon Barraclough and Krishna Ghimire* in their chapter on constraints of and opportunities for sustainable forest use (chapter 14).

While governments and international organizations often talked the talk of integrated development and the need to reduce the tensions between economic and social (and sometimes environmental) objectives, political dimensions were often marginalized. Any integrated approach required not only a reconfiguration of economic, social and environmental dimensions of development, but also a reconfiguration of power relations. To address this blind spot within mainstream knowledge and policy circles, UNRISD launched, in the 1980s, a large-scale global inquiry into “popular participation”. This took the analysis well beyond the already fashionable functionalist notion that participation facilitated project implementation to recognizing diverse forms of collective action as key for both resource mobilization and claims-making on the part of “the excluded” (Stiefel and Wolfe 1994). The definition of participation adopted by UNRISD in 1979 was more overtly political: participation referred to “the organized efforts to increase control over resources and regulative institutions in given social situations, on the part of groups and movements of those hitherto excluded from such control” (Pearse and Stiefel 1979:8).

The upsurge in international concern for environmental issues in the years leading up to the 1992 Earth Summit sparked a vast amount of research, writing and debate on conservation and natural resource management both globally and within UNRISD. New terminology, concepts, policies and analytical approaches emerged, as did various academic debates regarding their validity and contribution to sustainable development. In the late 1980s, UNRISD launched a research programme that addressed major concerns about the analysis of environmental issues and policies, as well as interventions associated with conservation and natural resource management in developing countries. These concerns related in particular to the lack of attention within environmental research and policy to: (i) the distributional consequences for different social groups of processes of both environmental degradation and conservation; (ii) how people and groups that are affected respond individually and collectively; and (iii) the role of local-level institutions and grassroots environmental action in protecting both environments and livelihoods.

Whereas much of this work focused on the role of states, civil society and local resource users, UNRISD work in the 1990s and the subsequent decade examined the role of business in sustainable development. Throughout the 1980s and 1990s transnational corporations had vastly expanded their power and global reach through commodity

chains, foreign direct investment and deregulation. The social and environmental consequences of “corporate-led globalization” became a major focus of international concern, particularly among civil society organizations and social movements. The response of both governments and corporations was often to encourage corporate self-regulation and voluntary initiatives aimed at improving the social and environmental performance of companies. UNRISD undertook an extensive inquiry into the effectiveness of corporate social (and environmental) responsibility (CSR) and new forms of business regulation involving non-state actors (see chapter 16).

In the build-up to Rio+20 (the United Nations Conference on Sustainable Development in 2012), the Institute examined the social dimensions of green economy (see chapter 8)—the new catch-phrase that sought to rethink economic practice and policy in the light of climate change. Recently, UNRISD has revisited the potential and limits of organizations and enterprises that, through various forms of collective action and solidarity, explicitly aim to address economic, social and often environmental objectives. Today, however, such organizations include not only cooperatives that were the focus of UNRISD work in the 1970s but also many other types that make up the “social and solidarity economy”. These include fair trade networks, women’s self-help groups, community-based enterprises, social enterprises, NGOs engaged in income generation and associations of informal economy workers.

Standing back from the rich body of work that UNRISD conducted on integrated and sustainable development, one is struck by three distinctive contributions, which are discussed below. These relate to analytical method or approach, the critique of public policy and perspectives on strategy—that is, the roles of different actors and institutions in crafting more sustainable development pathways.

Analysing Sustainable Development through a Social Lens

Political economy

The chapters in this volume reveal the importance of critical social science research and political economy analysis for understanding development approaches and impacts. But the strand of political economy applied extends the notion of “the political” well beyond the state and public policy. Rather it encompasses the broader field of power relations between multiple actors and organizations. From this perspective it becomes important to analyse how development interventions and processes affect different social groups, how people respond individually and collectively when affected, and how the configuration of social forces shapes, and is shaped by, policy and development processes.

Much of UNRISD research adopted an actor-oriented approach that examined the different values, perceptions, interests and responses of different social groups. This is brought out clearly in chapter 15 by *Piers Blaikie and Sally Jeanrenaud* in their examination of the relationship between biodiversity decline/conservation and human welfare. This approach also fundamentally challenges some of the assumptions of positivist science regarding objectivity and the usefulness of focusing on single variable or narrow explanations to explain development outcomes. As *Michel Pimbert and Jules Pretty* note in chapter 13, “[c]onservation science is firmly set within the positivist paradigm, and it is this that has determined the basic values and assumptions of conservation professionals.

...This has produced a mode of working that has systematically missed the complexity of ecological and social relationships at the local level”.

Critical social science research aims not only to interrogate conventional wisdom and mainstream approaches but also to reveal gaps in knowledge and blind spots on the policy radar. Political economy analysis provides a healthy antidote to tendencies within policy-applied research to project win-win scenarios that downplay the distributional consequences of policies, programmes and processes, and come up with policy recommendations that ignore the political and structural underpinnings of inequitable and unsustainable development. While policy makers may agree on what needs to be done, interests, ideology, institutional path dependence and structural impediments get in the way when it comes to designing and implementing policies that work for sustainable development.

Structure and agency

Various chapters in this volume highlight the importance of structural conditions and institutions—understood as “rules of the game”, both formal and informal, that shape perceptions, behaviour and decision making in fairly predictable ways—for understanding processes of change. Regulations, social relations, cultural norms, entrenched community practices and structures of inequality impact people’s motivations and life chances as well as the outcomes of policies, projects and technology. *Andrew Pearse’s* exposé in chapter 9 of the problematic social effects of the Green Revolution in the 1970s cautions against the tendency to generalize about negative or positive impacts of standardized technology packages. There are complex interactions between agrotechnological and social systems. How and if the former work from the perspective of inclusive and sustainable development depends very much on the institutional and social setting in which they are embedded. In today’s context where the World Bank and others are once again prioritizing a “new green revolution” via “sustainable agricultural intensification”, it is instructive to revisit the effects of the first green revolution.

Authors in this volume who emphasize the importance of structural determinants tend to steer clear of the crude dichotomy of the so-called “structure versus agency” debate. Structure clearly matters for understanding policy impacts and possibilities, but particular types of agency and constellations of social forces are also seen as key to bringing about change conducive to inclusive and sustainable development. As Solon Barraclough suggests in *An End to Hunger*, the oft-cited essential missing ingredient in purposeful change, namely political will, requires more than a slight motivational shift on the part of policy makers or “more awareness”. The challenge is far more demanding: “Political will is journalistic shorthand for the overcoming of conflicting interests, ideological blinkers and structural constraints that usually make it impossible for governments to do what is technically feasible and clearly necessary to solve a serious problem.” The task of social scientists is “to explain why political will is lacking and what might be done to produce it” (Barraclough 1991:169).

The role of agency is brought out clearly in the chapters dealing with participation (chapter 3 by *Michael Redclift*, and chapter 13 by *Michel Pimbert and Jules Pretty*) and, more specifically, the role of social movements activism. The analysis cautions, however, against romanticized notions of social movements activism as a driver of people-centred sustainable development. As *Madhav Gadgil and Ramachandra Guha* point out in their analysis of environmental activism in India (chapter 11), the environment “movement”

itself is quite heterogeneous with different world-views, policy preferences, tactics and strategies.

Systemic and holistic analysis

Various chapters point to the importance of systemic and holistic analysis that connects the dots between economic, social, environmental, institutional and political conditions or variables. Such analysis facilitates not only the identification of tensions and contradictions between different dimensions but also important complementarities and synergies. In his analysis of the potential of information and communication technologies to empower humankind and reintegrate social development and economic growth, *Manuel Castells* argues that “[s]ocial development today is determined by the ability to establish a synergistic interaction between technological innovation and human values, leading to a new set of organizations and institutions that create positive feedback loops between productivity, flexibility, solidarity, safety, participation and accountability, in a new model of development that could be socially and environmentally sustainable”.

Recognizing the importance of holistic analysis also means recognizing the importance of intellectual pluralism, multidisciplinary and transdisciplinary, that is, the need to draw on multiple bodies of knowledge—whether from different academic disciplines or different social actors—to understand complex realities. *Ha-Joon Chang*’s use of the term “institutionalist policy economy” in chapter 6, or *Piers Blaikie and Sally Jeanrenaud*’s application of political ecology (chapter 15) connote the importance of adopting a multidimensional analytical frame. Similarly, *Michel Pimbert and Jules Pretty* show in chapter 13 that effective conservation policies and practices have to be informed by learning from multiple disciplines and paradigms: “conservation science still operates on a narrow intellectual base emphasizing categories, criteria, knowledge and procedures that serve the interests of professional control over the management of protected areas”.

Appraising Public Policy and Exposing Contradictions

As might be gleaned from the above description of how UNRISD approached research and analysis, the research findings often contradicted conventional policy wisdom and suggested alternative approaches that did not always sit comfortably within bureaucratic or technocratic logic and decision-making processes. They also revealed the seeming intractability of what have been called “the wicked” problems of development due to institutional and political resistance to needed policy reforms, as well as dominant world-views and modes of technocratic policy making that impede effective policy design and implementation.

Some of the concerns that emerged in the “unified approach” project in the 1970s, summarized by *Marshall Wolfe* in chapter 2, could well apply to the Millennium Declaration, the Rio+20 outcome document and other recent international policy declarations. They include the tendency:

- of many governments to favour approaches based on integrating social and economic policy and programmes as an easy alternative to having to think about far-reaching structural changes within national societies; and
- for policy-applied research to shy away from both theoretical and historical analysis, on the grounds that what is needed are concrete, practical and quick solutions to deal with urgent problems; and

- to proffer concrete and practical prescriptions that refrain from judging specific national situations and policies—resulting in prescribed solutions that are vague and, unsurprisingly, quickly forgotten.

A criticism of international policy making that stands out in UNRISD research revolves around “the ‘high-level expert’ who pontificates on *what* must be done and evades the questions *who* and *how*” (Wolfe 1996:167). The current debate about the post-2015 development agenda and the need to focus on drivers of change rather than on targets related to the state of well-being has again taken up this concern (UNEP 2013). The prescriptions and recommendations contained in international flagship reports, declarations and plans of action often pay little attention not only to “the who” and “the how” but also to the tensions, dilemmas and trade-offs involved between different policies and dimensions of development.

Policy making often involves designing fairly standardized prescriptions. But, as *Cynthia Hewitt de Alcántara* shows in chapter 4 when examining the interface between policy prescriptions and “real” food markets, markets are culturally and politically specific institutions that operate through the interaction of real social groups. Such institutions and relations shape how markets operate and the effects that incentives and regulations have in concrete settings. Standardized policy prescriptions are, therefore, likely to fail given the very different institutional and political contexts with which they are liable to interact. The importance of factoring in such aspects was revealed clearly by the failures of structural adjustment programmes in the 1980s (see Volume I of UNRISD Classics). This type of analysis also calls into question commonly held technocratic assumptions that policy-applied research should focus on learning about good practices, in the belief that they can then be replicated in what are often quite different institutional and social settings.

Current approaches to sustainability would also do well to learn from such analysis. This emerges in the UNRISD inquiry into the social dimensions of “green economy”—the international development community’s latest approach to addressing the trade-offs and contradictions between economic growth and environmental protection or climate change. The *UNRISD Research and Policy Brief* presented in chapter 8 critiques the win-win rhetoric surrounding green economy by identifying various social risks and problems that mainstream green economy approaches are likely to generate when applied in concrete social settings. This points to the need for policy makers to focus on both *green* and *fair* economy. Key in this regard are various forms of social policy, discussed in Volume I of UNRISD Classics, and participation, discussed below.

Policy incoherence

A recurring theme in this volume relates to the issue of policy incoherence in the multiple senses of the term: different policies that lack coordination; policies that involve excessive trade-offs and may pull in contradictory directions; and policy agendas that ignore key structural issues. The upshot has often been a glaring gap between policy discourse and developmental trends. UNRISD’s critique of the United Nations 1970 International Development Strategy (see chapter 1) highlights “the contradictions between goals and trends and...the contradictory nature of policies”.

The contradictory social and environmental effects of policies associated with economic liberalization are noted in several chapters. According to *Barraclough, Ghimire and Meliczek* (chapter 5), “[t]he rigid insistence on certain kinds of monetary, fiscal, trade and privatization policies by most rich states and the international financial

institutions...has not been helpful for adoption of socially and ecologically friendly development strategies”. Similarly, in relation to transnational corporations, examined by Utting in chapter 16, policies promoting social and environmental responsibility are often contradicted by others encouraging labour market “flexibilization” and investment and relocation in areas or zones where regulation is weak.

Addressing inequality

Such biases and preferences have diverted the gaze from certain issues that are absolutely essential for dealing with unsustainable and exclusionary patterns of development. This is particularly apparent with regard to inequality. Until recently, not only the neoliberal but also the poverty reduction agenda paid scant attention to issues of inequality. But vulnerability and people’s ability to enhance livelihood security and exert claims depend crucially on their position within social structures.

This is brought out clearly in *Bina Agarwal’s* analysis (chapter 12) of the interrelationships between gender, poverty and environmental change in rural India. She shows not only how the adverse class and gender effects of both environmental decline and the privatization and increasing state control of common pool resources exacerbate class-gender inequality, but also that these effects arise from pre-existing gender inequalities related to the division of labour, intrahousehold distribution of subsistence resources, access to productive resources, other assets and income-earning opportunities, and participation in public decision-making forums. As *Cynthia Hewitt de Alcántara* shows in chapter 4, empirical analysis of real markets shows that producers are unlikely to respond to reforms in ways predicted by theory if they are still locked into unequal patterns of distribution of resources and power. And as indicated in chapter 8, the same applies to contemporary policies that aim to promote green economy.

Whose agenda?

Part of the problem of ineffective policy design relates to the world-views, perceptions and knowledge boundaries of policy makers themselves. Policies promoting agricultural modernization or environmental protection centred, for example, on commercial farming and protected areas—discussed in chapters 9 (*Andrew Pearse*) and 13 (*Michel Pimbert and Jules Pretty*)—are often informed by particular bodies of knowledge that are inherently myopic. Certain approaches to sustainable agricultural intensification currently in vogue appear to be more inclusive, bringing into the equation, for example, not only the small producer but also the environment. However, to do so effectively requires correcting biases within agricultural and development agencies that lean excessively toward high external-input agriculture, larger commercial producers and the liberalization of trade and investment regimes.

An important challenge in this regard relates to understanding and appreciating local knowledge and adaptive capacities. The recognition of the role of grassroots adaptation and experimentation was the focus of a considerable body of UNRISD work carried out in the late 1980s and early 1990s on “grassroots environmental action” (Ghai and Vivian 1992), and “participatory conservation” (Utting 2000). Chapter 10 by *Kojo Amanor* discusses these issues through a study of farmer’s responses to land degradation in West Africa, in particular Ghana. He points to the need to shift from a focus on top-down technological solutions, and commodity sector (export) orientation, to decentralized policy space, economic diversification and learning from folk knowledge

and adaptive traditions. The key role of local knowledge, grassroots environmental action and social innovation at the level of communities is also emphasized in the analysis of alternative pathways to green and fair economy discussed in chapter 8.

Crafting Alternative Pathways to Sustainable Development

A recurring concern throughout five decades of UNRISD research has been the need for people-centred development strategies that are: (i) guided by values of human welfare and social justice; (ii) shaped through “popular participation” that serves both to inform and influence policy and to reconfigure power relations; and (iii) enabled through proactive states and international policy and institutional reforms.

The role of the state and participatory governance

As *Solon Barraclough and his co-authors* suggest in their analysis of how to promote ecologically and socially sustainable development in rural areas (chapter 5), “only the nation state has the theoretical possibility to establish and enforce legal frameworks regulating activities within its territory and to transfer resources from some social groups to others”. Elsewhere, Barraclough (1991) outlined the diverse range of policy areas (social, investment, employment, agricultural trade and pricing, environmental, macroeconomic, etc.) where proactive and coherent intervention is necessary in order to transform the behaviour of economic agents via regulation, incentives and dialogue. But, as *Barraclough et al.* (chapter 5) point out, “the dominant thrust of the combination of a nation state’s often contradictory policies should be directed at improving the opportunities and livelihoods of poor majorities”. The chapter also emphasizes the fact that in today’s globalized world, international reforms are as important as national reforms.

Any strategy that relies on “bringing the state back in” cannot of course ignore the question of “good governance” and underlying theories and assumptions within the field of public sector reform about self-seeking bureaucrats and politicians. As *Ha-Joon Chang* notes in chapter 6, such motivations may indeed exist, but institutions like the state are not crudely shaped by individuals with predetermined motivations; rather “the interrelationship between motivation, behaviour and institutions [is far more complex] than what exists in neoliberal discourse”. Not only do diverse motivations exist, but institutions themselves also shape motivation and perceptions.

Crafting popularly based development strategies depends on reconfiguring power relations. “Participation”—understood as “organized efforts” and “gaining control”, as defined above—is key in this regard. But, despite the global uptake within mainstream development organizations of the rhetoric of participation, the meaning of the term is often reduced to consultation with selected stakeholders in policy design, or giving beneficiaries a say in project design and implementation. The gap between the reality and rhetoric of participation that Matthias Stiefel and Marshall Wolfe exposed over 20 years ago in *A Voice for the Excluded* (1994) may have diminished somewhat with the rise of civil society organizations and networks demanding a voice at the policy table, and the institutionalization of decentralization and mechanisms for dialogue, but the goal of “gaining control” remains elusive.

Reconfiguring power relations

Various chapters in this volume suggest that the direction of change in recent decades has worked against rather than for progressivity, understood as policy and institutional change that is conducive to distributive justice. Market-centred approaches to development, including processes associated with privatization, the commodification of the commons and various forms of deregulation have tended to skew the distribution of benefits toward the haves and often exacerbated problems of exclusionary and unsustainable development. Processes of globalization and economic liberalization have shifted the balance of power away, for example, from organized labour toward transnational corporations and finance capital, and away from “productive” and social ministries to central banks and ministries of finance. We also see a shift from collective action to what *Manuel Castells* refers to as “individualization”.

Another key dimension of strategies to reconfigure power relations and promote institutional and policy reforms conducive to sustainable development and social justice relates to coalitions and alliances involving not only like-minded change agents but also unlikely bedfellows—not least organized business interests discussed below. In chapter 17, *Karina Constantino-David* takes up the issue of relations between civil society and state interests at the local level. In her analysis of strategies for urban sustainability in Manila, she points to the need for greater space for local development via accountability mechanisms and participatory processes that keep local authorities honest, informed and energized, and government programmes that scale-up pro-poor innovations and enterprise. She puts considerable store in decentralization not simply as a process for connecting policy design and implementation with local needs and knowledge, but also as a mechanism for transferring decision making from (central-level) sites where it is easily hijacked by bureaucracy and vested interests.

The considerable attention given to the notion of “partnership” within international development discourse emphasizes the advantages—in terms of resource mobilization, pooling competencies and social and organizational learning—when different development actors collaborate and co-produce knowledge and policy. But partnerships often ignore the need to reconfigure power relations. Disadvantaged groups may gain “voice” via a seat at the table but they often do not become “players” in any meaningful sense. Furthermore the contemporary emphasis on partnerships can divert attention from the key role of contestation, resistance, bargaining and negotiation in processes of change conducive to sustainable development and social justice.

Other forms of social interaction such as networking have become increasingly important as drivers of social change in the era of globalization. In chapter 7, *Manuel Castells* notes the considerable potential for reintegrating social development and economic growth through the two interrelated phenomena of technological innovation associated with the information revolution and organizational innovation associated with networking. The challenge, he argues, is to ensure that a productivity-enhancing model eclipses that of economic competitiveness through cost-cutting. Networking and ICTs also provide civil society organizations and social movements with powerful tools to organize and mobilize. Indeed, great store has been placed in national and transnational activist networks empowered through ICTs acting as agents of change (Keck and Sikkink 1998). But, while new movements—such as Occupy and the Indignados—can quickly burst onto the global scene, and some global networks—such as Via Campesina and those of some informal economy workers—gain in influence, there is also the reality of a fragmented global environmental or social justice movement (Utting et al. 2012; Bullard

and Müller 2012). UNRISD research has also examined the significant gap between the promise and practice of civil society networks, not least because of the disconnect that can exist between the professionalized NGOs that often lead such networks and social movements (Bendell and Ellersiek 2012).

The role of social movements is taken up by *Madhav Gadgil and Ramachandra Guha* in their analysis of ecological conflicts and the environmental movement in India (chapter 11). They note the key role of movements associated with natural resource conflicts over forests, water, fishing and mining to frame public debates, raise awareness, occasionally prompt policy reforms and facilitate redress. But they also note the tendency for movements often to diverge rather than converge. This may be due to North-South differences in orientation, between the “environmentalism of the rich” versus that of the poor, or to very different strands of environmentalism at the national level.

Business interests

A particularly thorny issue relates to the role of business interests in processes of change associated with sustainable development. Political economy analysis often sees elite business interests as inherently resistant to processes of social change and policies that are conducive to distributive justice and sustainability, not least due to the pressures to externalize social and environmental costs in the interest of profit maximization. But UNRISD research also identified the conditions under which business elites, for example, could put aside narrow class or competitive interests and adopt social and environmental innovations and enter into social pacts or broad-based coalitions. Analysis of the rise of “corporate environmentalism” in the 1990s (*Utting*, chapter 16), heightened managerial concern with environmental and social standards in global value chains has arisen partly in response to structural changes affecting production and coordination systems, new markets associated with ethical consumerism, as well as activism targeting the reputations of corporations and global brands. But this analysis also reveals the considerable limits of trends associated with corporate social responsibility via voluntary initiative. It suggests the need to promote a corporate accountability agenda where there is more emphasis on the role of state regulatory capacity, public policies, compliance with agreed standards and redress for individuals and communities negatively impacted by business activities.

Manuel Castells also takes up the role of business interests in chapter 7 when examining how the information technology revolution could reintegrate social development and economic growth. He points to the potential coalition of enlightened business interests and active citizenship: “it is in the interest of the most enlightened business groups to support the high road of informational development, linking up productivity, quality of life, and investment in technology and education throughout the world. And if there is a strong pressure of public opinion in the world in favour of this shared development strategy, with its potentially positive payoff in environmental conservation, governments may join, ultimately, or else be ousted by their citizens”.

Ongoing Challenges

Undue privileges, extremes of wealth and social injustice persist or have become even more pronounced during the decade. ...While various social services have continued to widen their coverage, problems of distribution, content and costs remain formidable. Channels for creative participation by the poor majority of the population in decisions that affect their livelihood, their social ties and their cultures

remain weak or altogether lacking. ...Even in the high-income industrialized countries a pervasive sense of crisis in life-styles and uncertainty concerning the future is evident. The plausibility of these societies as models for development or for welfare state policies has dwindled, along with their capacity to respond coherently to the kinds of demands made on them.

While the above description of the state of the world could easily have been written this year, it was in fact written by UNRISD in 1979 toward the end of the Second United Nations Development Decade. Re-reading certain UNRISD texts from the past, one may be excused for wondering what if anything has really changed vis-à-vis the task of forging development pathways conducive to inclusive and sustainable development.

United Nations summit processes—not least the 1992 Earth Summit and the 2000 Millennium Summit—have played a key role in mobilizing political will to address major problems of environmental degradation and poverty reduction. But here too progress has been weak on many fronts. A stocktaking carried out by UNEP in 2012 of progress related to 90 goals specified in more than 500 environmental treaties, found significant progress on only four (UNEP 2013:7). And, as the UN Secretary-General's report *A Life of Dignity for All* suggests, progress to date in achieving the MDGs has been extremely patchy (United Nations 2013).

These observations point to the very real problem of institutional and political resistance to change. But we also know from both the history of the welfare state and some gains in such areas as women's rights, poverty reduction in several countries, sustainable forestry management, and the growth of cooperatives and fair trade that progress associated with integrative and sustainable development can occur. The analysis in this volume related to social, political and structural dimensions points to the key role of proactive states, regulation, participation, collective action and broad-based coalitions or alliances in promoting sustainable development.

In the time remaining for the United Nations to finalize the post-MDG agenda, the key questions are whether such drivers of change can coalesce and whether action commensurate with the scale of the problem of unsustainable development will be taken. Already during the build-up to the Rio+20 conference and in subsequent forums linked to the post-2015 process (UN-NGLS 2013), various concerns have emerged about the likely direction of policy change. These relate, in particular, to the types of social, political and structural issues that have been the focus of UNRISD research. Will, for example, market-centred approaches to “green economy”—like many conservation and “green revolution” policies in the past—reinforce existing inequalities by benefiting primarily corporations and local elites and excluding the poor? Will good intentions associated with people-centred sustainable development goals be backed by interests, coalitions and forms of participation that can ensure effective design and implementation? Will the growing attention to inequality focus on select vulnerable groups only and ignore the accumulation of wealth by “the 1 per cent”? And will issues associated with modern consumer lifestyles and the effects of processes such as financialization, privatization and economic liberalization remain blind spots on the agenda? It is imperative that future research in this field continue to interrogate the social dimensions of sustainable development, the politics of policy change and the structural conditions underpinning social and environmental injustice. The task that UNRISD suggested for the United Nations in 1979 seems as pertinent today as it did then: “to take an active role in studying and pointing out the nature and importance of...contradictions, including those within its own activities and those of its member governments” (UNRISD, chapter 1).

References

- Barracough, Solon L. 1991. *An End to Hunger? The Social Origins of Food Strategies*. Zed Books, London.
- Bendell, Jem and Anne Ellersiek. 2012. "The potential and practice of civic networks." In Peter Utting, Mario Pianta and Anne Ellersiek (eds.), *Global Justice Activism and Policy Reform in Europe*. Routledge, New York.
- Bullard, Nicola and Tazio Müller. 2012. "Beyond the 'green economy': System change, not climate change?" *Development: Greening the Economy*. Special issue in partnership with UNRISD. Vol. 55, No. 1, March, pp. 54-62.
- Ghai, Dharam and Jessica M. Vivian (eds.). 1992. *Grassroots Environmental Action. People's Participation in Sustainable Development*. Routledge, London.
- Iglesias, Enrique and Solon L. Barracough. 1981. "Preface." In Marshall Wolfe, *Elusive Development*. UNRISD/ECLA/Statistical Publishing House, Hungary.
- Keck, Margaret E. and Kathryn Sikkink. 1998. *Activists beyond Borders: Advocacy Networks in International Politics*. Cornell University Press, Ithaca NY.
- Pearse, Andrew and Matthias Stiefel. 1979. *Enquiry into Participation: A Research Approach*. UNRISD, Geneva.
- Stiefel, Matthias and Marshall Wolfe. 1994. *A Voice for the Excluded: Popular Participation in Development—Utopia or Necessity?* Zed Books, London.
- UN-NGLS (United Nations Non-Governmental Liaison Service). 2013. *Advancing Regional Recommendations on the Post-2015 Development Agenda. A Consultation with Civil Society*. http://www.un-ngls.org/IMG/pdf/UN-NGLS_Post-2015_Regional_Consultation_September_2013.pdf, accessed on 31 October 2013.
- United Nations. 2013. *A Life of Dignity for All: Accelerating Progress towards the Millennium Development Goals and Advancing the United Nations Development Agenda Beyond 2015*. Sixty-eighth session of the UN General Assembly. UN Doc. No. A/68/202. 26 July. <http://www.un.org/millenniumgoals/pdf/A%20Life%20of%20Dignity%20for%20All.pdf>, accessed in October 2013.
- . 2012. *The Future We Want*. Sixty-sixth session of the UN General Assembly. UN Doc. No. A/RES/66/288. 11 September. http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E, accessed in October 2013.
- UNRISD (United Nations Research Institute for Social Development). 2010. *Combating Poverty and Inequality: Structural Change, Social Policy and Politics*. UNRISD, Geneva.
- Utting, Peter (ed.). 2000. *Forest Policy and Politics in the Philippines: The Dynamics of Participatory Conservation*. UNRISD/Ateneo de Manila University Press, Quezon City, Manila.
- Utting, Peter, Mario Pianta and Anne Ellersiek (eds.). 2012. *Global Justice Activism and Policy Reform in Europe*. Routledge, New York.
- WCED (World Commission on Environment and Development). 1987. *Our Common Future: Report of the World Commission on Environment and Development*. Oxford University Press, Oxford. <http://www.un-documents.net/wced-ocf.htm>, accessed on 31 October 2013.
- Wolfe, Marshall. 1996. *Elusive Development*. Zed Books, London.

PART I

INTEGRATIVE DEVELOPMENT

Chapter 1

Social Development and the International Development Strategy¹

UNRISD

(1979)

“Development”—both as a process of economic growth and structural change stimulated by an international programme of resource transfer and technical assistance and as an inspirational ideal or myth for mobilizing people and resources—is approaching an impasse visible since the 1960s.

Disillusionment with international development efforts has been increasing among groups in the developed countries whose support is vital for funding international programmes—both bilateral and multilateral—partly as a result of the obvious disparities between the social goals that were proclaimed for international aid and the realities that are daily becoming more apparent.

At the same time scepticism and cynicism in the developing countries are reinforced by the contradictions between proclaimed goals and what are perceived as being the real objectives of the aid givers. A parallel of disenchantment has become more and more pervasive among development establishments of all types—both bureaucratic and academic—as accumulating frustrations belie the optimistic idealism of the late 1950s and early 1960s. There is a real possibility that the “development movement” will fade into history, as have so many other partially altruistic crusades of the past.

A critical analysis of the role of social development during the 1970 International Development Strategy must examine first the international consensus on development objectives, the contrasts between these objectives and actual trends, the reasons that are frequently given to explain divergence between goals and trends, and questions of social policy in an international development strategy. In addition, this chapter suggests some considerations for a more effective international strategy.

¹ Originally published as *Social Development and the International Development Strategy* (UNRISD, 1979).

The International Consensus on Development Objectives

The broad international consensus on development goals is implicitly expressed in the Charter of the United Nations (United Nations 1945), the Universal Declaration of Human Rights (United Nations 1948), the International Covenant on Economic, Social and Cultural Rights (United Nations 1966), and the International Covenant on Civil and Political Rights (United Nations 1966). More specific aspects of this consensus have been elaborated in various United Nations declarations, resolutions and reports. These formulations, however, should be sharpened considerably for guiding an international strategy.

According to the 1970 International Development Strategy for the Second United Nations Development Decade:

The ultimate objective of development must be to bring about sustained improvement in the well-being of the individual and bestow benefits on all. If undue privileges, extremes of wealth and social injustices persist, then development fails in its essential purpose. (United Nations 1970:para.7)

[I]t is essential to bring about a more equitable distribution of income and wealth for promoting both social justice and efficiency of production, to raise substantially the level of employment, to achieve a greater degree of income security, to expand and improve facilities for education, health, nutrition, housing and social welfare, and to safeguard the environment. Thus, qualitative and structural changes in the society must go hand in hand with rapid economic growth, and existing disparities—regional, sectoral and social—should be substantially reduced. These objectives are both determining factors and end-results of development; they should therefore be viewed as integrated parts of the same dynamic process and would require a unified approach. (United Nations 1970:para.18)

This formulation, taken by itself, suggested a major advance in the international consensus on development. However, as was noted at the time, other parts of the strategy, devoted to economic growth targets, norms for international trade and financial resource transfers, and social sectoral objectives formulated in rather vague terms of “improvement”, reflected hardly at all the new emphasis on structural changes and a unified approach.

Contrasts between Objectives and Trends

As the 1970s near their end, there is no evidence that the real trends of economic growth and social change have corresponded any better than previously to the ultimate objective set forth above. Moreover, the spelling out of this objective in the strategy seems to have had no significant impact on actual policies.

“Undue privileges, extremes of wealth and social injustices persist” (United Nations 1970:para.7) or have become even more pronounced during the decade. The number of people living in extreme poverty and insecurity continues to increase. While various social services have continued to widen their coverage, problems of distribution, content and costs remain formidable. Channels for creative participation by the poor majority of the population in decisions that affect their livelihood, their social ties and their cultures remain weak or altogether lacking, and situations of repression of popular demands in the name of “sound development” policy alternate with violent rejections by the masses of such “development”.

Neither the concepts nor the data on social development issues such as income distribution, employment and access to services in developing countries are adequate for providing precise quantitative dimensions to these assertions about the persistence of social injustice, but the evidence appears overwhelming. Perhaps these trends are most strikingly illustrated and extensively documented in relation to the disintegration of self-provisioning farming systems with the expansion of commercial agriculture and the attendant marginalization, proletarianization and generally unfavourable incorporation of the peasantry into industrializing and increasingly market-oriented societies. These processes are affecting—mostly negatively—nearly one half of this planet's inhabitants.

For example, UNRISD's Green Revolution studies showed that two of the leading features in the crises of livelihood in most of the developing world are (i) the emergence of more capital-intensive, higher technology farming and (ii) the accelerating dissolution of self-provisioning agriculture, both as a major element in peasant farming and as a subsistence base for poorer rural strata.

The commercialization of production and exchange relations, the growing competition for good quality lands by entrepreneurial farms, and the increasing numbers of landless labourers and of families trying to extract a living from diminishing areas of poor quality lands all contribute to this process of decay. The food systems that have maintained humankind throughout most of its history are disintegrating before other forms of economic activity are able to offer alternative means of livelihood to the displaced peasantry.

The full significance of this transformation is not entirely comprehended, but it seems to imply deterioration in the nourishment of the already poor obliged to purchase food in unfavourable conditions from the market, massive migration to urban centres, growing unemployment and underemployment and a much higher level of conflict, disorder and repression.

The evidence from these UNRISD studies—and many others—indicates that social development as defined by the international consensus mentioned above and rapid economic growth, as conventionally measured, do not necessarily go together, at least for periods of several decades. There can be considerable social development during periods of relatively rapid growth as well as during periods of slow growth, while there can be a deterioration of social conditions in countries where GNP is growing rapidly as well as in those where it is stagnant. The problem is not so much one of productive capacity and its rate of growth as of the character and composition of production and its distribution.

Even in the high-income industrialized countries a pervasive sense of crisis in lifestyles and uncertainty concerning the future is evident. The plausibility of these societies as models for development or for welfare state policies has dwindled, along with their capacity to respond coherently to the kinds of demands made on them by the strategy. During the 1970s, radical challenges to the conventional wisdom on development and proposals for "another development" starting from a transformation of values and social relationships have flourished. However, very few national societies have even begun to act on such proposals, whose political and economic viability remains to be demonstrated.

Under these conditions, it would seem that a serious consideration of the reasons for the conflict between the social development objectives of the previous strategy and the real processes of social change and policy formulation should precede the inclusion of social development targets, or reaffirmations of the need for a unified approach to development, in an international strategy for the 1980s. It is even more important to

consider the difficulties encountered by governments that have tried, within the constraints of the present world order, to combine rapid economic growth with the achievement of social objectives corresponding to those of the strategy, whether or not inspired by it.

Unless these reasons can be stated in terms leading to valid guidelines for the future, the formulation of social objectives for an international development strategy risks becoming an empty ritual, interesting no one except the functionaries who take part in the debates and the drafting of documents.

Reasons for Divergence between Trends and Objectives

The reasons that can be offered for the gap between international social objectives and real trends are varied and at several different levels; they bear on the international order itself, on national societies, on policy making and planning mechanisms and methodologies, and on administrative systems. One can take as a working hypothesis that certain reasons of fundamental and nearly universal relevance can be found for trends that are so generalized, but that the upshot in each national society has derived from a different combination of factors, some of them specific to the society. A brief chapter such as the present one cannot do more than list and comment on certain explanations that must be taken into account in the effort to clear the way to a more effective international development strategy.

- Economic growth in the Third World, and the international financial transfers expected to stimulate such growth, have been insufficient to permit significant allocations to social programmes or other measures to reduce the dimensions of poverty. These limiting factors, aggravated by rapid demographic growth, are obviously important for many countries, but their adequacy as a general explanation must be discounted by the evidence that inequalities in incomes, consumption, opportunities for livelihood and access to services are particularly pronounced in many countries that have achieved relatively high rates of economic growth during the 1970s. The groups that were worst off at the beginning of the period have gained little or nothing even in absolute terms.
- The dependent internationalization of national economies, largely through the penetration of transnational enterprises, has been accompanied by continual shocks and changing pressures (violent international commodity price fluctuations, balance-of-payments crises, accelerated inflation, rising debt burdens, defensive struggles by endangered classes and interest groups) that have forced governments to concentrate on “crisis management”. Their capacity to apply socially oriented policies—or indeed any kind of long-term policies in pursuit of a coherent image of the national future—has been eroded. This is certainly the case of a good many governments that have embarked on innovative social programmes and then had to abandon them or reduce them to a token scale.
- Those forces in the central capitalist countries (industrialists, agribusinesses, dealers in raw materials, financial institutions, sources of technological innovation, military establishments) that have dominated the international economic order have not changed. Although their interests and tactics may have changed with the “transnationalization” of industrial production and other recent trends, they usually retain sufficient power, in alliance with dominant groups in many Third World countries, to prevent major changes in national styles of development or to penalize and distort attempts at such changes.
- Dependent modernization in the national societies of the Third World has meant implantation of the “consumer society” for affluent minorities and the entrenchment of structures of production serving such minorities—requiring highly uneven income distribution, along with deprivation and repression for a large part of the rest of the

population. These patterns and the expectations they have aroused among the sectors able to make themselves heard inhibit domestic capital accumulation and strengthen the position of transnational enterprises, which are the main suppliers of sophisticated consumer goods.

- The unsatisfied needs of the masses of the population are so great and so incompatible with present structures of production and distribution that any governmental initiatives attempting to mobilize popular participation in decisions on livelihood are likely to disrupt the structures and to encourage the expression of demands from the one side that cannot be satisfied in the short run. They are also likely to arouse politically unmanageable resistance from the groups—external and internal—that would have to meet part of the costs. As long as highly visible affluence in part of a national population contrasts flagrantly with extreme poverty and insecurity, exhortations to the poorer classes to limit their (generally modest) consumption aspirations in the name of development priorities and try to meet their minimum needs through aided self-help are bound to be ineffective.
- The continued dedication of a major portion of the world's productive resources—and a much greater part of most governments' revenues—to military and police establishments and to sophisticated armaments cannot but detract from the possibilities of achieving social development goals. Military-industrial complexes have grown even larger in most developed countries and have appeared in many developing ones. The productive capacities devoted to armaments could be redirected toward development objectives only at high cost and over a prolonged period. Moreover, these military-industrial complexes have become social forces in their own right, often crucially influencing government policies toward objectives of their own that diverge sharply from those of the international consensus on development goals.
- In demands for a New International Economic Order, the strongest voices are those of nationally dominant groups determined to obtain for their countries enhanced autonomy and fairer terms of trade and financing within an international order otherwise similar to the present. These groups continue to attach overriding importance to rapid economic growth. They are not convinced by arguments to the effect that improvement of productivity requires higher levels of popular consumption and more active participation by the masses, and are reluctant to confront politically difficult problems of the composition of economic growth, distribution of its fruits, and its environmental consequences.
- Demands for higher priority to be given to the human objectives of development and the satisfaction of basic needs have become identified, in the minds of a good many Third World policy makers, with diversionary tactics of the central capitalist countries. These rich industrialized nations have been unable or unwilling to meet the trade and financing demands of Third World countries, or to bring under control the inflation, economic stagnation and armaments competition that strike increasingly at their economic and political stability. This identification, whether justified or not, diminishes the moral authority of the social objectives.
- The expansion of social services and programmes in the Third World—one of the more positive features of the past two decades—has remained excessively dependent on norms and techniques from the high-income industrialized countries. This has raised their costs to levels precluding universalization, facilitated their monopolization by urban minorities and contributed to the “brain drain” among expensively trained professionals. International technical, financial and material (mainly food) aid earmarked for social programmes has proved a mixed blessing—to some extent helping national authorities evade questions of production and distribution for the satisfaction of basic needs.
- The range of technological alternatives accessible to Third World societies, conditioned by transnationalization and related processes, has continued to clash with the needs for expansion of employment, local initiative and production to meet basic needs. The international agencies, through the kinds of project they advise and finance, have supported this kind of technological dependency in spite of declarations calling for different lines of innovation.
- The governments that have tried to apply a socially oriented “unified approach” have encountered great difficulties—in addition to those mentioned above—deriving from

the lack of realistic tactical guidelines for the reconciliation of multiple objectives, inadequate information, inefficient administrative structures, inadequate financial resources and precarious political backing. Development planning methodologies up to the present have not taken this into account and neither have international “plans of action” that, in their combination, urge governments to advance rapidly on all fronts at once in an integrated manner.

Apparently only a few of the factors behind these varied explanations for the divergence between trends and objectives could be directly modified by the New International Economic Order and other policies that usually receive priority in discussions of the third United Nations Development Strategy. The accelerating historical process incorporating an ever-increasing proportion of the world’s population into societies organized around the imperatives of high-technology industrial and post-industrial economic systems can probably be influenced only marginally by planned international action. The terms of incorporation into the industrial world of different countries and social groups, however, vary greatly from time to time and from place to place. They depend chiefly upon the interactions of numerous contradictory social forces—special interest groups and broader supporting class interests—locally, nationally and internationally. As a result, development policies also tend to be varied and contradictory. The state is not a consistently rational, unified and benevolent entity, capable of choosing and entitled to choose a style of development, so powerful but so unimaginative that it seeks generalized advice and then acts on it. An international strategy has little chance of influencing events within real national societies as long as it relies on such a fallacious image of the nation state. The United Nations International Development Strategy should be designed to take the realities of contending social forces fully into account. It might then be able to influence some of these social forces that determine the real strategies of national societies as well as governments—and, hence, the terms of incorporation of weaker nations and social groups—in the directions indicated by the international consensus on development objectives.

Social Policy Questions in an International Development Strategy

One might conclude from the above considerations that the inclusion of social development objectives in a new International Development Strategy that would have to be applied at the national level is not very pertinent to what would actually happen at this level. The compartmentalization of activities by the United Nations and national governments along sectoral lines has led to a similar compartmentalization of development issues and targets in the strategy, but an exercise focusing on sectoral social targets is open to several specific objections:

- Targets such as those presented under the heading of “human development” in the 1970 strategy (United Nations 1970) are too general and conditional to amount to more than a checklist of good intentions. It is hard to imagine any government using them as criteria for policy formation. (“Developing countries will make vigorous efforts to improve...will adopt suitable national policies...will take steps to provide...will adopt measures which they deem necessary in accordance with their concept of development”, etc.) (United Nations 1970:paras. 66, 70, 71, 65)
- On the other hand, well-known differences in national capabilities, priority needs, social organization and government strategies preclude the formulation of more precise quantitative targets. Global targets would be meaningless and targets tailored to national situations would be unacceptable.

- The reliability and international comparability of statistical information on social questions—consisting mainly of national aggregates concealing wide internal disparities—remain too weak to support judgements on the attainability of quantitative targets in most policy areas, or on real progress toward meeting them, even if they should become otherwise acceptable.

A few social questions are inescapably international and deserve a struggle for precise commitments within the bargaining between representatives of rich and poor countries from which the new strategy will emerge. The questions of international migration and of the protection of world food supplies from domination by purely commercial or political considerations, in particular, require commitments. The right for all persons to have a place to live and seek their livelihood under conditions of equality with their fellows and the right to receive sufficient food to allay hunger and ensure health are surely among the most fundamental goals of development. There is abundant evidence that actions confined by national frontiers cannot at present fully honour these rights.

The debate over the strategy, however, will no doubt continue to centre on the negotiation of commitments concerning international trade and the transfer of financial resources to support national objectives of industrialization, rural development and exploitation of natural resources. These negotiations will probably be overshadowed by frustration at the failure of most of the rich countries to honour the commitments contained in the 1970 strategy and later declarations on a New International Economic Order, and by forebodings that their present economic predicaments and vacillations may make them not only less responsive to such obligations in the future but also a source of destabilization for the rest of the world. The governments of the poor countries are now in a better position to preach to the rich on the errors of their economic ways than vice versa, but this will not help them very much.

The signs of crisis in the international and national orders can elicit two diametrically opposed reactions in the debate. First, the participants can deliberately narrow their focus, reverting to the earlier conception of development as practically equivalent to capital accumulation leading to accelerated economic growth. The present crises can then be attributed to deviations from sound economic policy and illusions concerning the capacity of government interventions to promote social justice and human welfare; the “unified approach” then becomes a dangerously misleading ideal, tempting the international order and national governments into promising more than they can perform.

Second, the participants can move toward a fundamental rethinking of the meaning of development, strategies for development, and the roles of the actors in such strategies, aimed at overcoming the schizophrenic divorce between endorsement of “ultimate objectives” and “unified approaches” on the one hand, and furtherance of processes that are antithetical to human welfare and equality on the other. During the 1970s a number of initiatives for the study of development alternatives—under the auspices of the Dag Hammarskjöld Foundation, Bariloche Foundation and other institutions—laid the groundwork for such a rethinking.

It would be unrealistic to expect a strategy representing a world consensus of governments to incorporate systematically their diagnoses and prescriptions, but they will undoubtedly exert an influence that was lacking in 1970. In fact, certain propositions deriving from studies of development alternatives can have a legitimate place in an international strategy prepared within the constraints discussed above.

- Achievement of the “ultimate objectives” of development requires enhancement of decision-making capacity at the national level, which cannot be confined to decision making by the state. Organized and informed popular participation is essential, and such participation will entail tension with centralized technocratically oriented social as well as economic strategies. The proposition that the people must become subjects rather than objects of development is not new but its implications can no longer be evaded.
- A truly international strategy must confront the ecological and international equity case for modifying patterns and levels of consumption in the high-income industrialized countries. Unless this happens, market forces and the demonstration effect will continue to exert nefarious influences on the development of poor countries. The questioning of consumerist lifestyles by public opinion in these countries makes such a confrontation more practicable now than only a few years ago. The main legitimate objective of production is to meet the needs of all the population now and in the future. This means that international trade should be treated as an instrument rather than as the main element in the formulation of an international development strategy.
- The dethroning of imported and imitative “consumer societies” for affluent minorities in the developing countries will also be a key component in any development strategy deserving the allegiance of the masses and capable of securing sufficient domestic capital accumulation. There is no way of achieving development goals within the constraints of present-day technological knowledge, natural resource availabilities and organizational capabilities while at the same time meeting sophisticated consumerist demands of the rich countries and higher income groups in the poor countries as well as encouraging spread to wider strata. As one member of the Committee for Development Planning has argued, the starting point toward self-sustaining national development may be to “remove all signs of affluence”—thus freeing the national society, including the poor, from an influence that poses antidevelopmental goals and attitudes. Moreover, while consumption and production structures are codetermined, the former can be changed more quickly than the latter. To attempt to reach development goals on a global scale by merely augmenting production without changing consumption and production structures in both rich and poor countries is foredoomed to be an exercise in futility. Achievement of such changes would require massive educational efforts at all levels in coordination with effective supportive national and international policies.

Considerations for a More Effective International Strategy

The past two strategies seem to have been designed primarily to commit governments to certain lines of action and to the achievement of certain targets—and only secondarily as a strategy for the United Nations Secretariat and specialized agencies. Should not the strategy of the United Nations during the coming decade also include planning the actions of the United Nations family itself?

The international consensus on development objectives reflects in part humankind’s ideals and accumulated wisdom concerning the nature of society and the nature of human existence. It also reflects the judgement of practical politicians of what many of their constituents—who may not have much influence today but might have tomorrow—really want. The United Nations is not a supranational power but depends on its member governments. If it is to fulfil its role as a truly dynamic institution for promoting “development”, it must balance its responsiveness to those social forces that are not particularly interrelated in social development but are dominant in many nations with its creditability among the poorer classes, who may become dominant social forces in these countries in the future.

If these arguments are valid, then there are several things the United Nations and its specialized agencies should be emphasizing during the coming years to which they have

not been giving sufficient priority or systematic attention in the past. A few of the most important of these are noted below.

- As the “ultimate objectives” of development, defined by the international consensus, are “to bestow benefits on all”, the United Nations development activities should be focused on the ways and means of bringing such benefits to those who do not now enjoy them. Its possibilities to guide investments, services, research, technological transfers, technical assistance and the like, and to influence national policies, should be exercised with the promotion of those structural changes required for improvement of the livelihood of the poor as the guiding principle and criterion. Of course, what the United Nations can do practically in this direction will vary immensely from place to place and from time to time. But every effort should be made to expand productive capacity broadly defined in such a way that production and consumption structures are transformed toward meeting basic aspirations of the masses for a better life. Such an approach would be consistent with promoting rapid economic growth, greater social justice and the reduction of international and intranational inequalities. In practical terms, this criterion could be used to determine United Nations priorities in selecting, designing, financing and assisting in the implementation of “development” projects and programmes.
- As has been shown earlier, the will and capacity of governments to adopt policies conducive to the achievement of international development objectives depend in large measure upon the degree to which those groups that would benefit from them participate actively and effectively in policy decisions and their implementation at all levels—local, national, regional and international. Moreover, the widely accepted objectives of self-reliance and collective self-reliance require popular participation by definition. Popular participation, like meeting basic needs, is both a goal and a means of development. This is a fundamental sociopolitical issue, as it implies a redistribution of wealth and power among and within nations and social classes. The United Nations should do everything possible within its limitations to encourage participatory structures, processes, organization and research. Again, what can actually be done varies greatly from one situation to another. But something can be done everywhere the United Nations is present.
- This chapter has referred to the contradictions between goals and trends and to the contradictory nature of policies and of the social forces determining them. The United Nations could take an active role in studying and pointing out the nature and importance of these contradictions, including those within its own activities and those of its member governments. This implies critical evaluation by the United Nations—with full participation of those social groups that are ostensibly its intended beneficiaries—of the development projects and programmes in which it is directly or indirectly involved. Such evaluations should use as their principal criteria the international consensus on development objectives and, especially, the improvement of livelihood and of the terms of participation by the poor and powerless. A study of history is not conducive to optimism about the willingness or ability of any organization to unmask its own contradictions. But the stakes are too high not to make the attempt.
- The international consensus recognizes the need for a unified approach. Such an approach presupposes the critical analysis of each social system’s real possibilities to move toward alternative development policies and styles more consistent with the objectives of the international consensus. A unified approach must take into account resource, environmental, geographical, historical, demographic, cultural, social, economic, technological, political and institutional factors. It must pay particular attention to the interplay of actual and potential social forces, both internal and external, acting upon each social system. Better information must be generated about change processes, the distribution of power, income and wealth and the possibilities for desirable alternative development styles and programmes. It implies a systems approach in the broadest sense in which the world social system and countless subsystems at different levels are all interacting to determine development in each situation.

Obviously, such an approach requires the United Nations and its agencies to combine their preoccupations with crisis management to a greater degree than at present

within longer term research, critical evaluation and analysis, educational efforts and strategic planning. This will be difficult in view of the many contradictory forces acting upon and within national governments and the United Nations system. An approach such as the one discussed above appears necessary; however, a United Nations strategy for the 1980s that does not explicitly recognize the social contradictions of the real world, and is merely a repetition and refinement of the previous two international strategies, offers little possibility for contributing significantly to the achievement of international social development objectives.

Chapter 2

Why “Elusive” Development?¹

*Marshall Wolfe*²

(1996)

A Sceptic’s Apology

Certain institutional imperatives and a personal reaction to those imperatives have shaped *Elusive Development* (Wolfe 1996). The institutional imperatives derived from the efforts of United Nations organs in their early years to secure, for the “social”, equal status with the “economic” in development policy; then to prescribe a “unified approach to development analysis and planning” or to point the way to alternative “styles of development” responding better to human needs than the processes heretofore passing for development. Through continual changes in terminology and emphasis, these efforts have assumed prior consensus on certain values of human welfare and social justice, on “development” as an identifiable phenomenon essential to the realization of these values, and on the rationality and benevolence of certain entities—international organizations, international governments, voluntary associations, public opinion—jointly striving for development so conceived and capable of acting on developmental prescriptions.

I participated in these efforts during more than 30 years within the United Nations Secretariat, mainly through studies designed to answer some variant of the questions: Are national societies approximating more closely to the professed values of human welfare and social justice? What can the above entities prescribe or do to bring real trends into closer correspondence with these values? In my struggles with these questions I assumed that to make any contribution toward an honest answer was a worthwhile task. This conviction, however, has been only precariously reconcilable with the ritualism and evasiveness visible in the ways international discourse has commonly posed and answered the questions. The institutional imperatives to identify “progress” that took at face value

¹ Originally published as the introductory chapter to *Elusive Development* by Marshall Wolfe (third edition, UNRISD and Zed Books, 1996). UNRISD is grateful for Zed Books for permission to reproduce this work here.

² Marshall Wolfe worked on a joint venture with UNRISD, the United Nations Economic Commission for Latin America (ECLA) and UN Social Development Division in the 1970s on a unified approach to development analysis and planning.

the “national achievements” reported by governments, and the normative declarations approved by those governments, clashed with observable reality. In this reality, “development” emerged from complex and confused struggles at the international, national and local levels; the strivings of the different centres of power and social forces had consequences that differed from what any of them had wanted or expected; and the capacity of institutions and individuals making up the state to exercise foresight or guide national change processes in any coherent direction was problematic.

The studies were addressed mainly to governmental participants in United Nations meetings, as well as to planners, social programme administrators and other presumed makers and executors of development policy rather than to social scientists or the general public. In the minds of this intended audience, questions of values and broad objectives had already been resolved, through their formulation in the Universal Declaration of Human Rights and numerous resolutions endorsed by the representatives of practically all states.

The same audience was unreceptive to explorations of questions of theory. It supposed that such questions had already been answered satisfactorily, or that the answers could wait, or that raising the questions would endanger the international consensus on the meaning of development. In formal terms, through instructions to the Secretariat, it requested factual information and practical prescriptions, although it made little use of either.

The fate of international studies responding to these requests demonstrated the superficiality of concern with the “practical”. An intergovernmental body might direct the Secretariat to prepare a report for its next meeting on how to satisfy all human needs. Half a dozen functionaries would strain to do so. The result, which might be expected to have a reception equivalent to that of the great documentary landmarks of human history, would be tepidly approved or criticized and would disappear without trace into government archives and the storerooms of the issuing organization, rarely remembered even by other functionaries preparing subsequent “practical” reports. It might receive a brief mention in the more conscientious newspapers when it appeared, but scholarly journals would not trouble to review it.

In the writings in which I was able to express a personal reaction to the institutional imperatives, I evaded literal responses and instead tried to distinguish, in terms meaningful to the intended audience, the full range of problems that must be faced when proposing relevant prescriptions. Thus, I reformulated the questions posed above in the following terms. *If one really wants development responding to the values of human welfare and social justice, and if national societies and the international order present quite different patterns and trends, what can be done and by whom? To whom does one address advice? Who is entitled to give advice?*

Confrontation with such questions might well be unsettling to the more literal-minded believers in the developmental articles of faith and also to the wider circles that depend for status and livelihood on the perpetuation of the bureaucratic structures and ritualized meetings based on these articles. For nearly half a century the promotion of development has been an industry in which supply has created its own continually diversifying demand for “experts”, in which conferences beget conferences and declarations beget declarations, in which major “problem areas” incorporating different conceptions of developmental priorities continually hive off organizationally, receive symbolic recognition in “years” or “decades”, inflate themselves to cover all aspects of “development” and spawn infinitely ramifying coordinating mechanisms.

The same questions might well seem naive, lacking in theoretical grounding and misleading as guides to action to social scientists and ideologists who have never taken seriously the suppositions of potential international harmony and compatible social class interests in development. From their point of view, why should anyone, for reasons other than mystification, expect existing states—instruments of dominant social classes or transnational power centres—to introduce styles of development oriented to human welfare and social justice? Can a valid response be anything other than the identification of social forces capable of transforming the society and the state? Does not the intergovernmental and governmental machinery of development studies, meetings and socially oriented declarations deserve Tolstoy's taunt that the ruling classes would do anything for the people except get off their backs?

By the 1970s, the eclecticism of international discourse, the heterogeneity of the regimes participating in it, the pervasive dissatisfaction with what had been done in the name of development, and the quest for policy innovations had increasingly blurred the dividing line between developmentalist and revolutionary ideologies, and brought about an ambivalent receptivity to radical questioning of the articles of faith. The realities of the world, too harsh to be camouflaged by discreet reports, continually pressed the international organizations in this direction, while institutional continuity, vested interests in ongoing programmes and governmental admonitions to be "practical" continually forced them to try to pour the new wine into their old bottles, to assume that all states meant well and that practically all ideological positions were ultimately reconcilable. Thus, forms of social action that had emerged painfully from revolutionary struggles in specific national societies were discussed as if they were promising prescriptions that might be adopted at the will of any regime along with a selection from the more conventional tools of social action. One outcome was the proliferation of what I then labelled "utopias devised by committees".

The explorer of development might find himself in an uneasily eclectic position for reasons other than this institutional bias. The state, in its real manifestations in the world, was obviously far from being the rational, benevolent, autonomous entity that international deliberations and development programmes, particularly in their earlier stages, seemed to assume. "Development", under whatever interpretation, was not necessarily a central preoccupation of the forces controlling states or contending for power. At the same time, in a good many national societies, the state was asserting a degree of autonomy and an apparent capacity to determine the direction of social and economic change that could not have been predicted from the previous balance of social forces or the country's place in the international order. This tendency became more pronounced as the international order itself fell into crisis after crisis and the previous ties of dominance and dependence were strained or broken.

For better or worse, developmental voluntarism came to the fore in widely differing national societies and under widely differing leaderships. Various "agents of development" asserted their right and duty to set their societies on new paths. The outcome of their choices, whatever the intentions behind them, seemed ambiguous at best. Technobureaucratic regimes put off social justice objectives to a remote future or simply compelled the population to swallow the agents' assertion that they were being realized. Voluntarist miscalculations under populist and socialist regimes led to the further impoverishment and oppression of the masses that were supposed to benefit.

However, it seemed premature to conclude that the structural situations in which agents trying to manipulate the state found themselves ensured that whatever choices they

made would turn out badly. Could the state achieve a measure of autonomy and use it to do more good than harm? Under what circumstances? Could international interpretative and normative activities, linked to the formation of a confraternity of would-be agents of alternative styles of development, increase the likelihood of positive outcomes? Could the more cautious prescriptions for state action to satisfy basic needs and eliminate extreme poverty do more than foster conformity with systems of exploitation that must eventually perish? Did the more radical and egalitarian proposals—demanding, for example, delinking from the global economic system and extirpation from poor countries of transnationalized consumer societies for affluent minorities—risk giving fuel to “terrible simplifiers” who might replace a bad social order with a worse? I was unable to answer such questions to my own satisfaction.

The alternative political approaches that subordinated action by the state to transformation of the structures of power controlling the state and of the consciousness of the people exploited or excluded by current styles of development were more attractive but no more verifiable as means to “authentic development”. Efforts over the past century to identify social classes capable of transforming their societies and to devise strategies for them had had no incontrovertible successes. It did not seem legitimate to contrast the real shortcomings and hypocrisies of existing states with millennial post-revolutionary expectations. Moreover, the proponents of these approaches commonly went to the other extreme from the developmental prescription-mongers in disregarding the practical questions of how styles of development corresponding to their values might be constructed once power had come into the hands of social forces really wanting such development. Class struggles were real enough, and the possibility that in certain conjunctures the classes whose interests conflicted with the existing order would assume the roles expected of them could not be discounted. The weight of evidence suggested, however, that the capacity of these classes to act coherently would continue to be weaker and their dependence on the state greater than the ideologists aspiring to mobilize them would admit.

The major influences on the content of *Elusive Development* have been my experiences since the early 1960s in the United Nations Economic Commission for Latin America (ECLA—usually referred to by its Spanish acronym, CEPAL); my participation during the early 1970s in a research programme centred in the United Nations Research Institute for Social Development (UNRISD) and aimed at a “unified approach to development analysis and planning”; and my intermittent involvement between 1979 and 1993 in an UNRISD research programme on “popular participation in development”.

The first experience exposed me to a clear-cut advocacy position on development evolved by CEPAL since the late 1940s. This position emphasized the planning of state action within a capitalist framework to accelerate economic growth and influence the distribution of its fruits. The thinking behind it was primarily economic, preoccupied by capital accumulation and industrialization, but increasingly incorporated social concerns on its own terms, both as means to the end of higher productivity and as human welfare justifications of the striving for development. Within this setting, economists challenged sociologists and specialists in sectoral social programmes to identify and prescribe for “social obstacles” to development.

The experience also exposed me to the radical questioning of “developmentalism”, inspired by Marxist as well as religious ideologies, characteristic of the non-official intellectual climate of Latin America and increasingly represented within CEPAL during the 1960s.

It exposed me, lastly, to the real processes of economic, social and political change in Latin America that in the main confounded the expectations of developmentalists as well as revolutionaries, confronting both with the apparent consolidation in most of the region of a "peripheral capitalism" dominated by transnational enterprises and global finance capital, imitative, repressive, wasteful of human as well as natural resources, juxtaposing ostentatious consumerism and mass poverty.³

The second experience gave me a different vantage point for observation of the variants of pragmatism, determinism and utopianism that emerge when a multidisciplinary and multinational team tackles the what, why and how of development. Chapter 2 of *Elusive Development* describes this experience in some detail, with its genealogy in previous United Nations efforts to prescribe for development, and the different "approaches to a unified approach" that sought common ground during the course of the quest.

Chapters 3 and 4 attempt to set out, in an objective and classificatory way, the heterogeneous social and political structures and the links between national centre (or state) and social unit (or local group) that enter into policy making and policy frustration. These chapters are intended to demonstrate to seekers for technocratic or normative-utopian development prescriptions the intractability of certain features of the real world that they might otherwise disregard. These chapters are obviously vulnerable to criticism in their pretension to cover a very wide range of national and local phenomena, without sufficient digestion of the enormous body of theoretical literature and empirical studies of these questions, and without distinguishing clearly between the basic and universal on the one side, and the conjunctural and localized on the other.

The main justification for returning to the history of the "unified approach" is that the United Nations family of organizations has re-embarked on similar quests under the labels of "social integration" and "integrated approaches" leading up to the 1995 World Summit for Social Development, with typical institutional amnesia about the past.

The third experience, entered into after my retirement from the United Nations Secretariat in 1978, took me away from the world of economists, planners, specialists in social programmes and international bureaucrats prescribing for development, to the world of peoples being incorporated into the real processes of economic growth and societal change with little or no control over the terms of their incorporation; of their organized efforts to participate in "development" or, more often, defend themselves against it; and of the ideologists and activists aspiring to guide, mobilize or "conscientize" them.⁴

The present text is the first chapter of the third edition published under the title *Elusive Development*. In each version the more obsolescent or repetitive chapters have been dropped, others rewritten so as to camouflage past illusions, and more recent efforts added to grapple with the old questions, in a process similar to that of the man who kept the same pocketknife but with three new blades and two new handles.⁵ The economically

³ The later diagnoses of Dr. Raúl Prebisch, principal architect of the CEPAL position and no friend to revolutionary socialist alternatives, support this picture. See Prebisch (1976, 1978). Latin America is now emerging from the economic and political crises of the 1980s in many respects transformed but with its variants of peripheral capitalism seemingly more consolidated but as wasteful and inequitable as ever.

⁴ The findings of this team research programme under the auspices of UNRISD were published in Stiefel and Wolfe 1994.

⁵ The first version was published in Spanish (Wolfe 1976a) and in Portuguese (Wolfe 1976b), and the second version (Wolfe 1981) was published jointly by UNRISD and the United Nations Economic Commission for Latin America (ECLA or CEPAL).

or technocratically oriented conceptions of “development planning” to which many of my earlier arguments were addressed are by now as obsolete as “real socialism”.

This 1996 version follows upon my retirement to a village in Vermont and participant observation of parish-pump politics and issue-oriented group activities—experiences throwing new light on the gap between broad policy prescriptions and the ways in which limited achievements emerge from the interplay of values, priorities, prejudices and apathies.

A Wastebasket for Commonplaces

Throughout my inconclusive struggles with the development Proteus, I have tried to purge my arguments of certain commonplaces of international policy-oriented discourse. Contributions to this discourse that in other respects radically challenge the conventional developmental wisdom continue to fall back on these formulas. Since these are symptomatic of reluctance or institutional inability to face the full implications of the failure of the real processes of economic growth and social modernization to respond to the hopes invested in them, it may be well to point them out here.

1. *“Growing awareness”* or *“increasing recognition”*: these are among the most venerable and overworked formulas in documents on social questions, and are well represented in discussions of other aspects of development. They generally express the user’s hope of lending an aura of consensus to his own conviction that something ought to be done, while evading the identification of agents able and willing to act effectively. The continuing revolution in communication media indeed makes more people than ever before aware of a wide range of urgent problems, but the predominant response seems to be growing bafflement and increasing apathy.

2. *Use of the first person plural* to indicate that the user arrogates to himself representation of all persons of good will, or of the masses refusing to suffer any longer their poverty and exploitation. This use of “we” has become particularly prominent in the declarations of semi-official and unofficial international advisory groups and conferences, in which “we” (lumping together officialdom, social scientists, public opinion and the poor) are assumed to share awarenesses and demands that would in reality seem subversive to some of the parties spoken for, inadequate and ingenuous to others, and incomprehensible to the majorities that are preoccupied with survival rather than “development”. In a condescending variant, “we” are supposed to be the unenlightened public that is responsible for the social injustices and environmental menaces that the user is denouncing.

3. *Warnings of catastrophe* for the international order or the national societies unless they transform themselves promptly. These formulas, closely related to the growing awarenesses, are directed to the centres of power and wealth to persuade them that it is in their own interest to lead or at least acquiesce in radical reforms and renunciation of privileges. The centres of power are by now quite accustomed to paying lip-service to the importance of the warnings, but probably continue to feel in private that they can shift to others the price of whatever catastrophes may come and that the alternatives offered are neither convincing nor convenient. Renewed confidence in the market as sole legitimate determinant of the future relieves them of responsibility. Moreover, experience indicates that national societies as well as the international order itself can continue to function,

however irrationally and unjustly, modifying but not transforming structures whose imminent collapse has been predicted for many years, and even reconstitute these structures after real catastrophe has come upon them.

4. *Personification* of "countries" as actors, as in the assertion that "countries" have a right to "choose" their styles of development, free of external pressures. The structure of intergovernmental organizations composed of formally sovereign states has made this an unavoidable fiction, but it has obscured the reality made plain in other passages of the same declarations: if styles of development are chosen at all, the choices are made by organized social forces within countries that must try to impose their choices on the rest of the society by persuasion, neutralization or coercion, and that must manoeuvre within constraints imposed by the country's place in the international order.

5. *Division* of the personified countries into two groups—rich and poor, developed and developing, central and peripheral, First World and Third World, North and South and so on—with the "real socialist" Second World up to the 1990s generally considered a rival model for the rich, developed, central category. The division corresponds to certain real characteristics of the world order, and it had an instrumental utility in promoting joint action by the "developing" or "poor" countries, but it has been misleading in several important respects:

- It fostered a supposition that the countries of the first group had found the path to permanent gains in material well-being and social harmony, and that their evolution and the economic laws derived from it offered a model for the rest of the world. One might expect this supposition—one of the earlier articles of faith of developmentalism—to have been too cruelly refuted since the 1970s by events in "capitalist" as well as "real socialist" countries to serve even as an inspiring myth. Nevertheless, the supposition seems to have consolidated itself in the former countries in a "culture of contentment" paradoxically coexisting with inquietude over the unmanageable accumulation of menaces and perversities in the system.⁶
- It fostered a supposition that each category of countries is homogeneous in essential characteristics, with common interests and problems. In fact, both categories are extremely heterogeneous in their power structures, resource bases, population characteristics and roles in the international order, at the same time that the globalization of economies and cultures is binding the first category more closely to the second. Political ideologies and "development" policies have become somewhat more uniform within and between categories, but this uniformity will not necessarily persist. Formulas assuming that the "poor" countries and the "rich" countries can take uniform positions vis-à-vis each other—whether of cooperation or confrontation, aid or exploitation—obscure the real complexity of the alternatives for alignments and ties of domination or self-defence.
- The dichotomization of countries, like the "we" formula, fostered a supposition that the dominant forces of the "poor" countries shared in the poverty, or at least in a determination to do something about it. In fact, the spokesmen for most of these countries had no personal reasons to envy the incomes and lifestyles of their counterparts in the "rich" countries and this, as press comments in the latter countries demonstrated, weakened the credibility of their appeals for a new international economic order. The same international reports that personified the poor countries and attributed to their leaders a determination to eliminate poverty presented

⁶ "What is new in the so-called capitalist countries—and this is a vital point—is that the controlling contentment and resulting belief is now that of the many, not just of the few. It operates under the compelling cover of democracy, albeit a democracy not of all citizens but of those who, in defense of their social and economic advantage, actually go to the polls. The result is government that is accommodated not to reality or common need but to the belief of the contented, who are now the majority of those who vote." (Galbraith 1993:10.)

evidence that increases in the wealth of these countries and in the operational capacity of their governments generally had no positive impact on the poverty of the masses.

6. International discourse has continually referred to “*social actors*” expected to “*play roles*” in development. This image suggests a drama in which the actors have roles defined for them, based on development dramas already performed elsewhere or on eschatological visions concerning the destiny of classes and societies. One might imagine a stage on which certain actors, convinced that they need a script to give sense to their performances, have tried to play roles that are incompatible with the scripts preferred by other actors on the same stage, or have strained to combine incompatible roles in their own performances. Meanwhile, the majority of participants in the drama of development—the dominant as well as the dominated classes—have improvised and reacted to continually changing opportunities and shocks, paying little heed to the scripts.

Existential Development

The exploration of approaches to development undertaken in *Elusive Development* will encounter many different actors “playing roles” within many different combinations of opportunities and constraints, in pursuit of an objective that is continually being redefined, falling back on verbal and organizational rituals for lack of ability to foresee and control the course of events, and sometimes violently rejecting reality for its failure to conform to their conceptions and values. One finds, internationally and nationally, a renewed affirmation of the need for different, more comprehensive, ideally “integrated” approaches to development, combined with real concentrations of power, resources and public attention on aims that are either irrelevant to such approaches or obviously incompatible with them.

The legitimacy and relevance of the present exploration depend on the supposition that the present international rethinking of development is not altogether a mystification, condemned by the societal and institutional positions of its practitioners to offer solutions that will always be too little and too late, but that mystification is bound to creep in, through the conscious or unconscious need of the practitioners to *appear* to be facing challenges boldly while really evading them. If the exploration stimulates some of the actors in development to think harder about what they are doing and wonder whether they should not be doing something else, the purpose is served.

The practitioner might well retort: “What positive, practical proposals do you have? Are you not really insinuating that the audience you address is irredeemably incapable of doing anything worthwhile?”

Of course, *Elusive Development* does not set out to demolish previous “How to Develop” prescriptions and then propose an infallible new one, nor does it reject previous societal candidates for the honour of leading the way to development and then nominate different agents who can do the job. It really points to an existential approach to development, in which the actors should come to terms with an awareness that theirs is a possibly Sisyphean task of trying to impose a measure of value-oriented rationality on realities that will remain permanently recalcitrant to such rationality. Or one might return to the hackneyed image of the blind men and the elephant; possibly the elephant they are trying to describe does not exist beyond their ability to imagine it and “integrate” their fragmentary images.

All societies that survive will have to strive to "develop" in the sense of enhancing their capacity to function over the long term for the well-being of their members. None will ever reach a safe terminal state of "being developed". Apparent success may, in the long term, lead into a trap of relative incapacity for policy innovation—as a good many "overdeveloped" as well as "developing" countries are now demonstrating. From this point of view, all national societies at all points in time confront a certain range of accessible alternatives with different combinations of advantages and disadvantages. The capacity of their dominant forces to choose specific alternatives depends not only on objective conditions but also on their subjective appreciation of these conditions and the momentum of what has already been done. Choices or failures to choose are continually closing doors and opening different ones.

Ideally, the striving for development should embrace the whole human race, but the international participants should attach a positive value to diversity in styles of development, if only for the sake of experimentation and cross-fertilization, as long as these styles do not diverge grossly from the international consensus on human rights and values. Within these limits, each society should be free to evolve its own style and count on the cooperation it needs to do so. In practice, however, the actors trying to realize this ideal need to pay careful attention to external constraints and the internal forces linked to these constraints, and try to manoeuvre within the limits of the practicable. (Even definition of the boundaries within which "choice" can be meaningful is difficult in view of the heterogeneity of formally sovereign states within the world system.) The meeting of needs through international cooperation remains precarious, inhibiting and in great part illusory; the actors cannot dispense with such cooperation, but neither can they lean on it, especially when they leave the conventional paths. As the crises of the 1980s demonstrated, the sources of financing have straitjackets waiting if the actors are overconfident or unlucky.

Recognition during the 1970s of the legitimacy of alternative styles of development and the possibility of value-oriented choice was a step forward from previous conceptions of development as a process uniform for all countries, following its own laws, to be discovered and obeyed under penalty of permanent backwardness, but it raised more questions than it answered: Who was entitled to choose a national style of development and adjudicate the gains and losses? Could styles of development corresponding to international norms for social justice—within the limits of austerity and sacrifice set by national resources supplemented by problematic external cooperation and narrowed by foreseeable external sabotage—ever be acceptable to the articulate and organized social groups whose acquiescence would be essential? Would even the political leaders, ideologists and planners who were calling for more equitable and autonomous development accept the implications for their own lifestyles? Would national societies in the real world be able to achieve the degree of consensus and rational organization called for except at a price that would distort each initiative into something different from the image of the just and free future society informing it at its beginning?

The Present and the Future

If one tries to summarize the main features of the 1990s and the present stage of efforts to describe and prescribe for the imaginary elephant, the paradoxes of economic and cultural globalization stand out. Interdependence and intercommunication have become

even more pervasive and multidimensional than could have been expected in the recent past. The imperatives of participation in the world system, together with the perverse outcomes of national experiments in socialism and populism, seem to have ruled out deliberate de-linking and state-managed quests for alternative styles of development. The same trends, however, have generated new forms of diversity between and within countries and divergent prospects for societal evolution or disintegration. These prospects derive partly from a differential capacity for advantageous incorporation in the global order, and partly from contradictions that threaten the long-term viability of the order itself.

The technical capacity of international organizations, states and other institutions to inform themselves about what was happening has increased enormously, while confidence in their ability to digest the information and intervene in pursuance of clear purposes has eroded. This general “crisis of responsibilities” manifests itself quite differently according to region and historical background.

In the “rich” countries of Europe and North America one finds the majority “culture of contentment” described by Galbraith (1993) contending with a “culture of insecurity”, a “culture of complaint” (Hughes 1993) and a “culture of exclusion”. A sense of unlimited possibilities for rising consumption and technological innovation coexists with an uneasy awareness of a wide range of menaces, dysfunctions and inequities. Alienation from the political system and the state coexists with organized pressures on the state to “solve problems” and protect group interests.

In most of East and Southeast Asia one finds aggressive participation in the world market and dynamic economic expansion. Millions of people are emerging aggressively from poverty into “cultures of opportunity”. The forces controlling states try to reconcile profit-oriented individualism with social discipline. Problems of population increase, environmental degradation, exclusion from livelihood of the rural people least able to cope with the market economy, and political corruption trouble these forces, but responses are subordinated to the safeguarding of economic dynamism. China—once the utopia of advocates of egalitarian, participatory development—has become the most extreme and paradoxical example of these trends.⁷

In Latin America one finds a precarious recovery from the debt traps and economic crises of the 1980s, with deepening contradictions between resurgent political democracy and increasing concentration of wealth accompanied by insecurity or impoverishment for the majority. State policies are constrained by market imperatives enforced by lending agencies, on the one side; and by endemic corruption, political stalemates and the inability to eliminate arbitrary violence by military and police agents of the state, on the other.

In most of Africa, one finds long-continued economic decline and majority impoverishment; collapse of state schemes for original styles of development followed by generally ineffective efforts to apply the structural adjustment prescriptions of lending agencies; increasing irrelevance to the needs of the global order; alienation of people from states perceived as repressive and corrupt; and in a good many cases state disintegration into endemic civil conflict.

In the Middle East, one finds a paradoxical combination of regional self-identification on the basis of culture and religion with intense rivalries between states and

⁷ For a recent expression of bafflement at the implications of China's trajectory, see Kristof and WuDunn 1994.

groups within states. As elsewhere, the outcome of state-managed development policies has been remote from growth as well as equity objectives. Minorities have gained, while majorities have remained in poverty or been excluded from previous sources of livelihood. Here a relatively systematic and region-wide political-religious reaction against the "modern" state and the norms of the global order itself has emerged, in contradictory combinations with state efforts to intervene aggressively in the global order through control of oil exports.

In the successors to the "real socialist" states of the recent past, one finds traumatic transitions from a period when the state assumed all-inclusive responsibilities for managing development and enforced assent to exaggerated claims of achievement. Here more than elsewhere globalization has meant a wholesale rejection of the past, an embrace of market forces, private enterprise, pluralist democracy and consumerism, accompanied by radical delegitimization of state power, on the one hand, and the persistence of economic and political power centres deprived of ideological justification, on the other. While the experiences of the successor states in managing these reversals have differed widely, the reversals have notoriously generated insecurity, widening inequalities, exclusion of part of the active population from employment, and disintegration of the pre-existing safety net of social services and subsidies. The sequence of events and the inability of new, largely imported, rules of the game to achieve a reasonable degree of consensus have stimulated a ruthless pursuit of self-interest and a flaunting of consumerism among minorities; and sullen resentment, scapegoating, xenophobia or hopelessness elsewhere in the populations.

Pluralist Democracy

Affirmation of pluralist democracy as the main source of legitimacy of the state has accompanied globalization, in spite of incongruities with other dimensions of this process. Open political competition and contested elections have emerged in more countries than ever before, although a good many national regimes continue to function in flat contradiction to this norm. International linkages among issue-oriented and interest-group organizations (human rights, environmental and gender protagonists, trade unions and so on) as well as political parties point to a kind of globalization of democratic strivings contesting global market-dominated policy imperatives.

At the same time, the implantation of a uniform model for pluralist democracy clashes with the weakness or absence in many parts of the world of supportive institutions of the civil society and with different national traditions and expectations concerning political power. The apparent extension of democratic choice to national majorities has coincided with a shrinkage in the capacity of the state to respond to or reconcile conflicting demands with resources, most striking in the countries subject to structural adjustment programmes but visible almost everywhere. Governments and political parties are more resigned than previously to multiple constraints and veto powers from lending agencies, potential investors of capital, the military and the middle classes terrified of inflation and hostile to taxation. The majority might well feel that it is invited to enjoy democratic choice only as long as it refrains from making use of it to advance its own perceived interests. The label "low-intensity democracy" seems appropriate for the pattern of promise and frustration (Gills et al. 1993).

From the standpoint of the quest for “human development” or “sustainable development”, the affirmation of pluralist democracy has other implications inseparable from those summarized above. In the 1970s and earlier, a good many advocates of alternative styles of development as well as advocates of state-guided capitalism were prepared to endorse mobilization regimes directed by vanguard parties and charismatic leaders as more promising and even more democratic agents of development than parliamentary regimes.

Different advocates identified certain countries as “good examples” of development under democratic-authoritarian auspices: China and Tanzania were coupled as examples of egalitarian, communitarian, anti-bureaucratic mobilization; former Yugoslavia as an example of workers’ management and ethnic harmony; and Mexico as an example of political stability and sustained economic growth under single-party direction. These and other “functioning utopias” have proved to be mirages. One is back to Winston Churchill’s characterization of democracy as the worst form of government except for all the others.

Pluralist democracy, according to one recent exploration of its relevance to the world of today, implies a juxtaposition or balancing of the representation of the interests of majorities, citizenship and limitation of power through fundamental rights:

To be democratic, a political system must recognize the existence of inescapable conflicts of values, and thus not accept any central principle of organization of societies, neither rationality nor cultural specificity... Everything that affirms or imposes a one best way...a norm of conduct identified with the universality of reason, is a menace for democracy. (Touraine 1994—my translation)

A compatible approach insists that “outcomes of the democratic process are uncertain, indeterminate *ex ante*”; and it is “the people, political forces competing to promote their interests and values, who determine what these outcomes will be...Democratization is an act of subjecting all interests to competition, of institutionalizing uncertainty” (Przeworski 1991).

Such formulations imply that, to the extent that democratic values and procedures influence human affairs, people will be able to make meaningful political choices, defend their perceived interests and set limits to the dictates of technocrats, bureaucrats, ideologists and concentrators of economic power. They even imply that the majority has a right to be wrong in the eyes of these diverse agents of policy. They do not altogether exclude the legitimacy of normative approaches to development, but imply that these should enter the political arena without pretensions to infallibility. In any case, infallible voluntaristic prescriptions for development are now less formidable rivals to democratic choice than is the seemingly irresistible but precarious momentum of the world system itself. Under its imperatives the practice of democracy at the national level risks exhaustion in resentful impotence.

A composite description based on several real national situations may help to clarify the paradoxical necessity and elusiveness of pluralist democracy in the world today.

Certain states meet conventional criteria for nationhood and also for formally democratic procedures. They have periodic elections, vigorous interparty competition, varied and autonomous institutions in the civil society, and free communication media reaching the majority of the population. At the same time, their capacity for coherent policy making has been semi-paralysed by institutionalized corruption; the exercise of arbitrary violence with impunity by the military, police, landowners and mafias; economic processes that are dynamic but anarchic, generating environmental devastation and

persistent high inflation; and a gap in power, wealth and access to education and other public services between social classes so wide that much of the population is excluded from democratic participation except in the form of electoral manipulation. To the groups holding political and economic power, as well as to the large middle strata striving desperately to achieve "modern" standards of consumption, the excluded are invisible while passive but pose a threat of anarchy if they make demands.

In such a situation, various political movements and issue-oriented organizations involving minorities among the middle strata as well as among the excluded have their own conceptions of responsibilities for democratic social integration and are struggling heroically to make them effective. Some of these conceptions focus on modernization and democratization of the state, while others distrust the state, avoid participation in national party politics and look to widening autonomy for new localized social movements within the civil society. The national regime representing the state claims wide responsibilities for development and social justice, but in practice can hardly go beyond opportunistic crisis management. The state as public sector and the array of provincial and local administrations have components that function effectively and democratically and others undergoing disintegration or in the hands of self-serving cliques. For the groups struggling to modernize and democratize the society, including important elements within the public sector, participation in international discourse on these questions, information on comparable problems and tactics elsewhere and, of course, material support are important. At the same time, it is hard for them to reconcile their perceptions of the urgency of societal transformation and redistribution of wealth and power with the self-limited open-ended conception of pluralist democracy summarized above. Such actors have probably had their fill of universalistic ideologies and policy prescriptions from abroad during past eras of state-managed development optimism, the Cold War, and subsequent debt traps and structural adjustment programmes.

A good many other national patterns could be distinguished within the world system of states, from stable welfare states with long traditions of pluralist democracy—now grappling with the suspicion that visions of higher levels of consumption and greater social equality with each generation were mirages—to states controlled through terror in the hands of cynically predatory armed forces. Of course, none of these patterns can be static. Economic and cultural globalization and the division of humanity into a system of interacting states that are formally equal in rights and similar in responsibilities have not made their potential future evolutions more uniform. If anything, the intensity of global interactions along with the precarious implantation of pluralist democracy make the range of possible futures more diverse.

Humanity is entering into an "information economy" or "Information Age" according to various recent expositions. One salient aspect is "the ever-growing role played by the manipulation of symbols in the organization of production and the enhancement of productivity" (Castells 1993).⁸ This dimension of globalization introduces unprecedented and continually changing relationships between systems of production, distribution and consumption, on the one hand, and requirements for human labour and educational qualifications for labour, on the other. Even the more optimistic prognoses for the Information Age point to a future of intense destabilization, rather similar to Marx and Engels' (1848) summing up of capitalism in the *Communist*

⁸ Editors' note: See also chapter 7 in the present volume.

Manifesto.⁹ It is not clear how any “development policies” accessible to states or the world system of states can cope with the marginalization of increasing numbers of people and whole countries that are superfluous or unable to qualify themselves to enter it.

Other aspects of the Information Age are equally unsettling vis-à-vis self-limiting pluralist democracy. People throughout the world have access to more varied information (and disinformation) than ever before. The requisites for keeping up with the information revolution become more formidable, both because of the dizzying rapidity of changes in media—from press to radio to television to videotapes to computer networks—and because of the diversity of messages. People from all classes and backgrounds are in a sense excluded from confidence in being able to grasp the implications of the scientific, technological, economic, political, cultural, demographic and environmental transformations of the world today, while they are bombarded by presentations, interpretations and warnings concerning them accompanied by stimuli to consume. While the distribution of sources of information is naturally uneven, some modern media penetrate even remote and “traditional” rural communities.

For some people, the Information Age means an unprecedentedly wide range of choices in lifestyles, gender and age group identifications, and an equally wide range of causes that can be embraced so as to achieve a sense of influencing change and warding off menaces. For others, it means an unprecedented range of possible survival strategies, all of them subject to unforeseeable risks. For still others, it offers vicarious satisfactions in the form of exhaustive information on sports events, the private lives of celebrities, and so on, to the practical exclusion of more unsettling information. Brazilian and Mexican soap operas have become the most appealing aspect of the Information Age to millions of people in very different cultural settings. The flood of unsettling information and cultural stimuli also generates xenophobic and fundamentalist reactions that make use of the same techniques for dissemination. Among young people it supports the globalization of continually changing youth cultures or anomic frustration and resort to violence.

In such a world, the supposition that some rational, benevolent but unimaginative entity is waiting to receive good advice and then act on it is hardly tenable. Nor is the supposition that a conspiracy of powerholders, responsible for the lamentable state of humanity, is waiting to be exposed and vanquished. One must face the prospect of permanent struggle, with challenges changing into different challenges. One must try to keep in balance the recognition that ideas have consequences and the recognition that these consequences emerge in the midst of confusion, perversion, myth making and human preoccupations only precariously related to the values that inform discourse on development.

References

- Castells, Manuel. 1993. “The informational economy and the new international division of labor.” In Martin Carnoy, Manuel Castells, Stephen S. Cohen and Fernando Henrique Cardoso (eds.), *The New Global Economy in the Information Age: Reflections on our Changing World*. Pennsylvania State University Press, University Park PA.

⁹ “Society, community, family are all conserving institutions. They try to maintain stability and to prevent, or at least to slow, change. But the organization of the post-capitalist society of organizations is a *destabilizer*. Because its function is to put knowledge to work—on tools, processes and products; on knowledge itself—it must be organized for constant change...It must be organized for systematic abandonment of the established, the customary, the familiar, the comfortable, whether products, services and processes, human and social relationships, skills or organizations themselves.” (Drucker 1993:57)

- Drucker, Peter F. 1993. *Post-Capitalist Society*. Butterworth-Heinemann, Oxford.
- Galbraith, John Kenneth. 1993. *The Culture of Contentment*. Penguin Books, London.
- Gills, Barry, Joel Rocamora and Richard Wilson (eds.). 1993. *Low Intensity Democracy: Political Power in the New World Order*. Pluto Press, London and Boulder CO.
- Hughes, Robert. 1993. *Culture of Complaint: The Fraying of America*. Warner Books, New York.
- Kristof, Nicholas D. and Sheryl WuDunn. 1994. *China Wakes: The Struggle for the Soul of a Rising Power*. Times Books, New York.
- Marx, Karl and Friedrich Engels. 1848. *The Communist Manifesto*.
- Prebisch, Raúl. 1978. "Socio-economic structure and crisis of peripheral capitalism." *CEPAL Review*, No. 6, pp. 159–252.
- . 1976. "A critique of peripheral capitalism." *CEPAL Review*, No. 1, pp. 9–76.
- Przeworski, Adam. 1991. *Democracy and the Market: Political and Economic Reforms in Eastern Europe and Latin America*. Cambridge University Press, Cambridge.
- Stiefel, Matthias and Marshall Wolfe. 1994. *A Voice for the Excluded: Popular Participation in Development—Utopia or Necessity?* Zed Books, London.
- Touraine, Alain. 1994. *Qu'est-ce que la démocratie?* Fayard, Paris.
- Wolfe, Marshall. 1996. *Elusive Development*. Zed Books, London.
- . 1981. *Elusive Development*. UNRISD and the United Nations Commission for Latin America, Geneva.
- . 1976a. *El desarrollo esquivo: Exploraciones en la política social y la realidad sociopolítica*. Fondo de Cultura Económica, Mexico City.
- . 1976b. *Desenvolvimento: para quê e para quem? Indagações sobre política social e realidade político-social*. Editora Paz e Terra, Rio de Janeiro.

Chapter 3

Sustainable Development and Popular Participation: A Framework for Analysis¹

*Michael Redclift*²

(1992)

Introduction

Both “sustainable development” and “environmental management” have become buzz-words in development policy circles, but the discussion surrounding these terms pays scant attention to the way in which people in developing countries participate in the management of their resource base and, through their participation, help to transform the practice of environmental management. In addressing these issues, this chapter seeks to correct two kinds of bias that exist in much of the sustainable development debate. First, there is a bias toward “managerialism” rather than resource management, stemming from a top-down approach to local-level development. Second, there is a tendency to treat “sustainable development” as merely a variation of the prevailing Northern, economic-centred world-view of development problems, and to see sustainability as a goal that can be attained through making adjustments to the standard development models.

This chapter, in contrast, will argue that the concept of sustainable development needs to be recognized as an alternative to the prevailing view, rather than a modification of it. The approach taken here reflects a way of examining resource conflicts, through political economy that some might not share. The emphasis is placed on the structural determinants of local-level decision making, at the local, national and international levels, rather than on a more “human resources” or interactional approach. At the same time, the analysis emphasizes that what distinguishes environmental concerns in the North

¹ Originally published as chapter 2 in *Grassroots Environmental Action: People's Participation in Sustainable Development*, edited by Dharam Ghai and Jessica Vivian (UNRISD and Routledge, 1992). UNRISD is grateful to Routledge/Taylor&Francis for permission to reproduce this work here.

² At the time of writing, Michael Redclift was Research Coordinator of the Economic and Social Research Council programme on Global Environmental Change, and Reader in Rural Sociology at Wye College, University of London, United Kingdom.

from those of poor areas of the South is not simply material conditions, but different epistemologies, different systems of knowledge.

The first sections of this chapter analyse the concept of sustainable development, and seek to enlarge the conceptual discussion on this topic in order to take more account of some of the inconsistencies and limitations of the definitions now available. The current thinking in environmental economics—which has gained favour within some international development agencies and which emphasizes the use of calculations of the environment's value—is critically discussed. The economists' rather limited technical treatment is compared with a more thoroughgoing account of the economic, political and epistemological dimensions of sustainable development.

In this context, some of the new approaches that outside development agencies are currently taking toward local-level environmental management are briefly discussed. Next, the chapter examines some instances of conflicts over resource use that have prompted popular participation and struggles to gain greater local control over the environment. The analysis focuses on situations in which natural resources are highly valued and have been heavily contested politically.

The final section of the chapter outlines an approach to contested environments that departs radically from the analysis of most development agencies by focusing attention on power and political mediation in the resolution of environmental conflicts at the local level. In this section, the chapter tries to incorporate some experiences of poor people's participation in resource management in order to set out a framework for analysis that takes into account both the need for popular participation and the utility of local-level environmental management as complementary facets of the problem. It is hoped that, through addressing the political problems associated with local resource management, as well as through developing a more rigorous analysis of the terms under which poor people and their environments are incorporated within development policy, we will begin to identify the potential for determining better policy interventions that is contained in the struggles and resistance of the rural majorities in the South.

Sustainable Development: Concepts and Contradictions

The problem with using the term “sustainable development” is that it has proven difficult to formulate a definition of it that is comprehensive but not tautological, and that retains analytical precision. In this it is similar to many terms in the development lexicon, whose very appeal, it can be said, lies in their vagueness. “Sustainable development” means different things to ecologists, environmental planners, economists and environmental activists—although the term is often used as if consensus exists concerning its desirability. Like “motherhood” and “God”, sustainable development is invoked by different groups of people in support of various projects and goals, both abstract and concrete.

One of the sources of the conceptual confusion surrounding the term “sustainable development” is that no agreement exists regarding what exactly is to be sustained. The goal of “sustainability” sometimes refers to the resource base itself, and sometimes to the livelihoods that are derived from it. Some writers refer to sustaining levels of production, while others emphasize sustaining levels of consumption (Redclift 1987). This divergence in emphasis is important since what makes continued “development” unsustainable at the global level is the pattern of consumption in the rich countries, while most policies

designed to tackle development problems—including those that fit within the “sustainable development” idiom—are essentially production-oriented.

The different uses made of the concept of sustainable development reflect varying disciplinary biases, distinctive paradigms and ideological disputes. In our view there are also at least two sets of contradictions that soon become evident when sustainable development is discussed.

First, embedded in much of the “sustainability” thinking is an important difference of emphasis. For some writers, the principal problem to be addressed is that “human progress” carries implications for nature itself and should cause us to re-examine the “ends” of development, as well as the means (Devall and Sessions 1985). Others view sustainability as a serious issue because nature is a major constraint on further human progress. They are concerned, basically, with the constraints that will be imposed on the conventional growth model if the warnings we receive from the environment, the “biospheric imperatives”, are ignored. The solution, according to this view, is either to develop technologies that avoid the most dire environmental consequences of economic growth, or to take measures to assess and “price” environmental losses in a more realistic way, thus reducing the danger that they will be overlooked by policy makers.

Second, when “sustainable development” is considered within a North-South framework, attention must be paid to the contradictions imposed by the structural inequalities of the global system (United Nations 1987; Redclift 1987). Green concerns in the North—such as alternatives to work and ways of making work more rewarding—can often be inverted in the South, where the environment is contested not because it is valued for its amenities or aesthetic value, but primarily because its exploitation creates economic value.

In the North, natural resources are also a source of value, and conflict between those who want to exploit them for commercial gain and those who wish to conserve the “countryside” is often highly charged. However, the very fact that conservation issues are given increasing weight in planning decisions in the developed countries bears witness to the shift in priorities that occurs in the course of “development”. In urbanized, industrial societies, relatively few people’s livelihoods are threatened by conservation measures. The “quality of life” considerations that play such a large part in dictating the political priorities of developed countries surface precisely because of the success of industrial capitalism in delivering relatively high standards of living for the majority (but by no means all) of the population.

In the South, on the other hand, struggles over the environment are usually about basic needs, cultural identity and strategies of survival, rather than about providing a safety valve within an increasingly congested urban space. Under these circumstances, when the individual and household are forced to behave “selfishly” in their struggle to survive, there is no point in appealing to idealism or altruism to protect the environment.

Sustainable Development Alternatives

Of the two major trends in sustainable development thinking, one, exemplified by the economic approach taken by Pearce et al. (1989) in *Blueprint for a Green Economy*, fails to take into consideration the contradictions discussed above. “Sustainable development”, in this view, is treated as a modification of traditional development strategy, rather than as an alternative to it, and this approach is therefore limited in scope and application.

The second major trend, exemplified by the Brundtland report, *Our Common Future* (United Nations 1987), treats sustainable development as alternative concept of development and therefore, in the end, shows more promise.

A common point of departure for a discussion of sustainable development is to define it as what Barbier (1989) refers to as *sustainable economic development*. This is an optimal level of interaction between three systems—the biological, the economic and the social—that is achieved “through a dynamic and adaptive process of trade-offs” (Barbier 1989:185). Many economists, notably David Pearce, also emphasize the *trade-offs* between systems, or between present and future needs, as the key issue (Pearce et al. 1989). In similar terms it is argued that “sustainable economic development involves maximizing the net benefits of economic development, subject to maintaining the services and quality of natural resources over time” (Pearce et al. 1989), and that “[sustainable development] is development that maintains a particular level of income by conserving the sources of that income: the stock of produced and natural capital” (Bartelmus 1987:12). For economists interested in the environment, then, procedures such as environmental accounting—that aim to give a numerical value to the environment and to environmental losses—are essential instruments for the achievement of greater sustainability.

In chapter 3 of *Blueprint for a Green Economy* Pearce and his colleagues argue, from a declared interest in environmental quality, that environmental improvements are equivalent to economic improvements “if [they] increase social satisfaction or welfare” (1989:52). The resolve of these economists is to demonstrate that there are economic costs to ignoring the environment. This approach is growing in influence within international development agencies such as the World Bank, the United Nations agencies and the Overseas Development Administration (ODA) (see World Bank 1987, 1988a, 1988b). Although all of these organizations have been strongly criticized in the past for funding development projects with very damaging ecological effects, such as cattle ranching in Central America, in many people’s estimation their new approach has become almost synonymous, in a relatively short space of time, with effective environmental management.

One of the main problems with this view of environmental management is that it works better for developed than for developing countries. Most neoclassical economists use the “willingness to pay” principle as a means of assessing environmental costs and benefits, and Pearce et al. argue that the emphasis in environmental policy should be shifted toward this principle to avoid future damage to the environment (Pearce et al. 1989:55). It is not hard to appreciate some of the difficulties in applying the new environmental economics when we consider developing countries. As Pearce et al. (1989) demonstrate, there is widespread popular concern about the environment in the North, where environmental quality is often placed before economic growth in surveys of public opinion. In the South, on the other hand, immediate problems of acquiring subsistence needs preclude extensive and expensive efforts to improve the environment. In this sense, it is not useful to attempt to quantify the developing countries’ “willingness to pay” for improved environmental quality, when their access to merely the basic livelihood essentials typically requires the sacrifice of environmental quality for short-term economic gain. Their ability to pay or effective demand for environmental quality is so limited under these circumstances that attempts to construct a level of “willingness to pay” must be speculative at best.

These uncomfortable facts have important implications for the ultimate utility of efforts to quantify assessments of environmental value in the Third World. No matter

how complex and sophisticated the price imputation techniques, for instance, the revaluation of tropical forest to include its “full” environmental value would do little directly to prevent forest destruction, although it might serve to highlight the scale of the problem. Colombia’s foreign debt, which requires the country to obtain foreign currency, enables the transnational companies buying valuable hardwoods in protected areas to pose as national saviours, rather than national vandals.

Equity considerations, in this context, are not necessarily a minor element in total utility, as Pearce et al. (1989:48) suggest, but are often the driving force behind indiscriminate resource degradation, and must be recognized as such. The process of environmental degradation, including the wanton destruction of primary tropical forest, needs to be viewed within the context of highly unequal landholding, which forces poor men and women to colonize the tropical forests and other untitled land. In situations like those of tropical Colombia and Brazil we need to specify greater equity, or the reduction of poverty, as the *primary objective* of sustainable development, before the question of environmental quality can be fully addressed.

It is also essential that we widen the discussion of sustainable development to include the immediate influences of national and regional policies on environmental management decisions taken at the local level. It is at this level that we are least able to provide a clear framework of policy interventions, although a start has been made (IUCN 1988). There is considerable evidence—much of it drawn from the experience of people living within fragile environments—about alternative, more sustainable uses to which resources can be put. In addition, largely because of the work of Pearce and other economists who take the environment seriously, we now have a much better basis from which to conduct environmental accounting within such environments.

These important advances, however, do not imply that the reformulation of environmental policy in developing countries should be confined to an assessment of environmental and economic “trade-offs”, for to do so would mean ignoring other essential points of reference. These include the regional and national political economy of resource use, as well as dimensions of social justice that provide the backcloth against which much environmental degradation occurs. On its own, resource accounting also tacitly endorses a highly ethnocentric and “North-biased” view of the development process. Without attention to the analysis of resource use decisions, and the way these are influenced by structures of power and social relations at the community level within the South, we are unlikely to be able to influence the behaviour of people who cut down primary forests in order to make a living.

An approach that is ultimately more successful than these primarily economic views of sustainable development is that taken by the Brundtland Commission’s report, *Our Common Future* (United Nations 1987). Although the economic concept of discounting plays a key role in the report, the Commission immediately enlarges the compass of the debate about sustainability to include consideration of non-economic factors. *Our Common Future* places the emphasis of the discussion of sustainable development on human needs, rather than on the trade-offs between economic and biological systems. While the future effects of present economic development are a central concern of the report, costs and benefits (both present and future) are assessed not only on economic grounds, but also in political, social and cultural terms.

In fact, the Brundtland Commission mapped out a very political agenda for shifting the emphasis of development, for the North as well as the South, without departing from the language of consensus. According to the Commission, “sustainable development is a

process in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony, and enhance both current and future potential to meet human needs and aspirations” (United Nations 1987:46).

One of the important things to note about the approach taken by the Brundtland Commission is that it regards sustainable development as a policy objective, a methodological approach *and a normative goal*, quite properly the end-point of development aspirations. Many economists acknowledge that normative considerations are important, but few would be prepared to state as unequivocally as does the Brundtland report that, without normative goals of this kind, improved methodologies and better designed policies will prove unworkable. The Brundtland report places the responsibility for environmental problems, and for mobilizing the political will to overcome them, firmly in the hands of human institutions and interests. Although the report remains committed to convergence and consensus, rather than divergence and conflict, as a means of achieving sustainable development, its clear implication (and one that has broad appeal in the South, if not the North) is that *unless the political and economic relations that bind the developing countries to the developed are redefined, sustainable development will prove a chimera*.

It is worth noting that some authors—including people like Robert Chambers, who contributed to the Brundtland process—take an even more “human-focused” approach than that reflected in the report. Chambers (1988) argues for using “sustainable livelihood security” as an integrating concept. For Chambers, the sustainability of the resource base makes little sense if it is separated from the human agents who manage the environment. Gordon Conway similarly emphasizes human actors in development. In a series of very influential papers, he argued that “sustainability [is] the ability to maintain productivity, whether of a field, farm or nation, in the face of stress or shock” (Conway and Barbier 1988:653). Originally, Conway had been thinking primarily in ecological terms, about the ability of natural systems to cope with system disturbance, and this led him to seek to define a concept which retained the idea of system disturbance, but incorporated a concern for the context of decision making within which poor rural households operate.

It has been left to the sociologists and anthropologists to take the discussion of the human agency in sustainable development further. In this context, both the participation of people in environmental management at the local level, and the relationship between the implementation of empowering strategies and successful sustainable development, are essential issues to explore.

The multiple dimensions of sustainable development

To establish an adequate conceptual framework within which to explore the issue of participation in sustainable development, we need to identify the multiple dimensions of the concept. There are three dimensions that require our attention: the economic, the political and the epistemological.

The economic dimension

As we saw in the discussion of environmental accounting, much of the economic argument has been conducted at the level of present and future anticipated demand, assessing the costs, in terms of foregone economic growth, of closer attention to

environmental factors. It was John Stuart Mill (1873), in his *Principles of Political Economy*, who emphasized the idea that we need to protect nature from unfettered growth if we are to preserve human welfare before diminishing returns begin to set in. Malthus had earlier stressed the limits of the carrying capacity of the environment, although his emphasis was on the adverse effects that population pressure would have on consumption, rather than on the impact of environmental degradation itself.

Mill's (1873) concern with the environment, which today we would identify as part of the alternative, sustainable tradition of thought, was not integrated into the mainstream of economic theory during the twentieth century. Following Ricardo's much more optimistic assessment of the potential of technology to overcome the limitations of existing resources, the more recent tradition has been to rely on humankind's Promethean spirit and ingenuity to enable society to make scientific and technological advances capable of "putting back" the day in which population growth would begin to overtake available resources.

This optimism was shaken, although not destroyed, by the publication in the early 1970s of *Limits to Growth* (Meadows et al. 1972). This influential book argued that natural resources were indeed in short supply, undermining the assumption that humankind could continue to overcome the obstacles placed in its path by nature. The 1970s was a time in which—particularly following the oil price shocks—economic growth endangered the planet, primarily because the clamour for growth had meant the neglect of the environment on which growth was dependent. Twenty years later, the situation in the developed world is different: today we are beginning to be aware that it is the damage to our environment, caused by a heavy dependence on fossil fuels to drive industrial growth, that potentially imperils our ability to continue to support industrial society. The global externalities today, notably the greenhouse effect and the depletion of the ozone layer, are not the product of scarcity but of reckless and unsustainable production systems.

The political dimension

The political dimension of the concept of sustainability comprises two separate but related elements: the weight to be attached to human agency and social structure, respectively, in determining the political process through which the environment is managed; and the relationship between knowledge and power in popular resistance to dominant world-views of the environment and resources. In both cases it is useful to draw on a body of emerging social theory that has evolved and gained currency while environmentalism has risen to prominence.

The problem of human agency in relation to the environment is well recognized in the literature, especially by geographers (O'Riordan 1989); it is also a central concern of sociologists, although rarely linked to environmental concerns per se. The British sociologist Anthony Giddens has devoted considerable attention to what he describes as a theory of "structuration", which would enable us to recognize the role of human beings within a broad structural context in seeking to advance their individual or group interests (Giddens 1984). Giddens notes that "human agents...have as an inherent aspect of what they do, the capacity to understand what they do while they do it" (1984:xxii). It is their *knowledgeability* as agents that is important. Although Giddens does not apply his ideas specifically to environmental questions, they have clear utility for any consideration of the political and social dimensions of sustainability.

An examination of the ways in which power is contested helps us to explain human agency in the management of the environment, as well as the material basis of

environmental conflicts. In this sense it is useful to distinguish between the way human agents dominate nature—what has been termed “allocative resources”—and the domination of some human agents by others, or “authoritative resources” (Giddens 1984:373). Environmental management and conflicts over the environment are about both processes: the way groups of people dominate each other and the way they seek to dominate nature. Not surprisingly, the development, or continuation, of more sustainable livelihood strategies carries important implications for the way power is understood between groups of people, as well as for the environment itself. The “green” agenda is not simply about the environment *outside human control*; it is about the implications for social relations of bringing the environment within human control.

The second question of importance in considering the political dimension of sustainability is the relationship between knowledge and power—a dimension often overlooked by observers from developed countries when they turn their attention to poorer societies. As we shall see in a moment, the consideration of epistemology in sustainable development carries important implications for our analysis, since it strikes at the cultural roots of quite different traditions of knowledge. It is also important to emphasize, however, that knowledge and power are linked, as Foucault observed in much of his work (Smart 1985; Sheridan 1980). We can, following Foucault, distinguish three *fields of resistance* to the “universalizing” effects of modern society, and these fields of resistance are particularly useful in delineating popular responses, by the rural poor in particular, to outside interventions designed to manage the environment in different ways.

The first type of resistance is based on opposition to, or marginalization from, production relations in rural societies. This is resistance against *exploitation*, and includes attempts by peasants, pastoralists and others to resist new forms of economic domination, which they are unable to control or negotiate with.

The second form of resistance is based on ethnic and gender categories, and seeks to remove the individual from domination by more powerful groups whose ethnic and gender identity has conferred on them a superior political position. In many cases the only strategy open to groups of people whose environmental practices are threatened by outsiders, and whose own knowledge, power and identity are closely linked with these practices, is to seek to distance themselves from “outsiders” by, for example, reinforcing ethnic boundaries between themselves and others.

Finally, poor rural people frequently resist *subjection* to a world-view that they cannot endorse—in much the same way as people in developed countries often confront “totalizing” theories, such as psychoanalysis or Marxism. In the South, development professionals frequently have recourse to a body of techniques for intervening in the natural environment that are largely derived from developed country experience. “Environmental managerialism” is one way of describing these techniques. The refusal to be subordinated to a world-view dominated by essentially alien values and assumptions marks resistance against subjection. This does not imply that such resistance should necessarily be equated with political struggle, whatever the basis of the resistance itself. Frequently, people who are relatively powerless, because their knowledge systems are devalued, or because they do not wield economic power, resist in ways that look like passivity: they keep their own counsel, they appear “respectful” toward powerful outsiders, but they simply fail to cooperate.

The epistemological dimension

Sustainable development is usually discussed without reference to epistemological issues. It is assumed that the system of acquiring knowledge in the North, through the application of scientific principles, is a universal epistemology—anything less than “scientific knowledge” hardly deserves our attention. Such a view—rooted as it is in ignorance of the way we ourselves think, as well as of other cultures’ epistemology—is less than fruitful. Goonatilake (1984) reminds us that large-order cognitive maps are not confined to Western science, and that in Asia, for example, systems of religious belief have often had fewer problems in confronting “scientific” reasoning than has the Judaeo-Christian tradition. The ubiquitousness of Western science, however, has led to traditional knowledge becoming “fragmented” in the South, increasingly divorced from that of the dominant scientific paradigm.

In his influential book *Farewell to Reason*, the philosopher Feyerabend (1987) has distinguished between two different traditions of thought, which can usefully be compared with “scientific” and “traditional” knowledge. The first tradition, which corresponds closely to scientific epistemology, is the *abstract tradition*. This enables us “to formulate statements [that are] subjected to certain rules [of logic, testing and argument] and events affect the statements only in accordance with the rules. ... It is possible to make scientific statements without having met a single one of the objects described” (Feyerabend 1987:294). He gives as examples of this kind of tradition elementary particle physics, behavioural psychology and molecular biology. In contrast, the kinds of knowledge possessed by small-scale societies Feyerabend (1987) would label as *historical traditions*. In these epistemological traditions “the objects already have a language of their own”, and the object of enquiry is to understand this language. In the course of time much of the knowledge possessed by people outside mainstream science, especially in developing countries, becomes encoded in rituals, in religious observations and in the cultural practices of everyday life. In societies that make an easy separation between “culture” and “science” such practices can easily be ignored—although they are frequently the key to the way environmental knowledge is used in small-scale rural societies.

It is evident from some of the cases discussed briefly in the later sections of this chapter that any view of epistemology that rests solely on Northern experience will often fail to galvanize opinion among people such as the Brazilian rubber tappers or the Indian women involved in the Chipko movement. What is required is the admission that, when we observe local resource management strategies, we are dealing with *multiple epistemologies* possessed by different groups of people. Furthermore, the existence of global environmental issues, and the reporting of these issues by the media, forces us to consider the links between local epistemologies (all of which have evolved from their own encounter with other systems of thought, and are not fixed, “traditional” systems) and global systems of knowledge.

The Rural Poor and Sustainable Development: Outside Intervention, Inside Knowledge

The first part of this chapter has sought to extend the definition of “sustainable development” by enlarging the compass of debate and considering the dimensions of sustainability which usually lie outside the parameters of most Northern environmental policy interventions. As such it represents a contribution to the still small body of work

that has begun to examine the links between local environmental knowledge, political processes and the management of resources.³ By enlarging the discussion it is hoped that we can begin to get at the texture of “actually existing” sustainable practices, and thus to make more qualified decisions about the direction that future policy should take. The remainder of the chapter employs the framework of sustainable development outlined above in order to consider the role of external agencies and local knowledge in a more genuinely participatory view of resource management.

Because environmental management in the North utilizes a scientific epistemology, development “experts” frequently devalue the contribution of local knowledge to environmental planning and policy and, simultaneously, assume that local people should “participate” in sustainable development. However, it is not clear why or how poor people can retain their knowledge systems, and put them to practical use within development activities, while “participating” in other people’s projects.

Rural people are unlikely to perceive the problems that face them in everyday life as “environmental problems”. Nevertheless the “answers” arrived at by the state and other outside institutions make assumptions about what is beneficial for people and ways in which the environment can be more effectively managed (Blauert 1990). In fact, the approaches of outside agencies frequently address the problems of the agencies themselves, rather than those of the rural poor or their environments. To most poor people in rural areas, for whom daily contact with the environment is taken for granted, it is difficult, if not impossible, to separate the management of production from the management of the environment, and both form part of the livelihood strategy of the household or group. It is increasingly recognized by many development agencies, notably NGOs working in developing countries, that the sectoral, “single problem” approach to policy and planning undertaken by most official bodies prevents a workable assessment of sustainable development options.

The current call for more participatory approaches to local-level environmental management stems from the failure to recognize the importance of popular participation in influential reports such as those of the Brandt Commission (1980) and the Brundtland Commission (United Nations 1987), and the original World Conservation Strategy document (IUCN 1980). It also reflects the acknowledgement that national governments are less likely to ignore international opinion when it is buttressed by popular, grassroots support.

The call for more participation also reflects a third important variable: during the 1970s and 1980s an influential body of knowledge, along with new methodological interventions, stressed the importance of capturing the knowledge of poor people themselves—through farming systems research, agroecology and “rapid rural appraisal” techniques. However, the cultural and political aspects of these gains in understanding received almost no attention. Social structure and political action remained essentially outside the map of development policy at the micro-level, and were given scarcely any attention in discussions of the natural environment.

The problem of rural poverty and the environment has frequently been posed in terms of available and appropriate technologies, while more reflexive, more iterative ways of working with rural people in developing countries were confined to the relatively “marginal” concerns such as community development. Anthropologists, for example,

³ McNeely and Pitt 1985; IUCN 1989; Norgaard 1985.

frequently found unlikely allies in ecologists, whose negative experience of large-scale development projects echoed their own (Ewell and Poleman 1980).

It often appeared as if the larger the financial commitment of an organization to “development” goals, the smaller the commitment to discovering how to assist the empowerment of the poor, drawing on their knowledge, their priorities and their politics. One of the consequences, with which we grapple today, was that most environmental knowledge, like environmental management, is handed down from the First World to the Third, from large development agencies to the supposed beneficiaries of change.

The report of the World Commission for Environment and Development, *Our Common Future* (United Nations 1987) served to set the agenda for recent thinking about the environment and development. Despite its trenchant analysis, accessible style and clear exposition of the issues, the Brundtland Commission has relatively little to say about popular participation in environmental management at the local level. Other than a few short, but useful, sections on participation the Commission’s report says little about local empowerment until the conclusion, in which, after a long account of the international measures required to achieve more sustainable development, a short section on popular participation is included:

[P]rogress will also be facilitated by recognition of, for example, the right of individuals to know and have access to current information on the state of the environment and natural resources, the right to be consulted and to participate in decision making on activities likely to have a significant effect on the environment, and the right to legal remedies and redress for those whose health or environment has been or may be seriously affected. (United Nations 1987:330)

Despite the fact that these points are not elaborated on in the Brundtland report, and popular involvement in environmental management gets only the most cursory treatment, these few phrases represent a commitment of immense value, which deserves to be taken seriously by the international community and national governments. Suddenly the issue of sustainable development is linked to human rights, and these rights are specified in terms of “their” right to know and be consulted. Participation, it is implied, is not simply a means of ensuring the efficacy of “our” development (via more attention to factors such as the creation of employment) but a means of ensuring their sustainability through the possession of the rights without which it cannot be achieved.

Evidence for greater attention to participation, and with it poor people’s rights in the environment, can be gleaned from the first draft of the *World Conservation Strategy for the 1990s*, prepared by IUCN, UNEP and the WWF (IUCN 1989). This document goes some way to redressing the lack of attention to people in the original *World Conservation Strategy* (IUCN 1989). The discussion of “policy, planning, legislation and institutions” (IUCN 1980:137–144) pays particular attention to the obligations which a more sustainable development strategy places on governments, to consult them, to facilitate their participation in decisions, and to make information available to them. It also recognizes that “special attention should be given to participation by women and indigenous peoples”, which should be provided for by governments and intergovernmental agencies (IUCN 1980:138).

The final section of the document gives considerable attention to local strategies for sustainable development, arguing that local communities should be given the opportunity to prepare their own sustainable development strategies “expressing their views on the issues, defining their needs and aspirations, and formulating a plan for the development of their area to meet their social and economic needs sustainably” (IUCN 1980:156). This should be undertaken, like the regional and national strategies to which it would contribute, on the basis of consensus. Achieving “a community consensus on a future for

an area” would require consultation and agreement with other, non-community interests, as well as “a forum and process through which the community (itself) can achieve consensus on the sustainable development of the area” (IUCN 1980:157).

In practice, however, in most developing countries local-level environmental management will be left to understaffed, underfunded and underesteemed enforcement agencies. The new World Conservation Strategy (IUCN 1989) recognizes that legislative changes will be necessary before sustainable development strategies can be implemented with any success, but it attempts no analysis of the forces at the local, national and international levels that would need to be pressed into service to ensure that legislation is enforced and local management decisions are implemented. This document, in fact, shares the assumptions of much discussion of “participation”, which is predicated on the presence of a social consensus that, in practice, rarely exists, especially in the most threatened parts of developing countries. Unless we analyse specific power structures in relation to the environment, we are in danger of being far too sanguine about the potential of negotiation and agreement. We are in danger, in fact, of drowning in our own rhetoric rather than identifying the underlying political processes whose understanding would facilitate the formulation of better environmental policy.

Conflicts over Resource Management: Forms of Resistance

Table 3.1 sets out some of the important variables for an analysis of conflicts over resource management at the local level. It must be emphasized that in cases described the resources in questions are heavily contested, and the conflicts surrounding them have drawn in both national and international interest groups. Many conflicts over local resource management in developing countries lack the heavily politicized nature of the Chipko or Brazilian rubber tappers’ disputes, which have attracted media attention and become the focus for alternative development agendas. Nevertheless, these conflicts, and others such as the cases of Bolivian frontier colonists, and freelance logging in the Chocó of Colombia do illustrate the inadequacy of environmental interventions that proceed on the assumption of existing consensus, and in ignorance of the social and political struggles which lie behind environmental disputes.

Table 3.1: Conflicts over resource management: Forms of resistance

	Choices for resource utilization	Political demands	Points of tension and resistance	State/external intervention
Chipko (Shiva and Bandyopadhyay 1986; Guha 1989)	Forest conservation Commercial logging	Respect for traditional forest uses	Peaceful non-cooperation (<i>satyagraha</i>)	Indian government intervention
Brazilian rubber tappers (LAB 1990; Hecht and Cockburn 1989)	Sustainable forest extraction Ranching	Conservation reserve	Forest clearing Federal government support	Brazil-wide solidarity groups International ecological awareness
Tropical colonists (Bolivia) (Redcliff 1987)	Sustainable farming system Commercial rice cultivation/land engrossment	Land titles Institutional support	Disputed land ownership Migration Economic policy	Land reform Cocaine surveillance
“Freelance” logging (Chocó, Colombia)	Contracted “logging” for transnational corporations (TNCs) Community stewardship		Individual livelihood strategy vs INDERENA	INDERENA military base

The conflicts between Chipko activists in India, logging companies and the Indian government are well known and have been exhaustively discussed in the literature.⁴ Similarly, the struggle of the Brazilian rubber tappers in the Amazon to establish their rights to use the forest in a sustainable way has received extensive coverage—notably since the murder of the rubber tappers' leader, Chico Mendes. The struggles of the rubber tappers have reached the world stage, especially through the press and television, but the precise circumstances of the conflict require some explanation.⁵

According to Schwartzman (1989) there are approximately 1.5 million people in the Brazilian Amazon who depend on the forest for their living. Of these, about 300,000 are engaged in the sustainable harvesting of wild rubber. In fact, most rubber tappers, like other sectors of the forest population, are involved in several activities other than their main cash-earning occupation—they cultivate small gardens planted with rice, beans and manioc; keep animals; and hunt in the forest. They also cultivate and manage fruit trees, palms and other forest species. The rubber tappers' production system "appears to be indefinitely sustainable. Many rainforest areas have been occupied by rubber tappers for over sixty years, and some families have been on the same holdings for forty or fifty years, yet about 98% of each holding is in natural forest" (Schwartzman 1989:156).

The diversity of sources of income is reflected in various aspects of the rubber tappers' culture: their diet is much more varied than that of most urban groups; their average cash income, although not large, is equivalent to twice the Brazilian minimum wage; and their awareness of the links between their livelihood and the maintenance of ecological diversity has enabled them to present their case as a convincing one of sustainable development. Any suspicion that their case has received special attention needs to be set against the fact that most other economic activities in the Amazon receive much higher subsidies, and are usually accompanied by disastrous effects.

In terms of local resource management, the interest in the rubber tappers' activities lies in two important issues. First, unlike much of the conservationist response currently being urged on governments in the South, the extractive reserves advocated by the rubber tappers are not simply another culturally alien "management strategy" urged on unwilling, or oblivious, local people. The idea of extractive reserves is an organized initiative directly undertaken by Amazonian grassroots groups and sympathetic national organizations, designed to change the course of official regional development policy for the benefit of local people. Because the extractive reserve concept was created by a social movement, it does not depend for its effective implementation on government agencies far removed from Amazonian reality. Forest communities have put their own model before the government and multinational lending institutions as a potential strategy for consideration within a wider context of sustainable development.

Second, although locally sustainable, the rubber tappers' activities also produce a surplus that finds its way to the larger society—not only is this a movement that is locally initiated, but it is also one that generates momentum outside the immediate domain of the *seringueiros* (rubber tappers).

The other two cases presented in the table are less well known. The tropical colonists referred to in the third case are largely migrants from the Bolivian Andes who migrated to the lowland province of Santa Cruz in the 1960s and 1970s, in search of

⁴ Bandyopadhyay 1992; Guha 1989; Shiva and Bandyopadhyay 1986; Kunwar 1982.

⁵ Schwartzman 1989; Hecht and Cockburn 1989; Hecht 1989.

land. These migrants have concentrated on growing rice for the market, but the difficulties associated with cutting down the forest, and the insecurity of the market for rice have also led some of them to explore (with official encouragement from some quarters) a more mixed farming system, comprising rice, perennial crops and small-scale animal production. The problems of managing a more sustainable system in an area where conflicts over land are compounded by contraband traffic and the cocaine trade are outlined in Redclift (1987).

The final case is illustrated by the conflict between INDERENA (Instituto Nacional de los Recursos Naturales Renovables y del Medio Ambiente)—a Colombian environmental agency—and the people living in the area of the Chocó, a reserve situated on the tropical Pacific coast of Colombia. These people were able to receive US\$10 a cubic metre for hardwoods cut from the forest reserve with chain-saws loaned by Cartón de Colombia—a transnational company operating in that country. Each load of hardwoods had to be taken by sea, on a home-made raft, out into the Pacific and on to the port of Buenaventura. There was considerable resentment in the area at the attempts, usually futile, of the INDERENA staff to prevent the cutting of wood in this way. For the people involved in illegal cutting, the activity represented an essential livelihood strategy, and there was no shortage of men willing to take the place of those who did not survive the dangerous sea journey. It is also worth mentioning that Cartón de Colombia is a major sponsor of environmental activities in Colombia (including a conference organized by INDERENA that I was attending).

The tragedy of hardwood logging in the Chocó—even on the relatively small scale practised by “freelance” colonists—is that, with sufficient official support, sustainable alternatives for the area could be implemented. It is thought that the Chocó possesses “perhaps the most diverse plant communities in the world and extremely high levels of local, as well as regional endemic species” (Budowski 1989:274). Two sustainable strategies, in particular, have attracted attention because they would make no serious inroads into the region’s ecological diversity but would enable large numbers of people to make a decent livelihood. First, food production could be concentrated on the rich alluvial river banks where, together with agroforestry combinations, larger populations could be supported. Second, if sustainable forestry schemes were promoted, especially in the swamp and secondary forests, numerous opportunities would open up for settlers in the region. The potential for the sustainable yield of fresh water fisheries in the area is even greater (Budowski 1989:276). Finally, it is clear that the ecological value of the Chocó is so great in global terms, that international efforts to promote local research activities, and to promote research stations within the region, linked to local communities, would bring about huge advances in our knowledge, especially of better-drained forested areas.

Each of the cases referred to in the table is related, along the horizontal axis, with four dimensions of the conflict: the alternative choices available for resource utilization in the area; the political demands of the participants in the various social movements; the points of tension and forms of resistance employed during the conflict; and the form of outside, state intervention to mediate the situation. In the cases of the Chipko movement and the rubber tappers, the conflict surrounds the defence of an existing, sustainable resource use or livelihood. In the case of the Bolivian colonists, a sustainable alternative to existing resource uses was available, but the incentives to make it attractive to people did not exist. The framework of policy measures and incentives in the Santa Cruz region of Bolivia favoured short-term calculations of profit over longer term considerations of

sustainability, although the risks carried by involvement with the market also threatened profitability for the colonist farmers. In the case of the Chocó, the individual's logging activities were undertaken independently of any community structure: individual livelihood opportunities were pursued in opposition to the formal, legal framework, but "supported" by a powerful transnational corporation.

The points of tension for each of the conflicts are different, and the interest of outsiders in the conflict varies widely—especially in terms of the commitment of the state to intercede on behalf of one group rather than another. In addition, it is impossible to view these conflicts as divorced from wider patterns of influence on the governments concerned, and in a more general sense in reshaping our awareness of the urgency of ecological issues. Although the local agents seem remote from most people—not only from those in the North, but also from the population of Indian or Latin American cities—their struggles provide evidence of the interdependence of both economic forces and power relations.

Before considering the need to examine these power relations in more detail, it is worth reflecting on the potential value of an approach to resource management that explicitly recognizes the importance of popular participation. First, it is clear from these and other similar cases that forms of political activity on the environment vary widely; we should not expect popular participation to follow a single trajectory. Second, it needs to be emphasized that in the course of conflicts over natural resources, new priorities and development opportunities are opened up and brought within the compass of popular discourse. The determination of development trajectories is not confined to the offices of experts working for the World Bank or of academic observers; they are worked out in the heads of the subjects themselves. Third, resistance to the "totalizing" effects of incorporation, even at the geographical periphery, into modern society can lead to the formulation of demands that have to be negotiated with governments and international interests.

A commitment to a more democratic discourse on the part of governments or the international development community, however, is only one of several possibilities whose probability depends, critically, on the role of supportive groups and interests, including NGOs, international pressure groups, and classes within the society itself. The mediation of conflicting demands and their peaceful resolution might be the outcome of resource conflicts, but it is unhelpful to assume that general agreement of this kind can be found, and that better environmental management is virtually impossible without it. The discussion of environment and development by international agencies frequently fails to identify the alternatives to consensus, or the role that the recognition of conflicting interests can play in policy formation. The more closely we examine conflicts over resource management in developing countries, the more we need to pay attention to the political and social mechanisms through which interests in the environment are channelled and expressed. It is therefore to this question, so long ignored in discussions of resource management, that we turn in the final section.

Contested Resources: Power, Resistance and Social Change

At the beginning of this chapter it was suggested that conflicts over the environment could be analysed in terms of three dimensions: the economic, the political and the epistemological. It was argued that power and resistance were complementary aspects of

the same strategic situation. Further, it was suggested that the way the environment was viewed in different cultures corresponded with distinct epistemological traditions of thought. We should not assume that knowledge, whether “local” or “scientific”, could be easily separated from ways of behaving, ways of managing resources or ways of expressing resistance toward the attempts of others to manage resources.

The current rethinking of mainstream economics—and the greater incorporation of environmental considerations that is highly influential within some development agencies—is helping to fashion a tool for policy makers in the North, but there are limitations to the heuristic possibilities that such techniques provide. Any serious discussion of participation in resource management—and any analysis of the problem—needs to consider the full range of demands that the management of natural resources involves. We should not pursue better resource management within an apolitical, normative conceptual framework of our own making. We need to take seriously the resource politics of people in the South—especially since their own political consciousness is forged through contact with external development agencies, planning institutions and policy makers.

The articulation of demands governing the use of natural resources inevitably means the exercise of power, and resistance to it. It should come as no surprise, then, to find that environmental demands affect the content of social relationships, as well as the form. They bring new social relationships into being, and with them new power relations—many of them uncomfortably like those they have superseded. In some cases a radical break is achieved, through which existing relations are democratized or opened up, but there is no guarantee that the new relations of power that are established will be more stable. Every strategy of confrontation dreams of becoming a relationship of power, of finding a stable mechanism to replace the free play of antagonistic forces. However, there is no guarantee in history that this will happen. As we have seen, frontier colonists in Brazil and villagers in India do not demand the end of the state or law, but insist instead on respect from the government for rights that are enshrined in tradition, as well as law.

The approach I have outlined to power relations can be used in exploring the contests between human agents over environmental resources. For example, peasant movements may be contained by a chain of state agencies through which power relations are deployed and reformulated (Harvey 1989). By identifying the weaker and stronger points in this chain, movements can apply pressure to break the former with the goal of eventually breaking the latter. If we begin by identifying the most important points of tension in local society, and the conflicts they generate, we can observe how the specific application of power is resisted and transformed, how new tactics are introduced and how traditional mechanisms are abandoned.

Bearing these points in mind we can propose a set of questions that can help us establish better methodological guidelines for the comparative analysis of micro-political change in relation to the environment. We can usefully compare the different ways in which groups seek to control and manage resources, and the concrete implications of these strategies for external agencies whose remit is to help channel and facilitate the expression of local demands. We need to look closely at the way in which different groups establish power relations through their control over resources, and the way in which these power relations change over time. In this respect, the following sets of questions can be posed.

- How do legal and institutional changes limit or enable groups to engage in *particular forms of political action over the environment*? Which groups have most successfully integrated their own micro-strategies with wider strategies shared by other members of the society? As it becomes clear that different groups in the wider society acquire different notions of “sustainability”, carrying implications for their own political action, it becomes more urgent that local demands are linked to wider social resistance.
- How does the recomposition of power relations affect the political priority given to more sustainable resource management? Do new strategies of political mediation, or domination, make certain policy alternatives less feasible, while opening up new ones? How do local agents view the constraints and opportunities that changing resource uses make possible? Are they able to carry their alternative vision of sustainability, their “concrete utopia”, into the organs of the state itself?
- How do struggles over resources shape the paths of different social groups? Do they channel environmental demands into the institutional arena alone, or do they engage groups in confrontations that highlight basic divisions within the wider society? What are the effects upon NGOs and governmental agencies of intervention to secure long-term environmental demands? Is it the case, as the Brundtland Commission hoped, that more contact between development agencies serves to bring forward the urgency of environmental priorities within policy-making circles?

These considerations are offered as a contribution to the resolution of some of the conceptual and methodological issues that surround local resource management. By identifying the points of tension in local systems of power, and comparing their implications for different groups, often possessed of different epistemological systems, we will be able to highlight the changes through which the environment becomes the object of economic, social and political dispute. The lessons of the past and of the present are central to any strategy of resistance and liberation, but it is up to us to undertake the necessary analysis, and to place it in the hands of those disempowered by the development process.

References

- Bandyopadhyay, J. 1992. “From environmental conflicts to sustainable mountain transformation: Ecological action in the Garhwal Himalaya.” In D. Ghai and J.M. Vivian (eds.), *Grassroots Environmental Action: People’s Participation in Sustainable Development*. Routledge, London.
- Barbier, E.B. 1989. *Economics, Natural-resource Scarcity and Development: Conventional and Alternative Views*. Earthscan, London.
- Bartelmus, P. 1987. *Environment and Development*. George Allen & Unwin, London.
- Blauert, J. 1990. “Autochthonous approaches to rural environmental problems: The Mixteca Alta, Oaxaca, Mexico.” University of London Ph.D. (Wye College).
- Brandt Commission. 1980. *North-South: A Programme for Survival—Report of the Independent Commission on International Development Issues under the Chairmanship of Willy Brandt*. Pan Books, London.
- Budowski, G. 1989. “Developing the Chocó region of Colombia.” In J.O. Browder (ed.) *Fragile Lands of Latin America: Strategies for Sustainable Development*. Westview Press, Boulder CO.
- Chambers, R. 1988. *Sustainable Rural Livelihoods: A Strategy for People, Environment and Development*. Institute of Development Studies, Sussex.
- Conway, G. and E. Barbier. 1988. “After the green revolution: Sustainable and equitable agricultural development.” In D. Pearce and M. Redclift (eds.), *Futures*, Vol. 20, No. 6, pp. 651–670.
- Devall, B. and G. Sessions. 1985. *Deep Ecology: Living as if Nature Mattered*. Peregrine Smith, Salt Lake City UT.
- Ewell, P. and T. Poleman. 1980. *Uxpanapa: Agricultural Development in the Mexican Tropics*. Pergamon Press, Oxford.
- Feyerabend, P. 1987. *Farewell to Reason*. Verso, London.
- Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Polity Press Oxford.
- Goonatillake, S. 1984. *Aborted Discovery: Science and Creativity in the Third World*. Zed Books, London.

REVISITING SUSTAINABLE DEVELOPMENT

- Guha, R. 1989. *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*. Oxford University Press, New Delhi.
- Harvey, N. 1989. *Corporatist Strategies and Popular Responses in Rural Mexico: State and Opposition in Chiapas, 1970–1988*. University of Essex Ph.D.
- Hayter, T. 1989. *Exploited Earth: Britain's Aid and the Environment*. Earthscan/Friends of the Earth, London.
- Hecht, S. 1989. "Chico Mendes: Chronicle of a death foretold." *New Left Review*, Vol. 173, pp. 47–55.
- Hecht, S. and A. Cockburn. 1989. *The Fate of the Forest Developers, Destroyers and Defenders of the Amazon*. Verso, London.
- IUCN (International Union for the Conservation of Nature). 1989. *World Conservation Strategy for the 1990s*. IUCN/UNEP/WWF, Gland.
- . 1988. *Economics and Biological Diversity: Guidelines for Using Incentives*. IUCN, Gland.
- . 1980. *World Conservation Strategy: Living Resource Conservation for Sustainable Development*. IUCN/UNEP/WWF, Gland.
- Kunwar, S.S. (ed.) 1982. *Hugging the Himalaya: The Chipko Experience*. Dasholi Gram Swarajya Mandal, Gopeshwar.
- LAB (Latin American Bureau). 1990. *Fight for the Forest: Chico Mendes in his Own Words*. Latin American Bureau, London.
- McNeely, J. and D. Pitt, (eds.). 1985. *Culture and Conservation: The Human Dimension in Environmental Planning*. Croom Helm, London.
- Meadows, D.H., D.L. Meadows, J. Randers and W. Behrens. 1972. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. Pan, London.
- Mill, J.S. 1873. *Principles of Political Economy*. Parker, Son and Bourn, London.
- Norgaard, R. 1985. "Environmental economics: An evolutionary critique and a plea for pluralism." *Journal of Environmental Economics and Management*, Vol. 12, No. 4, pp. 382–394.
- O'Riordan, T. 1989. "The challenge for environmentalism." In R. Peet and N. Thrift (eds.), *New Models in Geography: The Political Economy Perspective* (volume 1). Unwin Hyman, London.
- Pearce, D., A. Markandya and E. Barbier. 1989. *Blueprint for a Green Economy*. Earthscan Publications, London.
- Redclift, M.R. 1987. *Sustainable Development: Exploring the Contradictions*. Methuen, London.
- Schwartzman, S. 1989. "Extractive reserves: The rubber tappers' strategy for sustainable use of the Amazon Rainforest." In J. Browder (ed.), *Fragile Lands of Latin America: Strategies for Sustainable Development*. Westview Press, Boulder CO.
- Sheridan, A. 1980. *Michel Foucault: The Will to Truth*. Tavistock, London.
- Shiva, V. and J. Bandyopadhyay. 1986. "The evolution, structure and impact of the Chipko movement." *Mountain Research and Development*, Vol. 6, No. 2, pp. 133–142.
- Smart, B. 1985. *Michael Foucault*. Tavistock/Ellis Horwood, London.
- United Nations. 1987. *Our Common Future: Report of the World Commission on Environment and Development*. Oxford University Press, Oxford.
- World Bank. 1988a. *Environment and Development: Implementing the World Bank's New Policies*. Development Committee Paper 17. Washington DC.
- . 1988b. *The World Bank and the Environment*. Internal discussion paper. World Bank, Washington DC.
- . 1987. *Environment, Growth and Development*. Development Committee Paper 14. World Bank, Washington DC.

Chapter 4

Markets in Principle and Practice¹

*Cynthia Hewitt de Alcántara*²

(1993)

I.

If development policy in the 1980s was consistently shaped by an appeal to market principle, rather narrowly defined, the process of reform in the 1990s already shows signs of increasing concern with market practice—with what a growing number of people are calling the political economy of “real markets”.³

This is the case for a number of reasons. The first is simply the experience of the past decade, which has forcefully illustrated the complexity of efforts at economic restructuring around the world and the difficulties encountered when insufficient attention is paid to a wide range of real market settings in which reform programmes are being applied.

As a lending condition, international financial institutions have routinely imposed a standard set of policy prescriptions, intended to “get prices right”, on a large number of Third World countries with debt-related balance-of-payments difficulties. Although economic stabilization in a narrow sense has been attained with a certain frequency, this has very seldom led to renewed growth and it almost always has had regressive effects on income distribution and general welfare (Ghai 1991; Taylor 1988). Furthermore, in many cases, even stabilization itself has proved consistently elusive.

Particularly unsettling for observers of market reforms is the fact that one of the most prominent assertions made by proponents of these programmes, who hoped to better conditions in rural areas, has proved very unreliable in practice. It was consistently predicted that the standard set of corrective measures lying at the centre of reform

¹ Originally published as the introductory chapter to *Real Markets: Social and Political Issues of Food Policy Reform*, edited by Cynthia Hewitt de Alcántara (UNRISD and Frank Cass, 1993). UNRISD is grateful to Frank Cass/Taylor&Francis for permission to reproduce this work here.

² At the time of writing, Cynthia Hewitt de Alcántara was Project Leader at UNRISD.

³ Recent calls for new work on “real markets” can be found in Bernstein 1989; Harriss 1984; Hewitt de Alcántara 1989; Mackintosh 1990.

(including devaluation, reduction of trade barriers and curbs on the role of the state in agricultural marketing) would be strongly favourable to farmers, and in particular to small cultivators or peasants. “Shifting the terms of trade toward agriculture” was a principal goal of the reform process, and this was expected to provide strong impetus for improving rural livelihood (World Bank 1981, 1986).

After almost 10 years of experience, however, there is abundant evidence that the standard package of market-oriented reforms required to pursue macroeconomic stabilization has not, on the whole, been of benefit to small farmers, and that most rural people are worse off today than they were before the policy experiment began.⁴ This is not to say that they might not have suffered equally, or more, if nothing at all had been done to confront economic crisis; it is to say that such an outcome can be expected to raise legitimate questions concerning the adequacy of the set of assumptions utilized to devise a policy remedy.

The central assumption underlying the effort to deal with crisis in many Third World countries during the 1980s has been a relatively rigid one, based on a logical construct (the “free market”) that is open to theoretical and practical challenge on a number of grounds. In its most simplistic form, the assumption holds that resources are allocated in an optimally efficient manner through the impersonal play of supply and demand, and that the roots of crisis lie in the systematic “distortion” of market signals through inappropriate government interference with free market forces. Since relative prices constitute the basic instrument of market regulation, removal of factors (like fixed exchange rates, price controls and subsidies, restrictions on imports, export taxes, and so forth) impeding the automatic adjustment of these prices constitutes, in this view, the single most important step that can be taken to revive economies and—in largely agrarian societies—to ensure that rural people enjoy increased opportunities (World Bank 1981, 1986).

Macroeconomists outside the neoliberal school have long criticized this form of “free market” analysis for its reductionism: it posits mechanisms of adjustment on the basis of a deductive exploration of the logic of maximizing, not on the basis of empirical investigation (Robinson 1977; Polanyi 1957). Economists have also pointed out repeatedly that relative prices do not shift in ways that promote greater welfare for greater numbers within a context of fundamentally unequal distribution of resources. In the absence of structural reform, the unfettered working of the market is no guarantee of development.

At a more practical level, development economists have consistently challenged the notion that price distortion constitutes the most important problem of the agricultural sector in most Third World countries, drawing attention instead to the problem of ensuring that small cultivators are provided with the kind of basic infrastructure and support services they require to gain any benefit from more advantageous prices (Lipton 1987; Pinstup-Andersen 1989). A steady stream of country-level case studies has also convincingly illustrated the practical difficulties confronted by governments attempting to implement pricing and marketing reforms within a context of generalized economic crisis, deteriorating communications networks, foreign exchange shortage and concomitant

⁴ A comprehensive review of developments in sub-Saharan African countries by Lionel Demery and Tony Addison (1987:193) “cast serious doubt on any presumption that the pro-agriculture policy conditionality of the World Bank and IMF will improve food security in SSA in the foreseeable future”. And Kydd and Scarborough (1988:26) concluded that “implementation [of reforms] has raised as many new problems as it has solved”. For Latin America, see Twomey 1989 and Schejtman 1988.

restrictions on the importation of basic producers' goods.⁵ "Getting prices right" in one area of the economy (as through devaluation of the national currency, for example) can have potentially disastrous consequences for other areas, including agricultural production.

All of these criticisms suggest that if the economic crisis of the past few decades, and more specifically the livelihood crisis of rural areas, is to be tackled as adequately and creatively as possible, policy reform must be far more soundly grounded in a careful understanding of concrete local situations than it has usually been in the past. The more rigidly deductive elements in prevailing economic prescriptions must be tempered by further analysis of the complex processes of social and economic change that form the "real world" of macroeconomic adjustment and restructuring.

The international funding agencies, in association with donor countries, have attempted to address this need by setting up programmes of survey research oriented toward documenting changes in welfare and socioeconomic structure in a number of Third World countries (Delaine et al. 1992). Their effort is an important one, generating information that was previously unavailable. It will permit social scientists and policy makers to monitor certain trends. It cannot, however, provide a substitute for the kind of qualitative research designed to analyse the structure and functioning of social institutions and to observe the concrete dynamics of social change in particular local settings.

One of the institutions most in need of study at present is, in fact, the market—not as it is hypothesized to function in neoliberal economics, but as it is substantiated (to use Karl Polanyi's term) or made operative through the interaction of real social groups. Markets are culturally and politically specific institutions: the significant difference in the way they function, even within the relatively narrow field of highly developed capitalist economies, is surely a telling illustration of this basic point. Societies—even when formally lumped within the same taxonomic category—have different histories and values. The balance of power among major groups within each country is peculiar, and principal players adhere to historically specific rules of the political game. A varying degree of vulnerability to external forces (or capacity for external alliance) affects the capacity to manoeuvre in innumerable concrete cases. All of this makes for distinct allocative priorities and forms of regulation, and thus for qualitatively different "real markets".

It is precisely the enormous variation in "real markets" that lies at the heart of what reform-minded advisors to Third World governments tend to categorize as problems of policy implementation. A standard policy package, designed in the abstract, cannot be implemented in the abstract. It will be warped and moulded by social forces that are, in the last analysis, ideosyncratic. And in the passage through real markets, measures that in a given context might originally have been expected to favour one group may actually favour another; incentives designed to ensure a much-desired pattern of response may in fact inspire its opposite; and hypothesized patterns of reinforcement or interaction between elements in the package may prove, in the last analysis, to be highly problematic. In many cases, reform measures introduced at the national or regional level simply never reach the local level at all.

This statement is as applicable to reform efforts in socialist settings as it is to those in capitalist or semi-capitalist ones. Both "transitions to socialism" and "transitions from

⁵ Kydd 1986; Harrigan 1988; Igbedioh 1990; Sahn and Arulpragasam 1991; Commander et al. 1989.

socialism” in developing countries have been plagued by the same kinds of problems afflicting stabilization and adjustment efforts within the non-socialist Third World over the past few decades. A great many assumptions about the nature of existing markets have in practice proved illusory (most particularly when Third World governments have implemented socialist reforms in rural markets, insufficiently understood by urban-based planners) (Mackintosh 1986; Spoor 1991).

Similar problems arise in Eastern Europe and the ex-Soviet Union, now involved in an unprecedented experiment to create capitalist institutions. Reforms in these countries are often based upon an extremely stylized and formalistic vision of how market societies work; and it is obvious that some of the institutions and policies currently being imported will not be congruent with the existing social and cultural milieu or with any reasonably likely pattern of change within it. A broad-ranging debate within the international community on the complex world of “real markets” might provide some counterweight to unrealistic expectations in this context.⁶

II.

The chapters in *Real Markets: Social and Political Issues of Food Policy Reform* (Hewitt de Alcántara 1993) explore the interface between policy prescription on the one hand and real Third World food markets on the other.⁷ Some chapters are particularly concerned with local exchange environments and others with the political economy of market reform. Taken together, they contribute elements for rethinking experiments in market reform, from the bottom up, and they illustrate why policy prescriptions are likely to have a variety of unintended consequences in different parts of the world.

The first point that emerges clearly throughout the volume is simply that *a great many rural people around the globe are only tenuously integrated into wider markets of any kind*. Over centuries, the population of the Third World has been drawn into—and sometimes later expelled from—shifting markets for commodities and labour created by the commercial and political expansion of empires. Many remote communities, where contact with the outside world now seems extremely limited, have in fact participated at some earlier historical moment in once-dynamic markets, later eliminated by the vagaries of history.

Current isolation is therefore not likely to reflect a past in which there was no contact with wider forces. Truly “primitive” groups are difficult to find in our day. But hundreds of millions of people are currently living on the fringes of markets, caught up in a very chaotic and contradictory process of incorporation into developing political and economic systems that make new demands on their allegiances and resources, and wreak havoc with their lives.⁸

In this context, the market is experienced differentially. As James Fairhead shows in the second chapter, it advances in conjunction with very complex political forces, creating

⁶ Although it is the goal of reformers in Eastern Europe and the countries of the former Soviet Union to construct modern consumer societies of a Western European or American type, the social reality of some areas is in fact closer to that of some Third World countries; and the possibility should therefore not be overlooked that the kinds of markets that emerge in rural areas will bear considerable resemblance to one of the variants of market organization in developing nations.

⁷ For a discussion of the concept of interface, see Long 1989.

⁸ Andrew Pearse (1975) provided an exceptionally clear analysis of this process in his book on the Latin American peasantry. See also Bohannan and Dalton 1962.

opportunities for some and grave dangers to livelihood for others. It affects social relations throughout communities, kin groups and families; it changes the structure of rights and obligations for men and women within households. And the very incompleteness of market integration, whether for commodities or labour or land, implies the existence of extraordinarily varied survival strategies, altered with great frequency.

To think that steps introduced to “get prices right” within the macroeconomy can have any straightforward effect on most people in situations like these is naive—just as it is naive to suppose that measures introduced in the past by the majority of Third World socialist governments to create state marketing structures could have been implemented coherently in such a context.

In cases like that described by Fairhead, most rural households continue to have access to land; and they pursue a subsistence strategy in which non-monetary reciprocity still plays an important, though declining, part. They can exchange goods within and among families and clans without necessarily having to earn or spend money. Their livelihood, although circumscribed by dependence upon the protection and largesse of a chiefly hierarchy, is still to some degree under their own control.

Over large areas of the world, however, the survival of rural people depends on long-standing and rigid relations of subordination, whether within the context of feudal society or within a structure of mercantile power that stands between a local peasantry and the wider economic and political system. For example, the most densely populated country in Africa, Rwanda, contains regions in which the persistence of semi-feudal relations has seriously complicated the task of creating a viable national food market. There is great pressure on the land, controlled in the northern region by an elite that rents small parcels to its clientele, or allows the latter access to plots in return for the delivery of a part of the harvest and/or the provision of labour services.

Food markets in the semi-feudal setting of northern Rwanda are narrow and oligopolistic. In the recurring periods of drought and hunger that afflict the country, trading interests work not to move production from surplus to deficit regions but to channel basic foodstuffs toward areas where people are better off and effective demand is highest. Such a situation constitutes a textbook example, explained by Amartya Sen (1981), of how market mechanisms can actually bring on famine in regions where grain could in fact be supplied but effective demand provides no incentive to do so. The government has therefore been repeatedly urged by international advisors and donors not to get out of marketing but to get into it, in order to regulate distribution; but there has been only modest response (Pottier 1989).

Some of the most elaborately hierarchical structures of market exchange in the world are to be found on the Indian subcontinent, where private trade in backward regions is grounded in multiple mechanisms of coercion and control. An extreme example of an exploitative marketing system is analysed in the chapter by Ben Crow and K.A.S. Murshid, who have studied the real world of paddy and rice trading in a relatively isolated rural area of Bangladesh. As in northern Rwanda, the power of the local elite in the Bangladeshi case rests on the control of land and credit made available to poor peasants in return for a proportion of their output and/or the provision of labour services. Market dominance is further ensured by a transport cartel, by control over local political and judicial institutions and, when necessary, by the use of force.

Such a situation clearly illustrates the *inadvisability of assuming that private trade is necessarily synonymous with free markets*. On the contrary, private trade can be facilitated precisely by forcing peasant households into relations of dependence and indebtedness

that lead to what Amit Bhaduri (1986) has called “forced commerce”: poor producers sell more than they should, to pay their debts, and then fill the gap in family subsistence by buying back basic foodstuffs at high prices later on in the year. The system operates within a framework of interlocked markets for land, labour, credit and commodities that is the antithesis of the “free market” model.

Between the pole of incipient market integration, represented in the volume by the Zairian case, and that of complete integration under extremely exploitative conditions, described for Bangladesh, there are a great many intermediate situations, in which rural people have greater or lesser opportunities to participate in wider exchange environments under conditions enabling them to obtain a fair return for their goods or their labour. It is important to note that these conditions vary markedly not only among countries, but also—more interestingly, perhaps, for policy prescription—within countries and even within provinces or states. The physical setting of certain regions, the crops they produce and the food they consume, their social and political history and current status within national development projects or struggles—all affect the “actually existing” market structure in particular parts of Third World countries.

To speak of “the market”, as if there were a single integrated exchange environment, in Third World rural settings can therefore be extremely misleading. There is often more likely to be a network of micro-markets, sometimes only short distances apart, in which local power structures define the terms of trade, as well as the channels through which resources pass from lower to higher levels within the broader economy. It is not unusual to find remarkable spatial variation in prices within such situations.

Geographers have been particularly adept at identifying these idiosyncratic market contexts, which may be highly competitive in one area and highly oligopolistic in an adjacent one. Thus Carol Smith (1977) has drawn upon central-place theory to illustrate how, even within the restricted confines of western Guatemala, four types of “modern” peasant market structures exist side-by-side, in four micro-regions each of which is tied to the national market in a different way. Some are dominated by commercial interests based outside their area, others by local trading interests. Smith concludes that “as more and more peasants in the world are drawn into a market economy, it becomes increasingly irrelevant to ask how much peasants are integrated by or responsive to a market economy and increasingly relevant to ask how the market that structures their economy is instituted” (1977:144) or structured by local historical experience.

The fact that merchants in their private capacity, and the commercial sector as an institution, are linked in varying ways to the wider system of power and production in particular regional economies implies that the fruits of economic growth (or risks of economic failure) passing through this sector can be turned to very different uses and produce a wide variety of social outcomes in different cases. As Barbara Harriss notes in her contribution to this volume, *private mercantile power may be a progressive or a regressive force in the transformation of societies.* The interests of the “commercial sector” may lie in transforming local agricultural production or in maintaining traditional technologies and social relations; in challenging monopoly control over various kinds of resources (including political resources) or reinforcing it; in investing in industry or depositing profits in foreign bank accounts.

In other words, even a thriving private commercial sector, promoted in the rhetoric of market reform, in itself constitutes no guarantee of renewed development within the present recessionary context. Under the right circumstances, it may do so. But *the explosion of commercial activity during the past decade or so in both rural and urban areas of many*

Third World countries has often constituted at least as much a sign of poverty as of opportunity. Peasant families faced with rising input and consumption costs and declining incomes, and unable to guarantee subsistence through withdrawing entirely from the market, sell more of their output, even at ruinous prices. They may also attempt to engage in some form of petty trading, again under the most primitive and unremunerative conditions imaginable. The urban poor are simultaneously turning to petty trade in record numbers, as one element in ever more complex survival strategies.

Under circumstances in which large-scale private commercial enterprise controls the key junctures between rural and urban markets, this simply increases the pool of extraordinarily cheap labour which can be drawn upon by trading businesses. The chapters by Harriss and by Crow and Murshid in *Real Markets* describe the internal structure of large trading networks in which the initiative of subordinate petty traders is severely limited by ties of patronage and debt. Similar situations have been discussed by students of trade in many Latin American and African contexts. In some cases, dependent traders manage to move ahead (often through driving purchase prices from very small producers down sharply), but on the whole petty traders operating at the lower levels of networks dominated by moneylending merchants are likely to participate little if at all in any increasing profits obtained by their powerful merchant patrons. This is true not only in the rural but also in the urban segments of oligopolistic commodity markets.

There are of course an infinite variety of trading situations. The market context in some regions may be so competitive and resources so scarce that what one finds is simply a kind of commercial involution: more and more people enter the field of petty trade, working harder and harder to obtain less and less. In fact, the overall market economy under such circumstances may be shrinking. *The general economic crisis of the past decade or so has not only forced more people into trading but also, in many cases, undermined the vitality of already existing regional markets.*

Recession reduces the buying power of any potential clientele a trader may have, at the same time as it increases the costs and worsens the transport networks on which he or she must rely. Devaluation immediately raises the price of petrol and the cost of vehicles; cuts in government services worsen the roads; and attempts by public authorities to increase tax revenues are (especially in the African context) likely to be reflected in new taxes on petty trade (Bazaara 1991; Meagher 1988). In the process, turnover of personnel within the petty trading sector is extremely high. Many students of rural life in the 1980s have documented the demise of small trading businesses in interior regions, increasing scarcity of basic products and the prevalence of ruinous price structures at both producer and consumer levels.

Under circumstances like these, what is needed to reinforce competitive and efficient private trading networks in many rural areas during a period of profound economic malaise is not a simple prescription for less public intervention, but encouragement of more effective action on the part of the state to promote marketing of basic producers' and consumers' goods under extremely difficult circumstances. This is a complex subject on which a great deal of debate has centred.

III.

In the standardized discourse of market reform, state regulation of and intervention in marketing is singled out as one of the principal causes not only of agricultural stagnation

but also of commercial inefficiency in rural and urban settings of many Third World countries. The criticism is grounded particularly in an analysis of food and agricultural pricing policy, which occupies a strategic place in the developmental strategies of Third World countries. Many states have played some role in setting agricultural producer prices and, in the case of export crops, these have often been held below world market prices by state marketing boards in order to increase the trading margin captured by the government upon export. This “tax” on producers has formed an important part of public revenue.

At the same time, state marketing boards or food corporations have usually made some effort to buy basic grains at relatively low prices in order to feed a growing urban population at the least possible cost. This has contributed further to a systematic bias against agriculture, mitigated to some extent by subsidies on farm inputs and marketing services that have cheapened the cost of production for groups more closely integrated into the market. Subsidies lowering the consumer price of basic foodstuffs in major urban areas have also increased the relative advantage of urban over rural people.

A general diagnosis of rural disadvantage, growing out of mistaken public policy, has thus often been in order. Relative prices have frequently been set against agriculture, and state marketing agencies have played a role in extracting resources from agricultural producers, to be transferred to urban-industrial sectors or simply to be squandered through corruption. Robert Bates (1981), Michael Lipton (1977) and others have explored the political economy of urban bias in convincing detail.⁹

As usual in the complicated world of real markets, however, the picture is never as simple as it seems. To begin with, *public pricing policy—like most other areas of public policy—has had in the past and still has many purposes, some of which are thoroughly contradictory*. The driving forces of policy making are political, not technical, and they produce incongruous results. Thus, while a number of pricing measures may penalize rural people, others represent attempts to improve their position in extremely imperfect markets.

One of these measures is pan-territorial pricing, which establishes a single guaranteed price for certain farm products throughout the national territory. Such an effort can be extremely costly if it supports producer prices in distant farming regions, where the cost of transport to any major market is high. In times of economic crisis, this is difficult for governments to sustain. But such programmes, implemented through state-run buying stations and often supported financially by foreign donors, have provided indispensable support for rural development efforts in many relatively remote areas of Third World countries, where market prices would not justify commercial production. As Deborah Bryceson notes in her contribution to *Real Markets*, they have represented a commitment to “spatial egalitarianism”—even in countries criticized for strong urban bias in certain aspects of the pricing structure.

The assumption that the intervention of the state in rural marketing is *necessarily* damaging to rural people is therefore confirmed neither by logic nor by experience. The efforts of the Grain Marketing Board of the government of Zimbabwe, for example, stand behind the much-lauded expansion of maize production in communal farming areas over the past few years. Without the provision of subsidized marketing services, small farmers could not have benefited from increased yields (Amin 1992). More generally, the

⁹ For a Latin American analysis of urban bias, see Hewitt de Alcántara 1976.

maintenance of agricultural support prices, even at relatively low levels, protects farm families in many Third World countries (as in the industrialized nations) from extreme variation in income associated with innumerable factors, ranging from unpredictable climate to oligopolistic trading practices.

Adjustment-related attempts to remove such equilibrium-“distorting” mechanisms as support prices can be justified as emergency measures forced upon governments by economic crisis. But to urge that these steps be taken on technical or ideological grounds—as an inherently proper reinstatement of “free market forces”—and that macroeconomic policy reform of this kind will automatically benefit rural people, is disingenuous. *The livelihood of farming families can be devastated by loss of access to support prices and associated state-run marketing services, as has been the case over wide areas of Latin America and Africa during the past decade.*

Whether state intervention in agricultural markets benefits or harms rural people in fact depends at least as much on the degree of compulsion associated with public marketing programmes as on the level of the official price and its relation to alternatives in the unregulated market. *Official crop pricing programmes are likely to favour producers most when they are available to all on a discretionary basis. They favour producers least when delivery at the fixed price is mandatory;* and, in fact, the neoliberal stereotype of harmful state intervention in agricultural markets is drawn from reference to the latter case, not the former.

Experience throughout the Third World has shown that attempts on the part of national governments to ban private commerce in certain basic products and to create a single official channel for trade through state marketing boards tend to be politically and economically costly—and finally unsustainable. Monopoly control over the purchase of farm products, when exercised by the state, is as likely to harm “captive” sellers as is the exercise of monopoly control by private traders. It constitutes the mechanism through which governments can enforce artificially low prices, as emphasized in discussions on urban bias; and it provides fertile ground for corruption.

To illustrate the differential effects that state marketing programmes can have on various groups of rural producers, depending upon the characteristics of local markets and the degree of coercion or voluntarism involved in the official programme, it is useful to refer briefly to the case of Mexico. In that country, a complex structure of market regulation was developed during the postwar period to perform a wide range of functions, from regulating producer and consumer prices for certain basic products to ensuring the supply of grain throughout the national territory. This effort never involved the prohibition of private trade or the legal imposition of a governmental monopoly. The expressed intention of the government has always been to correct market forces—to regulate at the margin—not to eliminate the market altogether.

Nevertheless the functioning of the agricultural credit system created a de facto public-sector monopoly on crops produced by agrarian reform beneficiaries with official financing. As was later to prove the case in a number of developing countries, loans extended by the state-run rural bank were guaranteed against the purchase of borrowers’ crops. Given the need to support and develop peasant agriculture, and disinterest in this venture on the part of private enterprise, such an arrangement seemed logical and necessary. Over the long run, however, it fell prey to corruption and became an instrument for extracting resources from a captive farming sector. The level of support prices at which crops were acquired by the official rural bank was often lower than that prevailing in regional markets; and producers in these developing commercial areas

therefore began a long struggle to free themselves from the state-run trading system, so that they could bargain independently.

This, however, is only half of the picture. While selling at the official price proved detrimental to the interests of a sector of small commercial farmers operating within the framework of a de facto state-controlled monopoly on the purchase of certain crops (financed through the official credit system), access to the same support price was an alternative much in demand in more backward areas of rural Mexico. Plagued by interlocking private markets that held them in perpetual debt, the poorer peasantry of remote regions throughout the Mexican countryside insistently requested the extension of state trading programmes into disadvantaged areas, in order to challenge exploitative local monopolies. In fact, organizations of poorer rural producers and consumers have fought long battles—often at the cost of lives—to establish officially sponsored marketing cooperatives in their localities.

The experience of the peasantry in such backward regions of Mexico must be followed a step further in order to underline the complexity of relations between public and private sectors in real rural settings. Even when local people were successful in breaching the economic and political barriers that traditionally maintained their dependence on local political bosses and moneylending traders, and even when they gained outside allies who could support the establishment of marketing cooperatives in their communities, this was in no sense a guarantee that the potential benefits of the new arrangement would ultimately be realized. The struggle for control of the local market (and for control of local livelihood) was played out within ideosyncratic political arenas. In some cases, peasant producers were successful in using the power of regional and national allies (in the state-run marketing agency and the government) to alter the terms of trade and power in their communities. In others, the marketing programme was taken over by the traditional landholding and merchant elite, perhaps in collusion with employees of the national marketing programme.¹⁰

The point to be made is that when subject to empirical scrutiny, *the state is no more a single entity than the market, and that economic and political structures blend together at the local level in rural areas of the Third World to create exchange environments that cannot be understood by simply referring to general characteristics of state and market in the country.* This assertion is associated with another, at a more general level: in the last analysis, conceptualizing state and market as isolated—or opposite—entities (much less attributing to either a positive or negative connotation) is likely to encourage both bad social science and bad social policy.

IV.

The tendency throughout the 1980s for the discourse on reform to revolve around a supposed state-market dichotomy, and to abstract both state and market from the society that forms their common base, has furthered a number of misconceptions. In the first place, the policy debate has been so dominated by strong neoliberal concern with “getting the state out of marketing” (countered by strong nationalist concern with maintaining a state presence in that field) that *official market intervention in Third World countries has been made to appear far more widespread and pervasive than it actually is or has been.* In fact, with the

¹⁰ Essays on these experiences can be found in Hewitt de Alcántara 1992.

exception of consolidated socialist economies, even the most concerted efforts of Third World governments to outlaw private commerce or regulate trade have encompassed an extremely small part of the real national market. Greatest control has been exercised in the case of export crops. But in the case of grain and other staple crops, attempts by African governments to monopolize trade have never been more than partially effective;¹¹ and (with the exception of Cuba) private trade has never been outlawed in Latin America at all.

In the second place, *this debate has often assumed a life of its own, increasingly unrelated to the real world of marketing* for both staple and commercial crops. As governments and foreign advisors or creditors have argued endlessly about the technicalities of market reform, local people in many countries have continued to meet immediate needs through developing new modalities of exchange. Deborah Bryceson notes, for example, that during the 1980s private grain markets developed so consistently in Tanzania, even within the context of nominally all-pervasive governmental regulation, that the intense high-level debate on the merits of market liberalization in that country in fact proved increasingly irrelevant.

Finally, when needed policy reforms are carried out in states that have indeed imposed unrealistic regulations on trade, or exerted monopoly control over certain products, the ideological character of the state/market debate can to some extent obscure both the underlying social processes contributing to reform and the enduring problems of exchange that will remain even after the policy reform process has been completed.

This is particularly likely in the case of Third World socialist countries. As Peter Utting argues in the concluding chapter of *Real Markets*, trade liberalization in such settings can only partially be explained within a formalistic macroeconomic and macropolitical framework. The process of reform advances not only as a technocratic response to economic constraints or as a political response to immediate challenge or even as an ideological shift, but also because medium-term changes in social organization at the grassroots make restructuring unavoidable.

The Nicaraguan experience analysed by Utting also provides a clear example of the fact that *basic problems of provisioning and market regulation do not disappear simply because structures of more or less pervasive official control over certain areas of exchange are dismantled*. In situations of deep economic crisis, often aggravated by war or civil strife, in which production of basic staples may be declining and markets may be increasingly disarticulated, eliminating certain costly or unworkable programmes or trade policies may prove more useful as a means to balance the budget than as a way to ensure that masses of people will have access to basic goods. After old strategies are discarded, the challenge of building new ones remains.

V.

There is, then, an urgent need for market reform throughout the Third World. But this is not a task to which any standard set of policy prescriptions can be applied. In some cases,

¹¹ According to one estimate, cited by Green (1989:40), less than 10 per cent of all domestic food production in Africa, and less than one-third of all marketed food production, might have been handled through official channels around the turn of the 1980s. Such figures are, of course, extremely debatable since no reliable statistics exist in large areas of rural Africa (or Latin America).

exploitative structures of private commerce hold large numbers of people in virtual bondage; in others, there is no private market to speak of at all. In some cases, small farmers and traders must be freed from state tutelage; in others, they must gain access to state support. There are governments that extract too much from the countryside and governments that extract too little. There are places where rural and urban interests clash sharply and places where they do not.

Market reform will have to be worked out pragmatically, on the ground. And as it is, basic structural dilemmas of livelihood and provisioning within Third World societies must be confronted.¹² These dilemmas appear again and again throughout *Real Markets*.

References

- Amin, N. 1992. "State and peasantry in Zimbabwe since independence." *European Journal of Development Research*, Vol. 4, No. 1, pp. 112–162.
- Arhin, K., P. Hesp and L. van der Laan. 1985. *Marketing Boards in Tropical Africa*. Routledge Kegan Paul, London.
- Barracrough, S. 1991. *An End to Hunger? The Social Origins of Food Strategies*. Zed Books, London.
- Bates, R.H. 1981. *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. University of California Press, Berkeley CA.
- Bazaara, N. 1991. *Structural Adjustment Programmes: The Liberalisation of Food Markets and Social Change in Uganda*. Final version of a paper presented at the UNRISD Seminar on Food Pricing and Marketing Reform, Geneva, Switzerland, 20–22 November 1989.
- Bernstein, H. 1989. *Agricultural "Modernisation" in the Era of Structural Adjustment*, Development Policy and Practice Working Paper No. 16. Open University, Milton Keynes.
- Bhaduri, A. 1986. "Forced commerce and agrarian change." *World Development*, Vol. 14, No.2, pp. 267–272.
- Bohannon, P. and G. Dalton (eds.). 1962. *Markets in Africa*. Northwestern University Press, Evanston IL.
- Bryceson, D.F. 1993. "Urban bias revisited: Staple food pricing in Tanzania." In C. Hewitt de Alcántara (ed.), *Real Markets: Social and Political Issues of Food Policy Reform*. Frank Cass, London.
- Commander, S., O. Ndoye and I. Ouedrago. 1989. "Senegal 1979–1988." In S. Commander (ed.), *Structural Adjustment and Agriculture*. James Currey, London.
- Crow, B. and K.A.S. Murshid. 1993. "The finance of trade and agriculture in a backward area of Bangladesh." In C. Hewitt de Alcántara (ed.), *Real Markets: Social and Political Issues of Food Policy Reform*. Frank Cass, London.
- Delaine, G., L. Demery, J.-L. Dubois, B. Grdjic, C. Grootaert, C. Hill, T. Marchant. 1992. *The Social Dimensions of Adjustment Integrated Survey: A Survey to Measure Poverty and Understand the Effects of Policy Change on Households*. Social Dimensions of Adjustment in Sub-Saharan Africa Working Paper No. 14. World Bank, Washington DC.
- Demery, L. and T. Addison. 1987. "Food insecurity and adjustment policies in sub-Saharan Africa: A review of the evidence." *Development Policy Review*, Vol. 5, No. 2, pp. 177–196.
- Fairhead, J. 1993. "Paths of authority: Roads, the state and the market in Eastern Zaire." In C. Hewitt de Alcántara (ed.), *Real Markets: Social and Political Issues of Food Policy Reform*. Frank Cass, London.
- Ghai, D. (ed.). 1991. *The IMF and the South: The Social Impact of Crisis and Adjustment*. Zed Books, London.
- Green, R. 1989. "Articulating stabilisation programmes and structural adjustment: Sub-Saharan Africa." In S. Commander (ed.), *Structural Adjustment and Agriculture*. James Currey, London.
- Harrigan, J. 1988. "Malawi: The impact of pricing policy on smallholder agriculture, 1971–1988." *Development Policy Review*, Vol. 6, No. 4, pp. 415–433.
- Harris, B. 1993. "Real foodgrains markets and state intervention in India." In C. Hewitt de Alcántara (ed.), *Real Markets: Social and Political Issues of Food Policy Reform*. Frank Cass, London.
- . 1984. *State and Market*. Concept Publishing Co., New Delhi.
- Hewitt de Alcántara, C. (ed.). 1993. *Real Markets: Social and Political Issues of Food Policy Reform*. Frank Cass, London.

¹² For a useful discussion of these issues, see the last chapter of the book by Solon Barraclough (1991) on food strategies in Africa, Asia and Latin America.

- . (ed.). 1992. *Reestructuración económica y subsistencia rural*. El Colegio de Mexico, Mexico City. Also summarized in English in *Economic Restructuring and Rural Subsistence in Mexico: Maize and the Crisis of the 1980s*. Discussion Paper No. 31. UNRISD, Geneva.
- . 1989. *Food Pricing and Marketing Reform: Social and Political Issues*. Paper presented at the UNRISD Seminar on Food Pricing and Marketing Reform, Geneva, Switzerland, 20–22 November.
- . 1976. *Modernizing Mexican Agriculture: Socioeconomic Implications of Technological Change, 1940–1970*. UNRISD Geneva.
- Igbedioh, S. 1990. "Macroeconomic adjustment, food availability and nutrition status in Nigeria: A look at the 1990s." *Food Policy*, Vol. 15, No. 6, pp. 518–524.
- Kydd, J. 1986. "Changes in Zambian agricultural policy since 1983: Problems of liberalization and agrarianization." *Development Policy Review*, Vol. 4, No. 3, pp. 233–259.
- Kydd, J. and V. Scarborough. 1988. *Liberalisation and Privatisation in Sub-Saharan African Food Marketing: A Survey of the Issues*. Paper prepared for the Overseas Development Institute.
- Lipton, M. 1987. "Limits of price policy for agriculture: Which way for the World Bank." *Development Policy Review*, Vol. 5, No. 2, pp. 197–215.
- . 1977. *Why Poor People Stay Poor: Urban Bias in World Development*. Temple Smith, London.
- Long, N. (ed.). 1989. *Encounters at the Interface: A Perspective on Social Discontinuities in Rural Development*. Agricultural University of Wageningen, Wageningen.
- Mackintosh, M. 1990. "Abstract markets and real needs." In H. Bernstein, B. Crow, M. Mackintosh and C. Martin (eds.), *The Food Question*. Earthscan, London.
- . 1986. *Agricultural Marketing and Socialist Accumulation: A Case Study of Maize Marketing in Mozambique*. Development Policy and Practice Working Paper No. 1. Open University, Milton Keynes.
- Meagher, K., 1988, *The Market in the Lived Economy: A Report on the Dynamic of Official and Parallel Market Activities in Arua District, Uganda*. Institute of Development Studies, Sussex.
- Pearse, A. 1975. *The Latin American Peasant*. Frank Cass, London.
- Pinstrup-Andersen, P. 1989. *Government Policy, Food Security and Nutrition in Sub-Saharan Africa*. PEW/Cornell Lecture Series on Food and Nutrition Policy, Ithaca NY.
- Polanyi, K. 1957. *The Great Transformation*. Beacon Press, Boston MA.
- Pottier, J. 1989. *Food Security in Rwanda*. Paper presented at the UNRISD Seminar on Food Pricing and Marketing Reform, Geneva, Switzerland, 20–22 November.
- Robinson, J. 1977. "What are the questions?" *Journal of Economic Literature*, Vol. 15, No. 4, pp. 1318–1339.
- Sahn, D. and J. Arulpragasam. 1991. "The stagnation of smallholder agriculture in Malawi: A decade of structural adjustment." *Food Policy*, Vol. 16, No. 3, pp. 219–234.
- Schejtman, A. 1988. "La seguridad alimentaria: Tendencias e impacto de la crisis." *Revista de la CEPAL*, No. 36, pp. 141–162.
- Sen, A. 1981. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Clarendon Press, Oxford.
- Smith, C. 1977. "How marketing systems affect economic opportunity in agrarian societies." In R. Halperin and J. Dow (eds.), *Peasant Livelihood*. St. Martin's Press, New York.
- Spoor, M. 1991. *The State and Domestic Agricultural Markets in Developing Countries: The Case of Nicaragua under Sandinista Rule (1979–1990)*, Unpublished Ph. D. thesis, University of Amsterdam.
- Taylor, L. 1988. *Varieties of Stabilization Experience*. Clarendon Press, Oxford.
- Twomey, M., 1989, "The debt crisis and Latin American agriculture." *The Journal of Developing Areas*, Vol. 23, No. 4, pp. 545–566.
- Utting, P. 1993. "The political economy of food pricing and marketing reforms in Nicaragua, 1984–87." In C. Hewitt de Alcántara (ed.), *Real Markets: Social and Political Issues of Food Policy Reform*. Frank Cass, London.
- World Bank. 1986. *World Development Report 1986: Trade and Pricing Policies in World Agriculture*. Oxford University Press, Oxford.
- . 1981. *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*. World Bank, Washington DC.

Chapter 5

Rural Development and the Environment: Towards Ecologically and Socially Sustainable Development in Rural Areas¹

Solon Barraclough,² Krishna Ghimire³ and Hans Meliczek⁴
(1997)

National and International Linkages

In the second chapter of *Rural Development and the Environment* (Barraclough et al. 1997), we reviewed a bewildering array of intersecting social actors, policies, institutions, technologies and ecosystems affecting rural development and the environment at local levels. Each local situation was to some extent unique, but in none of them were the principal determinants of changing rural livelihoods and environments strictly local in origin.

Rural areas and people everywhere are increasingly integrated into wider national and transnational political and economic systems. Decisions that crucially affect the lives of large groups of rural people are frequently made in distant cities and countries by public officials or corporate boards and managers over whom they have no influence and who are most likely only vaguely aware of their existence. “For sustainable development to become a reality it is necessary for the livelihoods of the poor to be given priority, but how can this priority be pursued at the local level while the effects of international development systematically marginalize them?” (Redclift 1987:36) The popular NGO admonition of “Think globally but act locally” should always be supplemented by its corollary of “Act globally (and nationally) but think locally taking the whole wide range of local conditions into account” (Barraclough 1993). What are some of these

¹ Abridged from chapters 3 and 4 in *Rural Development and the Environment: Towards Ecologically and Socially Sustainable Development in Rural Areas* by Solon Barraclough, Krishna Ghimire and Hans Meliczek (UNRISD and UNEP, 1997).

² At the time of writing, Solon Barraclough was Senior Consultant at UNRISD.

³ At the time of writing, Krishna Ghimire was Project Leader at UNRISD.

⁴ At the time of writing, Hans Meliczek was Professor at the Institute of Rural Development in Göttingen, Germany.

developmental and environmental linkages, and how can they be modified in order to become supportive of more socially and environmentally sustainable development in rural areas?

During the last two centuries the sovereign, territorial “nation state” has spread to become the dominant form of political organization practically everywhere. The United Nations consists of almost 200 nation states that include nearly all the world’s 5.6 billion people. About one-fourth of these states have populations of less than a million each, while China has over a billion and India will soon have nearly as many. Some member states are much richer and more “sovereign” than others, but the national state remains the basic political unit in the world system. In many countries, however, the state’s capacity, authority and autonomy are being eroded by rapid advances of transnational finance, trade, transport, communications, production and consumption—that is, by “globalization” (UNRISD 1995).

At present, only the nation state has the theoretical possibility to establish and enforce legal frameworks regulating activities within its territory and to transfer resources from some social groups to others for reasons of public utility or national security. In the present world context, the nation state must play a central role in promoting sustainable rural development, as there are no credible alternative institutions in sight to take its place. NGOs can sometimes influence state policies and contribute to implementing development initiatives, but they cannot substitute for the state, while international organizations are primarily accountable to the governments of their member states.

The scope for autonomous state policy is always circumscribed by the conflicting goals and interests of its various support groups as well as by external economic and political constraints. Inevitably, the goals and the means adopted by governments are to some extent contradictory. In most countries development strategies are not popularly based nor do they serve only the interests of wealthy elites, but rather they are mixtures responding to conflicting interests, perceptions and pressures. These policy mixes vary greatly from country to country and from one time period to another. In discussing policies and institutions affecting sustainable development, the internal and external dynamics in the formation of national strategies and policies should be constantly kept in mind.

Between the 1950s and 1980s endogenous social forces striving for popularly based strategies in developing countries were frequently overwhelmed by exogenous ones attempting to maintain or expand markets, sources of raw materials and political influence. The increasing transnationalization of finance, trade, production and consumption left most governments of developing countries with no alternative but to rely on industrialized countries for technology, capital, markets and political support. National states that pursued policies of relative autarchy were soon left behind technologically. Moreover, geopolitical conflicts associated with the Cold War undermined the possibilities for endogenous social movements pursuing social reforms to act consistently in the interests of their constituents, even where they were genuinely popularly based.

The Soviet bloc’s collapse in the late 1980s did not facilitate autonomous national development strategies such as those pursued by successful “late developers” in the nineteenth and early twentieth centuries. On the contrary, once freed from the constraints imposed by the Cold War, transnationalization of production and consumption patterns accelerated, in spite of economic recession in much of the world. Weak states could no longer play one superpower against the other. They were under

increasing pressure to integrate their economics into the emerging global capitalist system dominated by Japan, the United States and the countries of Western Europe.

Policies, institutions and market forces interact in specific historical contexts to determine development styles. In the present chaotic world, it is practically impossible to discuss rural development and environmental linkages with market forces, policies and institutions without so many qualifications that few useful conclusions can emerge. To compare the recent experiences of Brazil, Chile, China, Egypt, Guatemala, Haiti, India, the Republic of Korea, Liberia, Malaysia, Somalia, Thailand and Zaire, and so on, makes little sense unless one is able to take into account the complex historical contexts of each of these countries. In spite of these difficulties, this discussion attempts to bring out a few common national and transnational linkages and interactions affecting rural development and the environment in developing countries. Market forces receive attention first because of the widely held but mistaken belief that policies and institutions are relevant principally to the degree that they facilitate or hinder further integration of these countries into world markets.

Constraints and Opportunities at Local and National Levels

Operating as they must in cooperation with sovereign national states—or at least with their assent—the scope for international agency and NGO initiatives in rural regions is circumscribed. Moreover, their resources for contributing toward more sustainable development are extremely limited. This latter constraint implies, however, that international organizations should use extreme discretion when determining their priorities and allocating their scarce resources.

Projects and programmes intended to promote sustainable rural development should be judged by their impacts on the livelihoods of vulnerable rural groups as well as on the environment. If the livelihoods of all the vulnerable groups in a rural region are not protected or improved, the initiative can easily be counterproductive. All too often rural development and environmental protection projects imply improved incomes for a few and greater hardships for many others. Construction of dams and reservoirs designed to provide irrigation water and generate hydroelectric power usually requires the resettlement of many rural people. So, too, does the construction of roads or the establishment of protected parks, and game and forest reserves. Several millions of rural poor have been deprived of their traditional access to land, water and forests during the last decade alone by projects that were supposedly designed to contribute to rural development and environmental protection. Relatively few of those affected received adequate compensation for lost livelihoods. Many of those who were displaced or who lost access to traditional resources were forced to resort to environmentally unsustainable practices in pursuit of livelihoods. In 1993, for example, World Bank-funded projects alone were estimated to threaten the livelihoods of two million people. Although the Bank established guidelines in 1980 for projects involving forcible resettlement in order to assure adequate alternative livelihoods for those affected, in practice these have been observed in a very partial fashion (Wilks and Hildyard 1994). Many other donors and governments have been even less scrupulous in protecting the livelihoods of those prejudiced by rural development and environmental protection initiatives.

Those affected negatively by projects carried out in the name of sustainable rural development are only a small portion of the rural poor displaced by “development” and

by political violence. Millions of landless rural workers, small cultivators, fisherfolk, pastoralists and forest dwellers are displaced each year by loss of employment that is frequently due to labour-saving mechanization, or because of the alienation of their natural resources. Several examples were cited in chapters 2 and 3 of *Rural Development and the Environment*. In addition, in 1993 over 20 million mostly rural people were international refugees or living in refugee-like conditions. Another 26 million or more were internally displaced by political violence that was frequently associated with ethnic or religious conflict. Some 79 countries—over one-third of the United Nations member states—were affected by wars or serious political violence in 1993 (UNRISD 1995). Programmes and projects pursuing sustainable rural development in a context of war are likely to be mirages.

Encouraging accountable and democratic rural institutions

The analysis contained in the chapter 3 of *Rural Development and the Environment* suggested that decentralization of initiatives to promote sustainable development is frequently not feasible because local institutions are controlled by elite groups allied with and accountable to outside interests with other goals. In the final analysis, however, popular participation has to begin through local institutions. Moreover, sustainable management of natural resources has to be assured by the local user groups that are dependent on them for their livelihoods and those of their descendants.

In many developing countries where traditional indigenous institutions regulating resource management still persist, they may have little real power if outsiders in alliance with local elites or with representatives of the national state find it profitable to alienate their lands. The national state itself often has little real presence in rural areas. Many state institutions in countries experiencing structural adjustments have often been starved for funds and had their personnel decimated—with those who remain having such low pay and prestige that they are demoralized and seeking supplementary sources of income. Public institutions whose clientele includes the rural poor have tended to be the worst hit by budget cuts. As a result, in many countries neither customary local institutions nor those of the national state are in a position to represent the interests of diverse groups of rural poor or to resist pressures by others coveting the natural resources upon which the rural poor depend for their life support.

Building and strengthening democratic and accountable rural institutions are possibly the most urgent challenges for promoting sustainable rural development. They are also among the most difficult. Rural groups are likely to be fragmented along lines of perceived ethnic or religious identities and according to differing clientelistic ties with landlords, merchants or political bosses. Some minorities among the rural poor may be discriminated against and exploited by others who are almost as badly off as they are themselves. Predatory state agencies, such as the armed forces or police in some countries, or commercial organizations, such as national and transnational corporations, may face no effective checks and balances to restrain their arbitrary exercise of power to exploit both natural resources and rural people for short-term gains. Legislation may be adequate in theory to protect the environment and basic human rights, but in practice it may be blatantly disregarded. Frequently, there is little international agencies or NGOs can do about such abuses of power in rural regions except bear witness and publicize them while attempting to provide some moral and material support for local and national reformers. Even this can sometimes be dangerous and counterproductive, but experience suggests that on balance it can help.

Much of the international discussion about sustainable rural development seems to ignore the harsh realities of power relations. Promoting rural institutions that are democratic and accountable to their members—especially to the different groups of the rural poor—deserves much higher priority than it has been given in the past. It requires persistent imaginative efforts at all levels, from local and national to transnational. International development agencies confronted with the unsatisfactory results in many countries of the structural adjustment policies they were promoting have begun to put more emphasis on institutional reforms. But this has often been done with inadequate attention to the extreme complexities of the issues in the fragile societies with which they are dealing. As “most development theorists and agencies are beginning to realize, getting institutions wrong could have more far-reaching consequences on local people and on national development than getting prices right” (Bangura 1995).

Land reform

Traditional rural power structures are in large part based upon and perpetuated through the control of land. Reforming land tenure institutions is always difficult because it challenges established social relations in society more generally. Reforms that provide equitable and secure access to land by the vulnerable groups that primarily depend on it for their livelihoods imply that local landowning elites and outsiders have to give up some of their privileges and claims to future gains.

Land reform of some kind is essential in most developing countries if social and environmental degradation in rural areas is to be controlled at acceptable social costs. Insecure and inadequate access to land by the rural poor is a salient characteristic of their poverty. Where their land tenure rights are insecure or non-existent, even the poor whose survival most depends on maintaining land productivity have no economic incentives to prevent land degradation, because the future gains implied by sustainable land management will be appropriated by others. Where the poor have no access to land other than as temporary wage workers or as squatters who may be evicted at any moment, they can hardly be expected to devote efforts to ecologically sustainable land and water management. Similarly, if peasants or pastoralists have access to inadequate land resources for bare survival, they may be forced to overexploit their lands unless they have some other sources of income—although evidence from a large number of diverse situations suggests that even very small landholders usually attempt to use their resources sustainably. Where traditional access to land has been alienated by its expropriation by commercial large farmers or ranchers, by concession holders and speculators, by the state for commercial use or for game and forest reserves or other protected areas, poor customary users of these resources are unlikely to be as concerned about sustainable management as they were when the lands were considered to be their common property. Large commercial landowners, investors or speculators are likely to be motivated primarily by strictly commercial criteria of short-term rates of return. Where most good land is controlled by a few large holders while most of the rural population is landless or nearly landless, social tensions tend to be particularly acute.

Land reforms that are effective have to be based on the political and socioeconomic realities of each situation. Equity, security and clarity of rights and obligations of those depending on access to the land for their livelihoods are the guiding principles. What is feasible in each case depends on politics both locally and nationally. In some circumstances, such as in many parts of sub-Saharan Africa and other regions where customary common property land systems are still vigorous, land reform should imply

providing the state's legal and political support of customary land rights. Customary communal land systems frequently functioned rather well in providing equity in access to land as well as clear rights and obligations for their members. They were particularly well suited for managing low-value pasture and woodlands where costs of establishing cadastrals, land registries and other prerequisites of effective private or state property regimes would be prohibitive, as well as being questionable for social reasons. State recognition of land rights by customary user groups could provide greater security for their members against dangers of alienation of their lands by private commercial interests or the state. Of course, this would have to be accompanied by norms to guarantee continued democratic participation by its members and to avoid concentration of control by small elites. Such rules would have to be worked out with the common property user groups in each case.

In areas where customary land tenure systems have broken down or never existed—and especially in areas where most land has been monopolized by a few large holders—reforms redistributing land rights to those actually working the land are required. The political obstacles to such redistributive reforms are always formidable, but this does not make the latter any less urgent. It is hard to imagine alternative approaches to sustainable rural development that do not imply land reforms in countries where most of the rural population is poor and virtually landless while most of the land is in large estates and where other sources of employment or livelihoods for the rural poor are practically non-existent for the foreseeable future.

Where large-scale agriculture is already highly commercialized and capital intensive, the goals of land reforms could theoretically be approached through credit and tax reforms, ecologically based land-use zoning and vigorous rural workers' organizations pressing for improved wages and working conditions. This requires strong and democratic popularly based institutions and policies. These are seldom found in countries where there is widespread rural poverty and where profound redistributive land reforms have not already taken place. Nonetheless, partial and piecemeal land reforms along these or similar lines should always be encouraged whenever they imply real participation and benefits for important groups of rural poor without prejudicing the livelihoods of others. They can often contribute to a dynamic of social change leading to a more popularly based development strategy and deeper reforms in the future.

The need for popularly based national development strategies

In developing countries a prerequisite for reducing rural poverty and protecting the environment in more than a few fortuitously situated or policy favoured small enclaves is a popularly based development strategy. In other words, the dominant thrust of the combination of a nation state's often contradictory policies should be directed at improving the opportunities and livelihoods of poor majorities and of minorities within these majorities. This contrasts with traditional modernization strategies that favour those already controlling substantial financial and material resources in the belief that they can most readily generate additional wealth and that some of these new riches will eventually trickle down to the rural poor. Unfortunately, for many influential wealthy support groups of national governments of developing countries, "policies for the poor are poor policies" (remark attributed to a recent Mexican Minister of Agriculture, *El País*, 13 March 1995).

For a popularly based development strategy to emerge and actually be implemented, however, those exercising state power and at least some of the state's major support

groups have to be convinced that this is in their own interests as well. Unless they see the rural poor as potentially valuable allies or troublesome opponents, this is not likely to happen. In order to bring about a popularly based strategy, important segments of the rural poor have to become politically mobilized, autonomously organized and vocal. Without organized pressures from the rural poor there seems to be little probability that a popularly based strategy will be adopted and much less possibility that it can be maintained over long periods.

Rural people dependent on natural resources for their livelihoods usually try to use them sustainably if they possibly can, even when they are very poor. This is especially the case if they perceive that they have secure rights of access to these resources and to the future benefits to be derived from their careful husbandry. The rural poor have the biggest stake of all in protecting their environment from harmful pollution and degradation. The allegedly greater preference of the poor for present as against future benefits compared to those who are better off is far from certain. The evidence supporting this hypothesis is for the most part hypothetical or anecdotal and in every case it is restricted to specific historical settings.⁵ In some contexts, desperately poor groups managed their environments sustainably during many centuries. The apparently short-sighted behaviour in natural resource use by the poor, when it really occurs, can in most circumstances be better explained by other factors than mere poverty, such as land alienation, insecurity of tenure or physical insecurity associated with repression or armed conflicts (Barraclough and Ghimire 1995).

The rural poor, however, cannot be expected to be preoccupied with environmental issues that do not directly impinge upon their meagre livelihoods, such as greenhouse gas emissions and the preservation of biodiversity or even the silting of downstream river channels and reservoirs. Also, they need allies to help them defend their rights and to help them in their struggles to maintain or increase their control over resources and institutions. These allies will differ from one situation to another. Some allies may be much more reliable than others, but all have their own agendas. Such allies may include NGOs, political parties, urban labour unions, certain public agencies or any number of other social actors. In many contexts urban-based human rights organizations as well as conservation groups and movements can be effective allies of the rural poor. But they have to become well organized, politically vocal and genuinely convinced that helping the rural poor to organize in defence of their livelihoods and their basic rights is the best way to advance their own conservationist and humanist causes. The record of conservationist organizations in this respect is a rather mixed one.

There are many examples of where outside allies have been able to make crucial contributions toward greater self-empowerment by groups of rural poor that may eventually help induce deeper reforms of institutions and public policies in the direction of popularly based development strategies. In the western Brazilian Amazon region, for example, traditional rubber tappers together with local indigenous populations organized to resist alienation of the rainforests from which they extracted their livelihoods. In this effort they were supported by several national and international NGOs, as well as by urban labour unions, cooperative leagues, other groups in civil society and some elements in the federal government. Partly as a result of this collective resistance by the rural poor and their allies, the first “extractivist reserves” were legally established in Brazil, with the

⁵ For example, Kishor and Constantino 1994.

support of some government and World Bank policies (Diegues 1992; Barraclough and Ghimire 1995).

One could cite many other examples of organized collective resistance by groups of rural poor to alienation of their life support systems. The semi-nomadic Barabaig in Tanzania, threatened with the loss of 100,000 hectares of their rangelands to be converted to mechanized wheat production by a government agency with the financial support of a foreign donor, found allies able to plead their cause with some success both in Tanzania and the donor country (Lane 1990, 1993). In India, national NGOs contributed to the Chipko movement's ability to bring commercial logging to a standstill when these peasants' livelihoods were threatened (Guha 1990). In Sarawak, Malaysia, indigenous people with some NGO support resisted, with less success, the logging of their rainforests (Colchester 1992, 1994).

Collective resistance by the rural poor in defence of their livelihoods and environment can often be very dangerous with or without allies. The cautionary list of peasant massacres and other reprisals provoked by such collective efforts is a long one (Barraclough and Ghimire 1995; Colchester 1994). This danger frequently poses serious dilemmas for those attempting to promote sustainable rural development.

Earlier discussion mentioned several less conflictive examples of people's participation. They can be explained in part by policy and institutional contexts that respected the rights of poor rural groups to organize in order to influence policy. One should recall that recognition of the poor's right to participate was often an outcome of earlier bitter conflicts that were eventually resolved in ways that institutionalized the rights of the poor to organize and protest. Other cases, however, were non-conflictive because they dealt with people's participation concerning issues that were marginal for more powerful social actors who did not perceive any threat to their vested interests.

An issue that merits much more serious consideration than it has received is the question of protected areas such as national parks. This has resulted in massive alienation of lands traditionally supporting important populations of forest dwellers, peasants and pastoralists. Moreover, it often indirectly causes serious environmental degradation when evicted customary users have to overuse natural resources elsewhere. Local people could participate a great deal more in the use and management of protected areas without sacrificing conservation goals.⁶

Effective environmental protection policies in developing countries could be particularly important in regulating the dumping of toxic wastes. In theory, this is now regulated internationally by the Basel Convention, but in practice it persists on a large scale. A problem for developing countries is that polluters can bid one potential recipient against another without ever informing the citizens in recipient countries about the risks involved. In any event, governments of many countries receiving toxic wastes are unlikely to depend on popular consent for their decisions. Even more worrisome is that there are no international rules at all regulating the establishment of dangerous polluting industries in developing countries in order to avoid regulations in industrialized ones. Also, as mentioned in the second chapter, hundreds of pesticides and other environmentally harmful products that are strictly prohibited in their countries of origin are marketed in developing countries by industrialized ones. These practices urgently require the elaboration of international codes of conduct.

⁶ Ghimire 1991; Ghimire 1994; Barraclough and Ghimire 1995.

International Reforms

As argued in the introduction *Rural Development and the Environment*, one cannot assume that rural poverty and environmental problems, after having initially worsened, will diminish with further economic growth. These problems will persist with rising average income levels and in many places may worsen. The international community, however, could make a major contribution toward the adoption and implementation of strategies in developing countries that better protect the environment and rural livelihoods. Achieving such international reforms is likely to be as difficult as finding social actors capable of adopting more sustainable strategies nationally and subnationally.

The rich industrialized countries, together with the international financial agencies they largely control, have tended to send out contradictory signals concerning sustainable rural development. Rich country governments frequently disagree sharply among themselves concerning the kinds of strategies they are willing to support in particular places. Much depends on domestic political considerations in each rich country and the perceptions within their governments of geopolitical and commercial “national interests”. Hopefully, some limited progress is being made toward greater international cooperation in a few areas of common concern about the planet’s future being endangered by social exclusion and ecological degradation. Without substantial progress toward a democratic world order, sustainable rural development will remain elusive everywhere.

The rigid insistence on certain kinds of monetary, fiscal, trade and privatization policies by most rich states and the international financial institutions in the name of stabilization and structural adjustment has not been helpful for adoption of socially and ecologically friendly development strategies (South Commission 1990). Most international agencies have shown little imagination in proposing more socially equitable and environmentally sustainable alternatives—that are at the same time realistic—to approach goals of structural adjustment.

The rather high-handed way in which the debt issue has been dealt with by the North—often in conjunction with small elites in the South—has been a factor in curtailing developing country governments’ capacity for dealing more effectively with rural poverty and environmental issues. The debt problem will undoubtedly continue to be a major obstacle for financing social and environmental programmes in developing countries for a long time to come, even if these countries were to adopt appropriate development strategies. The eventual write-off of “odious debts” is probably the only realistic solution for heavily indebted poor countries (Adams 1991). In any event, while debt relief would remove an important international constraint, it cannot by itself generate more sustainable development strategies.

The demand of international financial agencies and of large industrialized countries for greater trade liberalization in the South has been matched by continued protectionism in the North—especially in sectors such as agriculture and textiles. Policies in the North also make transfer of advanced environmentally friendly technologies costly for the South and inhibit emigration to the North of its workers, who are its most abundant resource. There has been great reluctance to have any type of serious discussion on the issues of highly volatile commodity prices, prolonged periods of high interest rates, a very unstable world monetary system and persistent periods of unfavourable terms of trade for most developing countries. The list is endless, but the complaints of developing countries just mentioned are sufficient to illustrate that contradictory policies by the rich industrialized countries have tended to be unsupportive of governments and movements in the South attempting to pursue popularly based and sustainable development strategies. Finding

and mobilizing the social forces required to create the democratic institutions designed to steer the world system more coherently and sustainably are challenges that social scientists and statesmen should place among their highest priorities.

There are now some 37,000 transnational parent corporations with 200,000 affiliates worldwide. Their annual sales in 1992 were 5.5 trillion dollars, and many were financially more powerful than most of the national economies with which they were dealing (UNRISD 1995). These transnationals controlled about 70 per cent of world trade and now enjoy freedom without responsibility. Some kind of international code setting minimum social and environmental standards for transnational investors, producers and traders seems at least as logical as the quality standards already widely applied to fruit and other commodities entering world markets, or to the accounting standards already required of international banks.

Several groups in the developing countries have opposed adoption of international social and environmental standards on the grounds that this could undercut their competitive advantages in trade with the North. This viewpoint is short-sighted as their current advantages may reflect little more than hyper-exploitation of natural resources and of people. If protectionist pressures in the North mount, environmental and social considerations will not be necessary as an excuse to restrict entry of products from the South. A big problem facing progressive governments in the South has been the freedom of transnationals to shop around among the poor countries to find the best possible terms for exploiting their resources and labour and for dumping noxious wastes.

What is needed to promote more sustainable development is an effective international body capable of overseeing, regulating and taxing international capital movements and trade, taking into account environmental and social criteria. International regulation of transnational corporations in the interests of the world's peoples—and especially its poor—is imperative. Such a regulatory body would have to be democratically constituted and accountable. Perhaps the World Trade Organization (WTO) could evolve in this direction if there were a fundamental democratic reform of the United Nations system (South Centre 1996). Politically, it seems unlikely in the present context.

An international code of conduct should require internationally and transnationally funded investments to include social and ecological impact assessments as an integral part of project design and implementation. In addition to conventional rural development projects, these assessments should include international aid in environmental programmes such as the establishment of protected areas and reserves. In the past, evaluations of the social impacts of such projects have been notoriously absent or superficial.

This is going to require a great deal of additional research, both basic and applied. Much of it will have to be site-specific for different ecosystems and farming systems. The international community could make a contribution by supporting social and ecological impact assessments, as well as the improvement of national and subnational social and natural science research capacities needed to carry them out with some degree of confidence.

What is required are assessments that spell out the probable impacts for different social groups of projects affecting rural people and their environment. To do this in qualitative and quantitative terms that each group can clearly understand based on its experience and perceptions is a major challenge for environmentalists and social scientists. Such assessments cannot be reduced to benefit-cost analyses in conventional monetary terms. Conflicts of interest between social groups with divergent resources, possibilities and

values have to be resolved politically, not technocratically. Imposition of world market values on subordinate groups can easily become a blatant form of imperialism that facilitates separation of vulnerable rural groups from their natural resources.

The introduction of ecological and social criteria into national income accounting systems could contribute toward redefining economic growth in practice. To do this, changes in accounting norms would have to be accompanied by institutional and policy reforms at all levels, providing incentives for more sustainable rural development and disincentives for the abuse of natural resources.

To be effective, however, accounting reforms would have to be reflected in the balance sheets of banks and other enterprises. This, in theory, could be brought about by environmental taxes and the removal of hidden subsidies. Energy taxes, taxes on excessive carbon dioxide and other greenhouse gas emissions per capita, or some system of tradable pollution permits are often cited as examples of such an approach. The *Human Development Report 1994*, for example, recommends that an international authority be empowered to issue tradable permits for the emissions of greenhouse gases and other pollutants within overall global limits. It suggests that the permits to pollute could be leased or given to countries, half on the basis of their population and half on their GNP (UNDP 1994:19, 68). Assuming that practical difficulties could be overcome, such a scheme appears inherently unsustainable politically. Citizens of poor countries with over three-fourths of the world's population are unlikely to see the logic of issuing greater permission to pollute to the minority in industrial countries already responsible for most planetary pollution.

In practice, the "polluter pays principle"—if carried to its logical conclusion of covering all the ecological and social costs generated by development—would imply a profound transformation of the world system. The approach could, however, yield several positive dividends if judiciously employed to provide incentives for producers, consumers and merchants of renewable and exhaustible natural resources entering international commerce to use them more sustainably and to minimize the damage inflicted on others. The political prospects for even limited progress along these lines look rather bleak.

There will have to be considerable mobilization of resources at all levels in both North and South to take effective action to ameliorate rural poverty and environmental degradation. Inadequate educational and health services, run-down or non-existent infrastructure, lagging inappropriate technologies and much else require urgent attention. This implies directing resources toward social goals. The resources are available, at least in theory. Unemployment is running at over 10 per cent in much of the North, and it is even higher in the South, taking account of underemployment. There is extensive idle installed productive capacity in both. Nearly 5 per cent of world GNP is being spent on armaments and much more on other forms of wasteful consumption.

The resources are clearly available if there were only the political imperative to use them for socially desirable ends. Increased effective demand generated by imaginative, decentralized and popularly based programmes to improve the environment and social conditions in both the North and the South could be the salvation of the world economy.

International and national taxes on polluting emissions and other socially harmful externalities as well as on energy from fossil fuels, could help raise funds. So, too, could a small tax on international movements of capital (UNDP 1994; UNRISD 1995). But care has to be taken not to undermine further the livelihood of the poor as a result. In most political systems, the burden of such taxes would tend to be passed on to the poor and vulnerable unless special precautions were taken.

There are many other justifications, on purely narrow economic grounds, for environmental and social programmes in developing countries to be partially financed from rich-country sources. The OECD countries could gain—even while selfishly pursuing their own interests—by paying for programmes to halt tropical deforestation, for example. The polluter pays principle does not necessarily hold in questions involving sovereign states, as a rich country could still profit by paying a poor polluter to clean up its act. This has been recognized by the OECD in dealing with acid rain issues in Europe (Måler 1992). In any case, the present analysis suggests that rich consumers and producers are primarily responsible for many of the policies and transnational market forces generating rural poverty and environmental degradation.

Nonetheless, the usual caveats are pertinent. Aid funds are always fungible and those earmarked for combating rural poverty and improving the environment are no exception. They can easily be frittered away through capital flight, waste and corruption by both donors and recipients. Without institutional and policy reforms, at local, national and international levels, no amount of financial aid would necessarily lead to sustainable rural development.

Substantial net resource transfers to developing countries from the North (net transfers during the 1980s were on average negative) could facilitate more popularly based sustainable development strategies. These strategies, in turn, could slow or even reverse undesirable environmental degradation and also greatly reduce rural poverty. Additional international funding could also have the opposite effect, even if it were designated for environmental protection. “Aid”—to be effective in helping to reach social and environmental goals—has to become more accountable to recipients and intended beneficiaries. It also has to become more democratically administered and allocated.

Final Remarks

If economic growth were to continue following past trends, it would be accompanied by greater social polarization and environmental degradation. This would generate increasing political tensions, civil conflicts and wars. Development would be socially unsustainable. Population growth would exacerbate these trends, but it would by itself be a rather minor factor in environmental degradation, as the poor consume very little and have only limited access to natural resources. Human society would be likely to extinguish itself in the flames of conflict long before it exhausted its sources of sustenance or suffocated in its own waste. On the other hand, to the extent more and more people adopt the lifestyles and production systems of the present-day rich industrial countries, pressures on the environment would worsen.

The only way out of this dilemma is for the nature and content of what is called “development” to change in practice. Poor majorities in developing countries will continue to strive for survival against heavy odds. To the extent that some groups of rural poor achieve minimal security, they will demand the conveniences and pleasures of those who are better off. The burden of adjustment toward sustainable development should fall primarily upon the rich. Global patterns of production, consumption and distribution will have to be radically reformed and global demographic growth stabilized. Sustainability will be out of reach without genuine social development. This implies a redistribution of wealth and power.

These kinds of structural adjustments are far more urgent for humanity's future than are the current adjustment programmes endorsed by international financial institutions, which aim at enabling rich creditors to recuperate their bad loans. The rich, however, can probably only be persuaded to adjust after their own internal contradictions have become intolerable as a result of growing pressures emanating from environmental degradation as well as from increasingly organized groups of the poor.

As has been mentioned repeatedly, the rich industrial countries will have to take the lead in confronting social and environmental issues on a global scale. Any international environmental standards will have to include the rich countries as well as the poor ones. The same goes for developing and sharing environmentally friendly technologies. The industrial countries should not expect developing ones to agree to give up their national sovereignty over natural resources because they are the "heritage of all mankind", unless the rich countries are willing to do the same. Developing countries will have to take primary responsibility for dealing with their own social and environmental problems, but they need a supportive international context.

National and international initiatives to protect rural livelihoods and the environment are doomed to be ineffective if they do not confront the fundamental social issues generating non-sustainable inequitable growth. A truly participatory international effort at all levels is imperative. The key issue remains that of what social actors might bring about the required institutional and policy reforms for rural livelihood improvements while at the same time protecting the environment for present and future generations.

References

- Adams, P. 1991. *Odious Debts: Loose Lending, Corruption, and the Third World's Environmental Legacy*. Earthscan, London.
- Bangura, Y. 1995. *Reforming the Institutions of Crisis-ridden States: Some Thoughts on a Possible Research Project*. UNRISD, Geneva. Mimeo.
- Barracough, S. 1993. "Social dimensions of desertification." In D. Stiles (ed.), *Listening to the People: Social Aspects of Dryland Management*. UNEP, Nairobi.
- Barracough, S. and K.B. Ghimire. 1995. *Forests and Livelihoods: The Social Dynamics of Deforestation in Developing Countries*. Macmillan, London.
- Barracough, S., K. Ghimire and H. Meliczek. 1997. *Rural Development and the Environment: Towards Ecologically and Socially Sustainable Development in Rural Areas*. UNRISD, Geneva.
- Colchester, M. 1994. *Salvaging Nature: Indigenous Peoples, Protected Areas and Biodiversity Conservation*. Discussion Paper No. 55. UNRISD/World Rainforest Movement/WWF, Geneva.
- . 1992. *Sustaining the Forests: The Community-based Approach in South and South-East Asia*. Discussion Paper No. 35. UNRISD, Geneva.
- Diegues, A.C. 1992. *The Social Dynamics of Deforestation in the Brazilian Amazon: An Overview*. Discussion Paper No. 36. UNRISD, Geneva.
- Ghimire, K. 1994. *Conservation and Social Development: A Study Based on an Assessment of Wolong and other Panda Reserves in China*. Discussion Paper No. 56. UNRISD, Geneva.
- . 1991. *Parks and People: Livelihood Issues in National Parks Management in Thailand and Madagascar*. Discussion Paper No. 29. UNRISD, Geneva.
- Guha, R. 1990. *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*. University of California Press, Berkeley CA.
- Kishor, N.M. and L.F. Constantino. 1994. "Sustainable forestry: Can it compete?" *Finance and Development*, Vol. 31, No. 4, pp. 36–39.
- Lane, C. 1993. "The Barabaig/NAFCO conflict in Tanzania: On whose terms can it be resolved?" *Forest, Trees and People Newsletter*, No. 20, p. 25–33.
- . 1990. *Barabaig Natural Resource Management: Sustainable Land Use under Threat of Destruction*. Discussion Paper No. 12. UNRISD, Geneva.

REVISITING SUSTAINABLE DEVELOPMENT

- Mäler, K.G. 1992. "International environmental problems." *Oxford Review of Economic Policy*, Vol. 6, No. 1, pp. 80–108.
- Redclift, M. 1987. *Sustainable Development: Exploring the Contradictions*. Methuen, London.
- South Centre. 1996. *For a Strong and Democratic United Nations: A South Perspective on UN Reform*. South Centre, Geneva.
- South Commission. 1990. *The Challenge to the South: The Report of the South Commission*. Oxford University Press, New York.
- UNDP (United Nations Development Programme). 1994. *Human Development Report 1994: New Dimensions of Human Security*. Oxford University Press, New York.
- UNRISD (United Nations Research Institute for Social Development). 1995. *States of Disarray: The Social Effects of Globalization*. Banson, London.
- Wilks, A. and N. Hildyard. 1994. "Evicted! The World Bank and forced resettlement." *The Ecologist*, Vol. 24, No. 6, pp. 225–229.

Chapter 6

Breaking the Mould: An Institutionalist Political Economy Alternative to the Neoliberal Theory of the Market and the State¹

Ha-Joon Chang²

(2001)

Introduction

This chapter critically examines the neoliberal discourse that currently dominates the debate on the role of the state, and suggests an alternative theoretical framework to overcome its limitations. After tracing the evolution of the debate on the role of the state during the postwar period that has led to the current dominance of neoliberalism, I question some fundamental assumptions underlying the neoliberal discourse on the role of the state and point out the theoretical and practical problems that arise from these assumptions. I argue that, if we are to overcome these problems, a marginal tinkering with the neoliberal framework is not enough and that we need to develop an altogether different framework, which I propose to call *institutionalist political economy*. In the subsequent section on the way forward, I outline this alternative framework and show how its adoption will improve our understanding of the role of the state. Brief concluding remarks follow.

The Evolution of the Debate: From “Golden Age Economics” to Neoliberalism

The end of the Second World War witnessed the worldwide rejection of the laissez-faire doctrine, which had failed so spectacularly during the interwar period. During the

¹ Originally published as an UNRISD Programme Paper (UNRISD, 2001).

² At the time of writing, Ha-Joon Chang was Assistant Director of Development Studies, Faculty of Economics and Politics, University of Cambridge, United Kingdom.

following quarter century or so, which is commonly known as the Golden Age of Capitalism, a variety of interventionist economic theories, such as welfare economics, Keynesianism and the early “development economics”, set the agenda for the debate on the role of the state (Chang and Rowthorn 1995a; Deane 1989). These interventionist theories, which I collectively call Golden Age Economics (GAE), identified a horde of “market failures” and argued that active state involvement was necessary to correct these failures. Although the exact types and forms of policies recommended by different branches of GAE were different from each other, it was widely agreed that a “mixed economy” of one sort or another was necessary and desirable.

From the 1970s onward, however, following the economic and political changes that the Golden Age had brought about both nationally and internationally, there were marked changes in the terms of debate on the role of the state.³ The new terms of debate were set by neoliberal economists like James Buchanan, Milton Friedman, Anne Krueger, Ian Little, Alan Peacock, George Stigler, Gordon Tullock and Friedrich von Hayek.⁴

Neoliberalism emerged out of an “unholy alliance” between neoclassical economics, which provided most of the analytical tools, and what may be called the Austrian-Libertarian tradition, which provided the underlying political and moral philosophy.⁵ The central plank in its argument regarding state intervention is that we cannot assume the state to be an impartial and omnipotent social guardian as it is assumed in GAE. Instead, it is argued, we should see the state as an organization run by self-seeking politicians and bureaucrats, who are not only limited in their ability to collect information and execute policies, but are also under pressure from interest groups. Neoliberal economists argue that this imperfect nature of the state results in “government failures”: regulatory capture, rent seeking, corruption, and so on. They argue that the costs of these government failures are typically greater than the costs of market failures, and therefore that it is usually better for the state not to try to correct market failures, because it may make the outcome even worse.

This attack was partly unfair, because many practitioners of GAE did not actually believe that real-life states are the modern equivalents of Plato’s Philosopher King, but used such a state only as an ideal benchmark (Toye 1991). However, it is also true that most of them did not have a clear theory of the state, and therefore made themselves vulnerable to the attack that their view of the state was “unrealistic” and “naïve”.⁶

Once this attack was unleashed, what was regarded as a pretty robust theoretical consensus on the appropriate boundary between the market and the state proved fragile. This was because, contrary to what many people had believed, welfare economics, which provided most of the tools used in drawing this boundary at the time, does not actually have an inevitable position on the issue. All that welfare economics says, in fact, is that markets can fail, but whether a particular real-world market actually fails depends on the

³ On the rise and decline of the Golden Age, see Marglin and Schor 1990.

⁴ For critical reviews, see Mueller 1979; Cullis and Jones 1987; Chang 1994a; and Stretton and Orchard 1994.

⁵ I say an “unholy alliance”, because the gap between these two intellectual traditions is not a minor one, as those who are familiar with, for instance, Hayek’s scathing criticism of neoclassical economics would know (see, for example, essays in Hayek 1949).

⁶ Interestingly, at around the same time, a very similar criticism was lodged by many Marxists, who emphasized the “class” nature of the state. They argued that, thanks to their control over state revenue, political funding and ideological machinery, the economically dominant class in a society (the capitalist class in the capitalist society) is able to determine state policies in its favour, subject to the need to maintain some degree of legitimacy among the dominated classes—see Jessop 1982 for a review of Marxist theories of the state of the time.

technological, political and institutional factors that define that particular market (see the subsection on defining the free market). In other words, depending on various assumptions one makes about human motivation and psychology, technology, institutions and politics, one can draw any conclusion one likes on the appropriate boundary between the market and the state. Indeed, the logic of market failure has been used to justify anything from the minimal state to full-blown socialist planning (Pagano 1985). Therefore, once the political consensus behind various models of the mixed economy that emerged during the Golden Age was undermined, it became impossible to defend them using the tools of welfare economics.

Ironically, however, the same “non-committal” nature of welfare economics regarding the appropriate role of the state meant that, unlike Keynesianism, it could be absorbed by neoliberalism, albeit with some difficulty (see below). Given that the Austrian-Libertarian tradition had been on the margin of intellectual respectability until the 1970s, the neoliberals could not afford to do without the “scientific” respectability that neoclassical economics carried, in return for which the Austrian-Libertarian tradition supplied the popular appeal that neoclassical economics could never dream of supplying itself (who ever died in the name of Pareto optimality or general equilibrium?). Accepting the analytical tools of neoclassical economics, however, meant that the neoliberals had somehow to tame the logic of market failure that had by then become a central element in neoclassical economics, which it was not in the prewar period. Therefore, ways had to be found to ensure that any endorsement of state intervention was kept within a boundary acceptable to the neoliberal *political* agenda.

One such way is to argue that market failures, while logically possible anywhere, in reality exist only in a few limited areas—such as defence, law and order, and the provision of some large-scale physical infrastructure—and therefore that only a “minimal state” is necessary. The second way is to limit the spillage of the logic of market failure into policy actions by separating “serious” academic discourse from “popular” policy discourse. So, for example, neoclassical economists in universities may be doing research justifying stringent antitrust policy, but policy makers may justify their lax antitrust policy in terms of some other logic that has no place in neoclassical economics—say, by citing the need “not to discourage entrepreneurship”.⁷ The third way of taming the logic of market failure is to fully accept it and build models that may have strong interventionist policy conclusions, but later downplay the relevance of such models on the grounds that real-life states cannot possibly be entrusted with policies that are so technically difficult (due to informational demands) and politically dangerous (due to bureaucratic abuse and/or interest group capture).⁸

⁷ The point is also poignantly illustrated by the experiences during the early days of “reform” in the former communist countries. What captured people’s imagination in those days was the Austrian-Libertarian language of freedom and entrepreneurship, and *not* the arid neoclassical language of Pareto optimality and general equilibrium. However, when the post-communist governments in these countries chose their foreign economic advisors, it was according, largely, to how high a standing they had in the Western academic hierarchy, which was basically determined by how good they were in handling the concepts and tools of neoclassical economics.

⁸ The works of the American trade economist Paul Krugman provide some of the best examples. In many of his articles, a few paragraphs of “pop political economy” analysis dismissing the integrity and the ability of the state are deployed to discredit his own elaborate strategic trade theory models endorsing state intervention that make up the bulk of the article. A leading neoliberal economist, Robert Lucas, reviewing Krugman’s book with Helpmann, asked why they had written the book in the first place if they were going to say in the end that the interventionist policies that follow from their models cannot be recommended because of the political dangers they carry (see Lucas 1990). This example shows that, in this neoliberal age, economists may build models that recommend state intervention as far as they are “technically competent”, but they have to prove their political credential by rubbishing their own models on political grounds, if they are to remain in the mainstream.

These examples show that, despite its pretence of intellectual coherence and clear-cut messages, neoliberal discourse on the role of the state contains some serious internal tensions and therefore can be sustained only through some intellectual contortion and political compromise. But that is probably the least of its problems. As I shall argue in the next section, the more serious problems of the neoliberal discourse on the role of the state are to do with, first, the very way it conceptualizes the market, the state and institutions, and, second, the way it theorizes their interrelationships.

The Limits of Neoliberal Analysis of the Role of the State

In this section, I discuss the limitations of neoliberal analysis of the role of the state by questioning four aspects of the neoliberal doctrine that are considered so basic they are rarely discussed. Through the discussion, I show why these limitations cannot be overcome through marginal tinkering with the neoliberal framework. This, I argue, requires an approach that takes the role of institutions and politics seriously, namely, what I propose to call “institutionalist political economy”.

Defining the free market (and state intervention)

The neoliberal discourse on the role of the state, and indeed the welfare economics discourse that it dethroned, is about whether state intervention can improve upon the workings of the free market. Even many of those who do not agree with the conclusions that are drawn from this discourse seem to regard the mode of discourse itself as unproblematic. As can be seen in the enthusiasm that the more interventionist conclusions of new growth theory or strategic trade theory have generated among some critics of neoliberalism, these critics believe that the limitations of neoliberalism can be overcome by building more models that justify state intervention.

However, I argue that the mode of neoliberal discourse itself is problematic, as defining the free market, and therefore defining what counts as state intervention, is a highly complicated exercise. As it will become clearer below, the same state action can be, and has been, considered an “intervention” in one society but not in another (which could be the same society at different points of time). Why is this? Let me answer this question with some examples.

First, let us take the case of child labour. At present, few people in the advanced countries would consider the ban on child labour as a state “intervention” artificially restricting entry into the labour market, whereas many Third World capitalists regard it as just that (and indeed the capitalists in the now-advanced countries did, too, up until the early twentieth century). This is because in the advanced countries, the right of children not to toil is more or less universally regarded as having precedence over the right of producers to employ whomever they find most profitable.⁹ As a result, in these countries, the ban on child labour is *not* even a legitimate subject of policy debate any more. In contrast, in the developing countries (of today and yesterday), this right of children is not so totally accepted, and therefore the state ban on child labour is considered an “intervention”, whose impact on economic efficiency is still a legitimate subject of policy

⁹ This is also manifested in the existence of many institutions that support this particular hierarchy of rights (for example, universal education and child benefits).

debate. The same argument can be applied to the case of slavery. In societies where the right to self-ownership is not universally accepted (such as, say, the nineteenth century United States), an attempt by the state to ban slavery can be disputed as an efficiency-reducing intervention, but once the right to self-ownership is accepted as a fundamental right of all members of society, the ban will no longer be considered an “intervention”.

Another example is provided by the many environmental regulations that were widely criticized as unwarranted intrusions on business and personal freedom (for example, factory pollution standards, automobile emission standards) when they were first introduced in the advanced countries not so long ago. However, in these countries such regulations are these days rarely regarded as “interventions”, as their citizens now regard the right to a clean environment as having priority over the right to choose (sometimes harmful) technologies of production and consumption (for example, production technology or type of automobile). Therefore, there are few people in these countries who would say that their country’s automobile market is not a “free” market simply because of these regulations. In contrast, some developing country exporters who do not accept the hierarchy of rights underlying such regulations as legitimate may consider them as “invisible trade barriers” that “distort” the workings of the “free” market.

As yet another example, many neoliberal economists, who criticize minimum wages and “excessively” high labour standards in the advanced countries as unwarranted state interventions that set up artificial barriers of entry into the labour market, do not regard the heavy restrictions on immigration that exist in these countries as state intervention (and, indeed, many of them will support stringent immigration control). However, immigration control sets up an “artificial” entry barrier into the labour market, just as the other labour market interventions they criticize. This contradictory attitude is possible only because these economists (at least implicitly) accept the right of existing citizens of a country to dictate the terms of non-citizens’ participation in “their” labour market, while rejecting the right of the same citizens to contest the rights of employers to offer the wages and working conditions they see fit, beyond what are dictated by what these economists themselves regard as “basic human rights”.

The examples can go on, but the point is that, depending on which rights and obligations are regarded as legitimate and what kind of hierarchy between these rights and obligations is (explicitly and implicitly) accepted by the members of the society, the same state action could be considered an intervention in one society and not in another. And once a state action stops being considered an “intervention” in a particular society at a given time (for example, the ban on child labour or on slavery in the advanced countries of today), debating their “efficiency” becomes politically unacceptable—although there is no God-given reason why this should be the case.¹⁰ This is most clearly revealed in the current disputes regarding the attempts to incorporate labour and environmental standards in the World Trade Organization (WTO) negotiation agenda, with one party (the developing countries) arguing that these are hidden protectionist measures that go against the very principle of free trade that the WTO is supposed to represent, and the

¹⁰ Indeed, during the late twentieth century when slavery had become a distant memory and therefore less politically sensitive, some American economic historians started a debate on the “efficiency” of slavery, although even then many people found the attempt distasteful.

other (the developed countries) arguing that these are “universal” standards that are perfectly compatible with free trade.

Therefore, if we want to decide whether a particular market is “free” or not, we need to take a position on the legitimacy of the underlying rights-obligations structure for the participants in the relevant market (and indeed certain non-participants, when there exist externalities). Thus, the apparently simple exercise of defining the free market (and therefore state intervention) is no longer so simple—and this is even *before* we can discuss whether some markets are “failing” and therefore state intervention may make them “more efficient”.

I would even go as far as saying that defining a free market is at the deepest level a pointless exercise, because no market is in the end “free”, as all markets have some state regulations on who can participate in which markets and on what terms.¹¹ It is only because some state regulations (and the rights and the obligations that they support, or even create) can be so totally accepted (by those who are making the observation as well as by the participants in the market) that some markets appear to have no “intervention” at all and therefore appear to be “free”.¹² Unless we recognize the ultimately political determination of the structure of rights and obligations that underlies market relationships, our discussion on the role of the state will be conducted with the pretence that our own opinions are based on “objective” analyses while those of our opponents are not, and are thus largely “politically motivated”.

Defining market failure

“Market failure” refers to a situation when the market does not work in the way that would be expected of the ideal market. But what is the ideal market supposed to do?

In the neoliberal framework, the ideal market is equated with the “perfectly competitive market” of neoclassical economics.¹³ However, the neoclassical theory of the market is only one of many legitimate theories, and not a particularly good one at that. There are, to borrow Hirschman’s phrase, many “rival views of market society” (Hirschman 1982a). And therefore the same market could be seen as failing by some people while others regard it as normally functioning—depending on their respective theories of the market.

For example, many people think that one of the biggest “failures” of the market is its tendency to generate an unacceptable level of income inequality (whatever the criteria for acceptability may be). However, in neoclassical economics, this is not considered a market failure, because the ideal neoclassical market (or at least in the Paretian version of it) is *not* supposed to generate equitable income distribution in the first place. This is *not* to deny that many well-intentioned neoclassical economists may dislike the income

¹¹ See the subsections on market, state and politics, and on analysis of the market below. See Trebilcock 1993 for a discussion from a legal perspective.

¹² The same reasoning applies to the judgement on how interventionist a particular state is. For example, it is because of the political consensus that defence is one of the absolutely necessary functions of the state that many people underestimate the interventionism of the United States federal government, which has strongly influenced the country’s industrial evolution through defence procurement programmes and defence-related research and development (R&D) contracts—especially in the computer, telecommunications and aviation industries (Johnson 1982).

¹³ Given its intellectual composition, the Austrian theory of the market, which denies the very notion of perfect competition, could have been the neoliberal theory of the market. However, this did not happen, as the whole point of the neoliberal alliance was to combine the political and moral appeals of the Austrian-Libertarian tradition with the “scientific” respectability of neoclassical economics. Needless to say, there are still many Austrian economists who reject the neoclassical model of perfect competition.

distribution prevailing in, say, Brazil, and may support some “non-distortionary” lump-sum income transfers to reduce inequality. However, even these economists would argue that an equitable income distribution is not what we should expect from the ideal market, and therefore that there is no market failure in Brazil in this sense.

A second example is that a non-competitive market is one of the most obvious examples of a failing market for neoclassical economics, while Marx and Schumpeter would have argued that the existence of non-competitive (in the neoclassical sense) markets is an inevitable, if secondary,¹⁴ feature of a dynamic economy driven by technological innovation. Thus, a typical example of market failure in the neoclassical framework, namely, the non-competitive market, is regarded as an inevitable feature of a successful dynamic economy from Schumpeter’s or Marx’s point of view.¹⁵ Or to put it differently, a market that is perfect in the neoclassical sense (for example, perfect information, no market power) may look like an absolute failure to Schumpeter because perfect information, which is necessary for a perfectly competitive market to exist, will lead to an instantaneous diffusion of new technology and thus to an instantaneous dissipation of monopoly rents, which means that there will be no incentive for entrepreneurs to innovate and generate new knowledge and new wealth.

The point that I have just tried to illustrate with the above examples is that, when we talk about market failures, we need to make it clear what we expect from the ideal market, only against which the failures of the existing markets can be defined. Otherwise, the concept of market failure becomes empty, as in the same market where one person sees perfection another person can see a miserable failure, and *vice versa* (the above example about non-competitive market illustrates this point very well). Only when we make our own theory of the market clear, can we make our notion of market failure clear.

Now, how much does market failure matter, however we may define it? The short answer is that it would matter greatly for the neoclassical economists while it may not matter so much for other types of economists, especially institutionalist economists. Neoclassical economics is, at its core, an economics about the market or, more precisely, about the barter exchange economy, where, to borrow Coase’s analogy, “lone individuals exchange] nuts and berries on the edge of the forest” (Coase 1992:718). In this world, even the firm exists only as a production function, and not as an “institution of production”. Other institutions that make up the modern capitalist economy (for example, formal producer associations, informal enterprise networks, trade unions) figure basically as “rigidities” that prevent the proper functioning of the market.¹⁶

Therefore, for neoclassical economists, for whom the market is essentially the economy, if the market fails, the economy fails. Of course, many neoclassical economists of neoliberal leaning would argue that market failures do not occur often and that, given the possibility of government failure, it is usually better to live with failing markets than to attempt state intervention (see the section above on the evolution of the debate). However, as far as they acknowledge the existence of market failure, the only alternative

¹⁴ Recall Schumpeter’s famous metaphor that the relationship between the efficiency gains from competition through innovation and those from (neoclassical) price competition was “as a bombardment is in comparison with forcing a door” (Schumpeter 1987:84).

¹⁵ This, needless to say, does not exclude the possibility (which is often realized) that an economy may be full of monopolies but undynamic.

¹⁶ For a criticism of the view of non-market institutions as “rigidities”, see Chang 1995.

they will seriously contemplate (and ultimately reject) is state intervention, because no intermediate institutions or organizations have a place in their scheme.

In contrast, for the institutionalist economists, who regard the market as only one of the many institutions that make up the capitalist economic system, market failures may not matter as much, because they know that there are many institutions other than markets and state intervention through which we can organize, and have organized, our economic activities. In other words, when most economic interactions in the modern capitalist economy are actually conducted *within* organizations and not between them through the market (Simon 1991), the fact that some (or even many) markets are “failing” according to one (that is, neoclassical) of many possible criteria may not really make a big difference for the performance of the economy as a whole.

For example, in many modern industries where there are high incidences of monopoly and oligopoly, markets are failing all the time according to the neoclassical criterion, but these industries are often very successful in more common-sensical terms because they generate high productivity growth and consequently high standards of living. This outcome is due to the success of modern business organizations, which enable the coordination of a most complex division of labour—thus, where neoclassical economists see “market failure”, institutionalist economists may see “organizational success” (Lazonick 1991). And, if this is indeed the case, state intervention in these markets, especially of the neoclassical antitrust variety, may not be necessary, but may in fact even be harmful under certain circumstances.

The point that I am trying to make here is *not* that market failures do not exist or that they do not matter at all—on the contrary, the real world is full of market failures and they do matter. The real point is that the market is only one of the many institutions that make up what many people call the “market economy”—or what I think is better called “capitalism”. The capitalist system is made up of a range of institutions, including the markets as institutions of exchange, the firms as institutions of production, and the state as the creator and regulator of the institutions governing their relationships (while itself being a political institution), as well as other informal institutions such as social convention. Thus, focusing on the market (and market failure), as neoclassical economics does, really gives us a wrong perspective in the sense that we lose sight of a large chunk of the economic system and concentrate on one, albeit important, part only. This suggests that we badly need an explicitly “institutionalist” perspective that incorporates non-market, non-state institutions as integral elements, and not simply as add-ons.

The market primacy assumption

One fundamental assumption about the nature of the market and the state in neoliberal economics that is shared even by the neoclassical economists without a neoliberal leaning, is what I call the market primacy assumption—or the assumption that “in the beginning, there were the markets” (Williamson 1975:20).¹⁷ In this view, the state, as well as other non-market institutions, is seen as a man-made substitute that emerged only after market failures became unbearable.¹⁸

¹⁷ Williamson defends this starting assumption on the ground of “expositional convenience”, arguing that the logic of his analysis would be the same even if the starting assumption were that “in the beginning, there was central planning” (1975:20–21). However, he never explains why and how one assumption makes the exposition more convenient than the other.

¹⁸ Arrow 1974 is the most sophisticated example of this view.

The most obvious example of the market primacy assumption is the Contractarian explanation of the origin of the state, which the Austrian-Libertarian wing of neoliberalism has used with great political effects. In this view, the state emerged as a “contractual” solution to the collective action problem of providing the public good of law and order, especially the security of private property, which is seen as necessary (and often sufficient) for markets to function (Nozick 1974; Buchanan 1986). Thus, this view explains even the very existence of the state itself as a market-like (contractual) reaction to market failure. It is well known, of course, that this explanation is at odds with the historical evidence, as even many of its proponents acknowledge. However, the fact that it is still taken so seriously among the neoliberal thinkers is symptomatic of their adherence to the market primacy assumption, where the “state of nature” is the state of the “free” market to the extreme degree (including in the provision of law and order), and that the “natural” reaction of “free” individuals to this undesirable state of affairs is to engage in the market-type behaviour of voluntarily signing a social “contract” to set up the state as the provider of law and order.¹⁹

At this point, it must be emphasized that the fact that someone attributes institutional primacy to the market does *not* necessarily mean that he/she endorses a minimal state view. There are many economists who start their analyses (at least implicitly) from the market supremacy assumption, but willingly endorse a relatively wide range of state intervention, as well as a range of other “institutional” solutions (for example, Arrow 1974; Schotter 1985). However, these economists would still see state intervention, and the other non-market, non-state institutions (for example, the firm) as man-made substitutes for the “natural” institution called the market.

The plain truth is that, in the beginning, there were *not* markets. Economic historians have repeatedly shown us that, except at the very local level (in supplying basic necessities) or at the very international level (in luxury trade), the market was *not* an important, and even less the dominant, part of human economic life until the rise of capitalism. In fact, although even Joseph Stiglitz—one of the most enlightened neoclassical economists of our generation—once argued that “markets develop naturally” (Stiglitz 1992:75),²⁰ the emergence of markets was almost always deliberately engineered by the state, especially in the early stage of capitalist development.²¹

Even in the United Kingdom, where the market economy is supposed to have emerged “spontaneously”, state intervention played a critical role in the emergence of individual markets and of the market system. In Polanyi’s words:

[t]he road to the free market was opened and kept open by *an enormous increase in continuous, centrally organized and controlled interventionism*. To make Adam Smith’s ‘simple and natural liberty’ compatible with the needs of a human society was a most complicated affair. Witness the complexity of the provisions in the innumerable enclosure laws; the amount of bureaucratic control involved in the administration of the New Poor Laws which for the first time since Queen Elizabeth’s reign were effectively supervised by central authority; or the increase in governmental

¹⁹ For more detailed criticisms of the Contractarian argument, see Chang 1994a:ch.1.

²⁰ However, more recently, Stiglitz has moved away from this view and embraced a more (if not completely) institutionalist position. See, for example, Stiglitz 1999.

²¹ Polanyi 1957 is the classic work making this point; see also Block 1999.

administration entailed in the meritorious task of municipal reform. (Polanyi 1957:140, emphasis added)²²

In the case of the United States as well, state intervention in establishing property rights, facilitating the provision of critical physical infrastructure (especially railways and telegraphy), funding agricultural research, and so on, were key to successful early industrialization (Kozul-Wright 1995).²³ Most importantly, the United States was the birthplace of the idea of infant industry protection (Freeman 1989; Reinert 1995) and was indeed the most heavily protected economy in the world for about a century, until the Second World War.²⁴

Once we accept that even the United Kingdom and the United States—the two supposed models of market-based development—did not develop through spontaneous emergence of markets, it is much easier to see that virtually no country achieved the status of an industrialized country without at least some periods of heavy state involvement. (the region of Hong Kong may be the only possible exception). The exact focus of intervention has certainly varied across time and space, reflecting what I have elsewhere called the “institutional diversity of capitalism” (Chang 1997):²⁵ “pre-emptive” welfare state in Bismarckian Germany; postwar French industrial policy; early Swedish state support of research and development; the postwar transformation of the Austrian manufacturing sector through dynamic public enterprises; the well-known state-led developments of the East Asian countries. Nevertheless, the fact remains that all successful developmental efforts involved substantial state intervention.

What we have just discussed is not simply of historical interest. For one thing, even in the most advanced capitalist economies of today, which already have well-developed market systems on the whole, the state is constantly involved in creating new markets and thus setting up new rights and obligations necessary for their functioning, on the one hand, and modifying the existing rights-obligations structure in order to accommodate them, on the other. The most prominent recent examples include the creation and restructuring of markets by the state in mobile telecommunications, computer software, electricity and Internet service provision.

But, perhaps more importantly, whether or not we accord institutional primacy to the market makes a critical difference to how we design developmental policies for countries that have yet to set up a fully developed market system. For example, the severe economic crisis experienced during the last several years by many former communist countries that opted for a “big bang” reform is one striking example of how the establishment of a well-functioning market economy is impossible without a well-functioning state.²⁶ In fact, if markets evolved as “naturally” as the neoliberal economists

²² And he continues: “Administrators had to be constantly on the watch to ensure the free working of the system. Thus even those who wished most ardently to free the state from all unnecessary duties, and whose whole philosophy demanded the restriction of state activities, could not but entrust the self-same state with the new powers, organs and instruments required for the establishment of *laissez-faire*” (Polanyi 1957:140).

²³ Even the World Bank now recognizes this—see World Bank 1997:21, box 1.2.

²⁴ During this period, few countries had tariff autonomy, either because of colonial rule or unequal treaties. For example, Japan got tariff autonomy only in 1899 on expiration of the unequal treaties it had signed following its opening-up in 1853. Of the countries with tariff autonomy, the United States had by far the highest tariff rates. Average rates since the 1820s had never been below 25 per cent, and had usually been around 40 per cent, when those in other countries for which the data are available—such as Austria, Belgium, France, Italy and Sweden—had rarely been over 20 per cent. For details, see World Bank 1991:97, box table 5.2; Kozul-Wright 1995:97, table 4.8.

²⁵ See also Albert 1991; Berger and Dore 1996.

²⁶ See Chang and Nolan 1995; Stiglitz 1999.

believe, these countries would not be in such trouble now. Likewise, the developmental crises that many developing countries have gone through during the last two decades or so show how dangerous it is to assume the primacy of the market and believe that it will naturally develop as far as the state does not interfere with its evolution.

Thus taking issue with the market primacy assumption in neoliberal theory is not merely a theoretical quibbling, nor is it a quest for historical “truth”. This assumption deeply affects the very way in which we understand the nature and the development of the market, as well as its interrelationship with the state and other institutions. Unless we abandon this assumption and develop a theory that deals with the market, the state and other institutions on a more equal footing, our understanding of the role of the state will remain incomplete and severely biased.

Market, state and politics

As we mentioned earlier, the neoliberal world of politics is populated by self-seeking bureaucrats, and politicians with limited capabilities operating under the influence of interest groups. In this view, politics opens the door for sectional interests to “distort” the “rationality” of the market system. The neoliberal solution to this problem is to “depoliticize” the economy. This is, according to their view, to be achieved by restricting the scope of the state (through deregulation and privatization) and by reducing the room for policy discretion in those few areas where it is allowed to operate, for example, by strengthening the rules on bureaucratic conduct or by setting up “politically independent” policy agencies bound by rigid rules (for example, an independent central bank, independent regulatory agencies).

Many studies take issue with the neoliberal view of human motivation that underlies this political economy analysis.²⁷ These studies argue that, contrary to the neoliberal assumption, self-seeking is not the only human motivation even in the “private” domain of the market, and that people do not operate with the same degree of selfishness in the public domain as in the private domain. Once this assumption of pure self-seeking is dropped, the anti-statist conclusions of neoliberalism need to be seriously modified, as the moral views and social norms held by individuals may restrain the extent to which they advance their interests by finding ways to “distort” market outcomes through political means—that is, even if all political modifications of existing rights and obligations can be interpreted as market “distortion” through political means. (I showed why this cannot be the case in the subsection on defining the free market above.)

As this point is already well known and as I shall develop this theme further later (in the subsection on analysis of the state), now I would like to criticize the neoliberal view of politics from another angle. My point here is that the market itself is a political construct and therefore the neoliberal proposal for its de-politicization is at best self-contradictory and at worst dishonest.²⁸ But what does it mean, exactly, to say that markets are political constructs?

To begin with, the establishment and distribution of property rights and other entitlements that define the “endowments” of market participants, which neoliberal economists take as given, is a highly political exercise. The most extreme examples are the

²⁷ Cullis and Jones 1987; Chang 1994a; Stretton and Orchard 1994.

²⁸ For further criticisms of neoliberal political economy, see, in chronological order, King 1987; Gamble 1988; Toye 1991; Stretton and Orchard 1994; Chang 1994a, 1994b; Evans 1995; Weiss 1998; Woo-Cumings 1999.

various episodes of “original accumulation” in which property rights were redistributed through the most naked forms of politics, involving corruption, theft and even violence—such as the Great Plunder or the Enclosure in the early days of British capitalism, or the shady deals that dominate the privatization process in many developing and ex-communist countries these days.

Even basic knowledge of the history of the advanced countries over the last two centuries reveals how many of those rights that are now regarded as so “fundamental” that very few, if any, of their citizens would question them were perfectly contestable and often fiercely contested in the past—examples include the right to self-ownership (denied to slaves), the right to vote (and thus to have a say in the political modification of market outcomes), the right to minimum working hours, the right to organize and the right not to be subject to physical abuse in the workplace. More recent struggles regarding rights in areas such as the environment, equal treatment regardless of sex or ethnicity, and consumer protection are reminders that the political struggles surrounding the establishment, sustenance and modification of the rights-obligations structure underlying markets will never end.

Moreover, even when we accept the existing rights-obligations structure as uncontestable, there are practically no prices in reality that are not subject to “political” influences, including those that are not perceived as such even by many neoliberals. To begin with, two critical prices that affect almost every sector—wages and interest rates—are politically determined to a very large degree. Wages are politically modified not simply by minimum wage legislation, but also by various regulations regarding union activities, labour standards, welfare entitlements and, most importantly, immigration control. Interest rates are also highly political prices, even when they are determined by a “politically independent” central bank.²⁹ The recent debate in Europe on the relationship between political sovereignty and autonomy in monetary policy, which was prompted by the European Monetary Union, shows this very clearly. When we add to these the numerous regulations in product markets regarding safety, pollution, import contents, and so on, there is virtually no price that is free from politics.³⁰

In other words, the “market rationality” that the neoliberals want to rescue from the “corrupting” influences of politics can only be meaningfully defined with reference to the existing institutional structure, which itself is a product of politics.³¹ And, if this is the case, what the neoliberals really do when they talk of de-politicization of the market is to assume that the particular boundary between market and the state *they* wish to draw is the “correct” one, and that any attempt to contest *that* boundary is a “politically minded” one. However, as we argued above, there is no one “correct” way to draw such a boundary. If there appears to be a solid boundary between the two in certain instances, it is only because those who are concerned do not even realize that the rights-obligations structure underpinning that boundary is potentially contestable. So, if some people feel that central banks should be politically independent, it is *only because* they contest the right of the people to influence

²⁹ For further discussions, see Grabel 2000.

³⁰ We were reminded of this clearly in the British coal crisis under the Conservative government in the early 1990s, when British coal miners were told to accept the logic of the “world market” and face mine closures with grace. However, world market prices, which the then British government argued to be beyond political negotiation, turned out to be determined by the “political” decision of the German government to subsidize German coal, of the French government to allow the export of subsidized French nuclear electricity, and of the many developing country governments to allow, at least de facto, child labour in their coal mines.

³¹ See Vira 1997 for further exposition of this point.

monetary policy through their elected representatives, and *not because* there is some “rational” reason that monetary policy should not be politically influenced.

Moreover, in calling for de-politicization of the economy, the neoliberals are not only dressing up their own political views as “objective” ones that are “above politics”, but are also undermining, willy-nilly, the principle of democratic control. The neoliberal call for de-politicization is often justified in populist rhetoric as an attempt to defend the “silent majority” from corrupt politicians, fiefdom-building bureaucrats and powerful interest groups. However, the diminution of the legitimate domain of politics that the neoliberal proposal for de-politicization will bring about only serves to further diminish what little political influence the so-called “silent majority” have to modify market outcomes, which, we repeat, are heavily influenced by politically determined institutional parameters in the first place. Like the old liberals, the neoliberals believe deep down that allowing political power to those who “do not have a stake” in the existing system will inevitably result in “irrational” modifications of the status quo.³² However, unlike the old liberals, the neoliberals cannot openly oppose democracy, so they try to do it by discrediting *politics in general* and making proposals that ostensibly seek to reduce the influence of “untrustworthy” politicians and bureaucrats—but ultimately diminish democratic control itself.³³

Thus seen, the market is ultimately a political construct, and therefore not only is a full de-politicization of the market an impossibility but it also has a dangerous anti-democratic undertone. Note, however, that by saying this we are not denying that a certain degree of de-politicization of the resource allocation process may be necessary. For one thing, unless the resource allocation process is accepted by the members of the society as “objective”, at least to a degree, the political legitimacy of the economic system itself may be threatened. Moreover, high transaction costs would be incurred in search and bargaining activities if every allocative decision were regarded as potentially contestable, as was the case in the former communist countries. However, this is not the same as arguing, as the neoliberals do, that no market under any circumstance should be subject to political modifications—again because, in the final analysis, there is no market that can be really free from politics.

The Way Forward: Toward an Institutional Political Economy

My discussion so far has revealed some important limitations of the currently dominant neoliberal discourse on the role of the state. In this section, I argue that these problems can be overcome only by adopting an alternative approach that incorporates politics and institutions into its analytical core, which I propose to call “institutionalist political economy” (IPE).³⁴ As it is beyond the scope of this paper to develop this approach fully, in the rest of this section I attempt to describe the central theoretical features that distinguish it from the neoliberal approach in the analyses of the market, the state and politics, and suggest how these analyses may be developed.

³² For a critical exposition of old liberalism along this line, see Bobbio 1990.

³³ We should also note that political activities are often ends in themselves, and people may derive value from the activities *per se* as well as from the products of such activities (see Hirschman, 1982b:85-86).

³⁴ I have attempted to develop elements of this theory in a number of my previous works. See Chang, 1994b; Chang, 1995; Chang and Rowthorn, 1995b; and Chang, 1997.

But before we proceed, one thing needs to be made clear. As the reader may have noticed already, and as will become clearer later, when I say “institutionalist” approach, I do not mean it to be of the new institutionalist economics (NIE) kind, but a development of the tradition found in the classic works of authors such as Karl Marx, Karl Polanyi, Joseph Schumpeter, Andrew Shonfield, Herbert Simon and Thorstein Veblen.³⁵ This tradition, which is sometimes called the “old institutional economics”, differs from the NIE in a number of important respects,³⁶ but most importantly in seeing institutions not simply as constraints on the behaviour of the pre-formed and unchanging individual as in the NIE, but in seeing them also as shaping the individuals themselves. With this in mind, let me now sketch out what I think need to be the distinguishing features of IPE.

Analysis of the market

As I argued above, in the neoliberal discourse, the market is seen as a “natural” economic phenomenon that spontaneously grows out of the universal human nature to exploit gains from trading (see the section on market primacy assumption, above). While, when pressed, most neoliberal economists would admit that the market itself is an economic institution and while, given the recent influence of the NIE, many of them may even talk about some (albeit not all) non-market institutions such as the firm, their analysis of the market itself involves only a minimal, and often implicit, institutional specification. Usually, some simplified notion of private property rights is all that exists in the neoliberal analysis of the market, although some may also consider those institutions that are needed for effective exercise and modification of property rights (for example, the court system, contract law).

In contrast, IPE highlights the institutional complexity of the market. It argues that, in order to understand the workings of the market, we need to understand a wide range of institutions that affect and are affected by it. These institutions are not, of course, simply formal institutions like law and state regulation. They also include private-sector self-regulatory institutions (for example, professional associations, producer associations) and informal institutions such as social conventions, although many are supported by formal institutions (for example, decisions by professional associations or social conventions are, when it comes to the crunch, enforceable through the legal system).

Many of these institutions that need to be incorporated into the analysis of the market are often “invisible” because the rights-obligations structure that underlies them is taken so much for granted that it is seen as an inalienable component of naturally ordered free markets (see the above section on defining the free market). However, no institution, however “natural” it may look, can be regarded as such, and although in many cases we may choose to accept many institutions as given, in the final analysis we should be willing and able to subject all institutions that support markets to analytical and political scrutiny.

First, all markets are based on institutions that regulate who can participate. For example, laws may stipulate that certain types of individuals (such as slaves, foreigners) cannot own property. Banking laws or pension laws may limit the range of assets that banks or pension funds own and therefore limit the range of asset markets they can enter.

³⁵ Recent developments of this tradition can be found in Hodgson 1988, 1993, 2000; Lazonick 1991; Evans 1995; Block 1999; Chang and Evans 2000; and Burlamaqui et al. 2000.

³⁶ See Rutherford 1996; and Hodgson 2000.

Who can participate in which labour market will be affected not only by formal regulations by the state and by private sector agents (for example, laws regulating professional qualifications, rules of unions and professional associations) but also by social conventions regarding caste, gender and ethnicity. Company laws and industrial licensing rules will decide who can participate in the product market, while stock market listing rules and brokerage regulations determine who can participate in the stock market.

Second, there are institutions that determine the legitimate objects of market exchange (and, by implication, ownership). In most countries, there are laws illegalizing transactions in things like addictive drugs, “indecent” publications, human organs or firearms (although different societies have different views on what count as, say, addictive drugs or indecent publications). Laws on slavery, child labour and immigration will stipulate, respectively, that human beings, labour service of children and labour service of illegal immigrants may not be legitimate objects of exchange.

Third, even when the legitimate participants in and the legitimate objects of exchange have been stipulated, we need institutions that define what exactly each agent’s rights and obligations are in which areas. So, for instance, zoning laws, environmental regulations (for example, regarding pollution or noise), fire regulations, and so on, define how property rights in land can be exercised (for example, what kinds of buildings can be constructed where). For another example, laws regarding health, safety and grievance resolution in the workplace will define the rights and the obligations of the workers and the employers.

Fourth, there are numerous institutions that regulate the process of exchange itself. For example, there are rules regarding fraud, breach of contract, default, bankruptcy and other disruptions in the exchange process, which are backed up by the police, the court system and other legal institutions. Consumer laws and liability laws, for yet another example, will stipulate when and how buyers of unsatisfactory or faulty products may annul the act of purchase and/or claim compensation from the sellers. Social conventions (for example, those regarding fairness and probity) or codes of conduct issued by trade associations (for example, bankers’ associations) may also influence the way economic agents behave in economic transactions.

To sum up the discussion in this section, understanding the market requires consideration of a much wider range of institutions than what are normally discussed by the neoliberals. In addition to property rights and the legal infrastructure that help their exercise and modification, which the neoliberals focus on, we also need to consider all the other formal and informal institutions that define who can hold what kinds of property and participate in what kinds of exchange, what the legitimate objects of exchange are, what the acceptable conducts in the exchange process are, on what terms different types of agent may participate in which markets, and so on. In other words, neoliberal markets are institutionally very underspecified, and we need a fuller institutional specification of markets if we are to understand them properly.

Emphasizing the institutional nature of the market in the way discussed above also requires that we bring politics explicitly into the analysis of the market (and not just into the analysis of the state) and stop pretending that markets need to be, and can be, “depoliticized”. Markets are in the end political constructs in the sense that they are defined by a range of formal and informal institutions that embody certain rights and obligations, whose legitimacy (and therefore whose contestability) is ultimately determined in the realm of politics. Consequently, IPE adopts a “political economy” approach not only in analysis of the state, but also in analysis of the market.

Analysis of the state

The neoliberal analysis of the state starts by questioning the “public” nature of the motivations of the agents that make up the state, such as politicians and state bureaucrats. The theory of human motivation and behaviour underlying this analysis—and for that matter neoliberalism as a whole—asserts that self-seeking is the only “genuine” human motivation, except perhaps vis-à-vis family members.³⁷

However, as many critics in the institutionalist tradition have pointed out, human motivations are multifaceted and there are just too many non-selfish human behaviours that cannot be explained without admitting a range of non-selfish motivations and assuming a complex interaction between them.³⁸ And this criticism applies even more to the analysis of the state and other aspects of public life. This is not only because individuals often join public life with commitments to certain non-selfish values (for example, public service ethic, social reform, liberalism, party loyalty, nationalism) but also because, operating in an explicitly “public” sphere of life, they end up internalizing many “publicly oriented” values.

In addition to accepting the variety and the complexity of human motivations, we also need to acknowledge that human beings are fundamentally shaped by institutions. In neoliberal theories (including the NIE models), individual motivations (which they usually call “preferences”) are treated as the ultimate data. In these theories, institutions may be able to shape individual *behaviours* by punishing or rewarding particular types of conduct, but they are not able to change the *motivation* itself (Ellerman 1999; Hodgson 2000). In contrast, IPE does not see these motivations as given but as being fundamentally shaped by the institutions surrounding the individuals. This is because institutions embody certain “values” (world-views, moral codes, social norms, or whatever one may choose to call them) and, by operating under these institutions, individuals inevitably internalize some of these values and thereby have their selves changed. This is what, elsewhere, we proposed to call the “constitutive role of institutions” (Chang and Evans 2000) or what Hodgson (2000) calls the “downward reconstitutive causation from institutions to individuals”, and is a central hallmark of a truly “institutionalist” approach, different from the neoliberal institutionalism of the NIE.

Of course, IPE’s emphasis on the constitutive nature of institutions should not be interpreted to mean that people’s motivations are more or less determined by institutional structure. If IPE is not to lapse into unwarranted structural determinism, we need to accept that individuals also influence the way institutions are formed and run, as it is typically done in the NIE models. However, IPE differs from NIE in that it postulates a two-way causation between individual motivation and social institutions, rather than a one-way causation from individuals to institutions, although IPE would agree that in the final analysis a truly institutionalist analysis should see institutions as at least “temporally” prior to individuals (Hodgson 2000).

Now let me illustrate with some examples how an “institutionalist” analysis of the relationship between motivation, behaviour and institutions may improve our thinking about the role of the state.

³⁷ Williamson 1993 presents this view passionately.

³⁸ Simon 1983; Basu 1983; McPherson 1984; Etzioni 1988; Frey 1997; Ellerman 1999. See also the section on market, state and politics.

In societies where high standards of behaviour in public life have long been established, government officials may act with more probity compared to their counterparts in other societies without such behavioural norms, even if they are subject to the same institutions involving individualistically designed sanctions and rewards of the kinds that the neoliberals recommend (for example, more thorough monitoring, higher relative salaries, tougher punishments). IPE acknowledges the usefulness of these institutions that target *behaviours* directly, but would argue that behavioural standards can also be improved, and in some cases more effectively improved, by changing the *motivations* of public personages. This, in turn, can happen through direct ideological exhortation (for example, emphasizing a public service ethic in bureaucratic training), but perhaps more indirectly (given the constitutive role of institutions) through changing the institutions that surround them (for example, devising incentive systems that reward teamwork in the bureaucracy in order to boost *esprit de corps*).

Indeed, I would go a step further and argue that some of the neoliberal recommendations that are intended to improve the behavioural standards of public personages may be downright counter-productive, if they undermine the non-selfish motivations that had previously motivated the public personages in question—that is, if they cause what Ellerman (1999) calls the “atrophy of intrinsic motivation”. Therefore, increased monitoring of public figures may make them *behave* in a more “moral” way in areas where monitoring is easier (for example, diligently documenting their expenses for business trips). However, it may make them less *motivated* to behave in a moral way and take initiatives in areas where monitoring is difficult (for example, taking intellectual initiatives without material compensation). This is because it will make them feel that they are not trusted as “moral” agents, and therefore that they are under no obligation to behave morally unless they are forced to do so.

Let me summarize the argument set forth in this subsection. In order to overcome the limitations of the neoliberal analysis of the state, we need to abandon its arguably most crucial assumption—namely that individuals have predetermined motivations (or “preferences” in the neoliberal language) that are selfish—and adopt a more complex view of the interrelationship between motivation, behaviour and institutions than the one in the neoliberal discourse.

IPE proposes that we accept, from the start, that human motivations are varied and interact with each other in complex ways. Moreover, it argues, individual motivations are fundamentally formed by the institutions that surround the individuals. Thus seen, we should acknowledge that there is no need for selfish motivations to dominate behaviour in the public sphere of the state, where non-selfish values are institutionally emphasized, and therefore that actors internalize many such values. Moreover, it must be emphasized that even in the private sphere the importance of self-seeking motivation is much less than the neoliberals believe it to be. IPE argues that behaviours may be changed not only through changing institutions that define the incentives for individuals, but also through ideological and institutional changes that influence individual motivations themselves.

Analysis of politics

Neoliberalism has made an important contribution to the debate on the role of the state by bringing politics back into the analysis of state action. Since I am advocating an institutionalist “political economy”, I am naturally sympathetic to the neoliberal attempt to emphasize the role of politics. However, the neoliberals claim that politics inevitably

generates state actions that go against market “rationality”. In doing so, they are effectively making two claims, both of which are highly problematic.

First of all, they are claiming that markets should be, and can be, free from politics. However, as I have argued, it is a myth that markets can be free from politics. I accept that this myth may be useful, or even necessary, in containing the potentially disruptive effects of a very high degree of contestation of the rights-obligations structure underlying existing markets. However, the usefulness of this myth does not change the fact that it is still a myth. IPE argues that markets are fundamentally political constructs and therefore that it is not possible, or even desirable, to try to completely rid markets of politics, as the neoliberals wish (see the earlier subsection on markets, state and politics).

Second, by portraying the particular boundary of the market that they are advocating (into which, they argue, political influences should not be allowed) as the “rational” one, the neoliberals are claiming an objectivity for their view that no theory can claim. However, once we accept the political nature of the market, we can see that there is no “objective” way to decide the “correct” boundary between the market and the state, as one’s political view will deeply influence whether one sees a particular boundary as a legitimate (or “rational” in their language) one. In contrast, IPE argues that we need to see politics as a process through which people with different, and equally legitimate, views on the contestability of the existing rights-obligations structure vie with each other, rather than as a process in which interest groups try to change the “natural” order of “free markets” according to their own sectional interests.

Therefore, IPE treats politics not as something alien and damaging to the market, but as an integral part of its construction, operation and change, although it acknowledges the harm that excessive politicization can do. It also emphasizes that there is no such thing as a “correct” political view and therefore that no one should be able to claim the boundary between the market and the state that he/she believes in to be the “correct” one.

I would go even further and criticize the neoliberal analysis of politics for its failure to recognize the extent to which politics itself is an institutionally structured process.³⁹

Of course, I am not saying that institutions do not feature in the neoliberal analysis of politics. On the contrary, it has tried to analyse, often with success, how the formal and informal institutions that govern the way interests are organized and power exercised affect political actions (for example, electoral rules, rules regulating the behaviour of public figures, rules on agenda formation and voting in parliamentary committees). However, like the other neoliberal analyses involving institutions, it has not gone beyond seeing institutions as “constraining” factors on human behaviour, and fails to see that institutions are also “constitutive”, that is, that they can influence politics not only by affecting human actions but also by influencing individual motivations and world-views (Chang and Evans 2000).⁴⁰ We can talk about three related, but different, mechanisms that are involved here.

First of all, institutions influence the very perception of their interests by individuals. So, for instance, in societies where political parties have more class-conscious organizations (for example, formal affiliation of political parties with trade unions or

³⁹ See Chang and Evans 2000; March and Olsen (1989) argues along this line from a political science point of view.

⁴⁰ See also the section on analysis of the state, above.

employers' associations), many more voters will vote along "class lines" than in societies without such parties.

Second, institutions influence people's views on what kinds of issues are legitimate targets of political action. So, for example, in societies where child labour is no longer a legitimate policy issue, not even people who will potentially benefit from the practice will start lobbying for its reintroduction—not simply because they fear some formal or informal sanctions, but more importantly because they do not even believe the issue to be a legitimate item on the agenda for political action by any group.⁴¹

Third, institutions influence how individuals perceive the legitimacy of particular types of political actions. So, for example, rent seeking is likely to be less widespread in societies where open lobbying is, even if legal, considered to be in "poor taste", than in societies where it is not, even if both societies have the same scopes for rent seeking.

To summarize the argument in this section, the neoliberal claim that politics inevitably corrupts the market is problematic, not only because markets themselves are political constructs, but also because the neoliberal notion of the "uncorrupted" market is based on a particular set of political beliefs that cannot claim superiority over other sets of political beliefs. Moreover, the neoliberals fail to see politics as an institutionally structured process in the deepest sense. They see institutions as constraining political actions but fail to see that institutions also affect people's motivations and perceptions.

IPE argues that politics is an institutionally structured process, not only because institutions shape people's political actions, given their motivations and perceptions, but also because they influence people's perception of their own interests, of the legitimate boundary of politics, and of the appropriate standards of behaviour in politics. Unless we break the neoliberal mould and see institutions as both constraining people's behaviour and being constitutive of their motivations and perceptions, our understanding of politics will remain biased and incomplete.

Concluding Remarks

In this chapter, after pointing out the internal contradictions of the neoliberal view on the role of the state that arise from the tensions between its neoclassical and Austrian-Libertarian components, we critically examined some of its basic concepts and assumptions from the institutionalist point of view. Four main points were raised: the definition of the free market; the definition and the implications of market failure; the market primacy assumption (namely, the view that the market is logically and temporally prior to other institutions, including the state); and the analysis of politics.

My main criticism of the neoliberal analysis of the role of the state is *not* that its policy recommendations are too anti-interventionist, as some of its critics argue, but rather that the very way in which it envisages the market, the state, institutions and politics, as well as their mutual relationships, is highly problematic. Therefore, I suggested that overcoming the limitations of the neoliberal discourse on the role of the state cannot be done by looking for more interventionist models within the neoliberal mould, but only by breaking this mould and developing an alternative framework that brings institutions and politics to its analytical core. I proposed to call this an institutionalist

⁴¹ See Goodin 1986 for further discussion of the issue of "public agenda formation".

political economy approach, and sketched out how its analyses of the market, the state and politics differ from those offered by the neoliberal discourse.

IPE is a “political economy” approach because, like the neoliberal analysis, it puts emphasis on the role of political factors in determining state policy. However, the political economy of IPE goes much further than its neoliberal counterpart in that it emphasizes the fundamentally political nature of the market and applies the political economy logic to the analysis of the market, and not just to the analysis of the state. At the same time, IPE is an “institutionalist” approach because, like the new institutionalist branch of neoliberal economics, it emphasizes the role of institutions in affecting human actions, including those within and surrounding the state. However, the institutionalism of IPE goes much further than that of NIE in that it emphasizes the “temporal priority” of institutions over individuals (rather than the temporal priority of individuals over institutions, as is done in NIE) and that it sees institutions as not simply “constraining” individual *behaviour* (as in NIE) but also being “constitutive” of individual *motivations*.

Admittedly, this chapter is only the first step on a potentially long and laborious road to developing a full-blown institutionalist political economy—especially given that the broader institutionalist framework that should provide a background to this approach is still not fully developed. However, it is hoped that it will serve a useful role by proposing a new research agenda that will allow us to break the mould of current debate on the role of the state, which is set by the very powerful and informative, but fundamentally flawed and misleading, discourse of neoliberalism.

References

- Albert, M. 1991. *Capitalism vs. Capitalism*. Four Walls Eight Windows, New York.
- Arrow, K.J. 1974. *The Limits of Organization*. W.W. Norton and Company, New York.
- Basu, K. 1983. “On why we do not try to walk off without paying after a taxi ride.” *Economic and Political Weekly*, Vol. 18, No. 48, pp. 2001–2012.
- Berger, S. and R. Dore (eds.). 1996. *National Diversity and Global Capitalism*. Cornell University Press, Ithaca, NY.
- Block, F. 1999. *Deconstructing Capitalism as a System*. Department of Sociology, University of California, Davis CA. Mimeo.
- Bobbio, N. 1990. *Liberalism and Democracy*. Verso, London.
- Buchanan, J.M. 1986. “Contractarianism and democracy.” In J.M. Buchanan, *Liberty, Market and State: Political Economy in the 1980s*. Wheatsheaf Books Ltd., Brighton.
- Burlamaqui, L., A. Castro and H-J. Chang. 2000. *Institutions and the Role of the State*. Edward Elgar, Cheltenham.
- Chang, H-J. 1997. “Markets, madness, and many middle ways: Some reflections on the institutional diversity of capitalism.” In P. Arestis, G. Palma and M. Sawyer (eds.), *Essays in Honour of Geoff Harcourt—Volume 2: Markets, Unemployment and Economic Policy*. Routledge, London.
- . 1995. “Explaining ‘flexible rigidities’ in East Asia.” In T. Killick (ed.), *The Flexible Economy: Causes and Consequences of the Adaptability of National Economies*. Routledge, London.
- . 1994a. *The Political Economy of Industrial Policy*. Macmillan, London.
- . 1994b. “State, institutions and structural change.” *Structural Change and Economic Dynamics*, Vol. 5, No. 2, pp. 293–323.
- Chang, H-J. and P. Evans. 2000. *The Role of Institutions in Economic Change*. Paper presented at the workshop on The Other Canon in Economics, Oslo, Norway, 15-16 August.
- Chang, H-J. and P. Nolan. 1995. “Europe versus Asia: Contrasting paths to the reform of centrally planned systems of political economy.” In H-J. Chang and P. Nolan (eds.), *The Transformation of the Communist Economies: Against the Mainstream*. Macmillan, London.
- Chang, H-J. and R. Rowthorn. 1995a. “Introduction.” In H-J. Chang and R. Rowthorn (eds.), *Role of the State in Economic Change*, Oxford University Press, Oxford.
- . 1995b. “Role of the state in economic change: Entrepreneurship and conflict management.” In H-J. Chang and R. Rowthorn (eds.), *Role of the State in Economic Change*. Oxford University Press, Oxford.

- Coase, R. 1992. "The institutional structure of production." *American Economic Review*, Vol. 82, No. 4, pp. 713–719.
- Cullis, J. and P. Jones. 1987. *Microeconomics and the Public Economy: A Defence of Leviathan*. Basil Blackwell, Oxford.
- Deane, P. 1989. *The State and the Economic System*. Oxford University Press, Oxford.
- Ellerman, D. 1999. *Helping Others to Help Themselves: The Challenge of Autonomy-Compatible Development Assistance*. World Bank, Washington DC. Mimeo.
- Etzioni, A. 1988. *The Moral Dimension: Toward a New Economics*. The Free Press, New York.
- Evans, P. 1995. *Embedded Autonomy: States and Industrial Transformation*. Princeton, Princeton University Press.
- Evans, P., D. Rueschemeyer and T. Skocpol (eds.). 1985. *Bringing the State Back In*. Cambridge University Press, Cambridge.
- Freeman, C. 1989. "New technology and catching up." *European Journal of Development Research*, Vol. 1, No. 1, pp. 85–99.
- Frey, B. 1997. *Not Just for the Money: An Economic Theory of Personal Motivation*. Edward Elgar, Cheltenham.
- Gamble, A. 1988. *The Free Economy and the Strong State: The Politics of Thatcherism*. Macmillan, London.
- Goodin, R. 1986. "Laundering preferences." In J. Elster and A. Hylland (eds.), *Foundations of Social Choice Theory*. Cambridge University Press, Cambridge.
- Gabel, I. 2000. "The political economy of 'policy credibility': The new-classical macroeconomics and the remaking of emerging economies." *Cambridge Journal of Economics*, Vol. 24, No. 1, pp. 1–19.
- Hall, P. 1989. *The Political Power of Economic Ideas: Keynesianism across Nations*. Princeton University Press, Princeton NJ.
- Hayek, F. 1949. *Individualism and Economic Order*. Routledge and Kegan Paul, London.
- Hirschman, A. 1982a. "Rival views of market society." *Journal of Economic Literature*, Vol. 48, No. 4, pp. 1463–1484.
- . 1982b. *Shifting Involvements: Private Interest and Public Action*. Princeton University Press, Princeton NJ.
- Hodgson, G. 2000. *Structures and Institutions: Reflections on Institutionalism, Structuration Theory and Critical Realism*. The Business School, University of Hertfordshire, Hatfield. Mimeo.
- . 1993. *Economics and Evolution: Bringing Life Back into Economics*. Polity Press, Cambridge.
- . 1988. *Economics and Institution: A Manifesto for a Modern Institutional Economics*. Polity Press, Cambridge.
- Jessop, B. 1982. *The Capitalist State: Marxist Theories and Methods*. Basil Blackwell, Oxford.
- Johnson, C. 1982. *MITI and the Japanese Miracle: The Growth of Industrial Policy 1925–1975*. Stanford University Press, Stanford CA.
- King, D. 1987. *The New Right: Politics, Markets and Citizenship*. Macmillan, London.
- Kozul-Wright, R. 1995. "The myth of Anglo-Saxon capitalism: Reconstructing the history of the American state." In H-J. Chang and R. Rowthorn (eds.), *Role of the State in Economic Change*. Oxford University Press, Oxford.
- Lazonick, W. 1991. *Business Organisation and the Myth of the Market Economy*. Cambridge University Press, New York.
- Lucas, R. 1990. "Review of 'Trade Policy and Market Structure' by E. Helpman and P.R. Krugman (1989. MIT Press, Cambridge MA)." *Journal of Political Economy*, Vol. 98, No. 3.
- March, J.G. and J.P. Olsen. 1989. *Rediscovering Institutions: The Organizational Basis of Politics*. The Free Press, New York.
- Marglin, S. and J. Schor (eds.). 1990. *The Golden Age of Capitalism: Reinterpreting the Postwar Experience*. Oxford University Press, Oxford.
- McPherson, M. 1984. "Limits of self-seeking: The role of morality in economic life." In D.C. Colander (ed.), *Neoclassical Political Economy: The Analysis of Rent-Seeking and DUP Activities*. Ballinger Publishers, Cambridge MA.
- Mueller, D. 1979. *Public Choice*. Cambridge University Press, Cambridge.
- Nozick, R. 1974. *Anarchy, Utopia and the State*. Basil Blackwell, Oxford.
- Pagano, U. 1985. *Work and Welfare in Economic Theory*. Basil Blackwell, Oxford.
- Polanyi, K. 1957. *The Great Transformation*. Beacon Press, Boston MA.
- Reinert, E.S. 1995. "Competitiveness and its predecessors: A 500-year cross-national perspective." *Structural Change and Economic Dynamics*, Vol. 6, No. 1, pp. 23–42.
- Rutherford, M. 1996. *Institutions in Economics: The Old and the New Institutionalism*. Cambridge University Press, Cambridge.
- Schotter, A. 1985. *Free Market Economics: A Critical Appraisal*. St. Martin's Press, New York.
- Schumpeter, J.A. 1987. *Capitalism, Socialism and Democracy*, 6th edition. Unwin Paperbacks, London.
- Shonfield, A. 1965. *Modern Capitalism: The Changing Balance of Public and Private Power*. Oxford University Press, Oxford.
- Simon, H.A. 1991. "Organisations and markets." *Journal of Economic Perspectives*, Vol. 5, No. 2, pp. 25–44.
- . 1983. *Reason in Human Affairs*. Basil Blackwell, Oxford.

REVISITING SUSTAINABLE DEVELOPMENT

- Stiglitz, J. 1999. *Wither Reform? Ten Years of the Transition*. Paper presented at the Annual Bank Conference on Development Economics, Washington DC, USA, 28–30 April.
- . 1992. “Alternative tactics and strategies in economic development.” In A.K. Dutt and K. Jameson (eds.), *New Directions in Development Economics*. Edward Elgar, Aldershot.
- Stretton, H. and L. Orchard. 1994. *Public Goods, Public Enterprise and Public Choice*. Macmillan, London.
- Toye, J. 1991. “Is there a neo-political economy of development?” In C. Colclough and J. Manor (eds.), *States or Markets? Neo-liberalism and the Development of Policy Debate*. Oxford University Press, Oxford.
- Trebilcock, M. 1993. *The Limits of Freedom of Contract*. Harvard University Press, Cambridge MA.
- Vira, B. 1997. “The political Coase theorem: Identifying differences between neoclassical and critical institutionalism.” *Journal of Economic Issues*, Vol. 31, No. 3, pp. 761–779.
- Weiss, L. 1998. *The Myth of the Powerless State*. Polity Press, Cambridge MA.
- Williamson, O. 1993. “Calculativeness, trust, and economic organisation.” *Journal of Law and Economics*, Vol. 36, No. 1, pp. 453–486.
- . 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. The Free Press, New York.
- Woo-Cumings, M. (ed.) 1999. *The Developmental State*. Cornell University Press, Ithaca NY.
- World Bank. 1997. *World Development Report 1997: The State in a Changing World*. Oxford University Press, New York.
- . 1991. *World Development Report 1991: The Challenge of Development*. Oxford University Press, New York.

Chapter 7

Information Technology, Globalization and Social Development¹

*Manuel Castells*²

(1999)

Introduction

The world is in the midst of a historical transformation at the turn of the millennium. Like all major transformations in history, it is multidimensional—technological, economic, social, cultural, political, geopolitical. Yet, in the end, what is the real meaning of this extraordinary mutation for social development, for people's lives and well-being? And is there a shared meaning for everyone, or must we differentiate people in terms of their specific relationship to the process of social change? If so, what are the criteria for such a differentiation?

There is a raging debate in the world on the mixed record of the information technology revolution and of globalization—especially when we consider their social dimensions on a planetary scale. As is always the case with a fundamental debate, it is most often framed ideologically and cast in simplistic terms. For the prophets of technology, for the true believers in the magic of the market, everything will be just fine, as long as ingenuity and competition are set free. All we need are a few regulatory fixes, to prevent corruption and to remove bureaucratic impediments in the path of our flight to hyper-modernity. For those around the world who are not ecstatic about surfing on the Internet, but who are affected by layoffs, lack of basic social services, crime, poverty and disruption of their lives, globalization is nothing more than a warmed up version of traditional capitalist ideology. In their view, information technology is a tool for renewed exploitation, destruction of jobs, environmental degradation and the invasion of privacy. Techno-elites versus neo-luddites.

¹ Originally published as an UNRISD Discussion Paper (UNRISD, 1999).

² At the time of writing, Manuel Castells was Professor of Sociology, and of City and Regional Planning, at the University of California, Berkeley.

Of course, the real issues are not in-between, but elsewhere. Social development today is determined by the ability to establish a synergistic interaction between technological innovation and human values, leading to a new set of organizations and institutions that create positive feedback loops between productivity, flexibility, solidarity, safety, participation and accountability, in a new model of development that could be socially and environmentally sustainable.

It is easy to agree on these goals, but difficult to develop the policies and strategies that could lead to them. Some of the disagreement comes, certainly, from conflicting interests, values and priorities. But a considerable source of current disarray in social and economic policies stems from the lack of a common understanding of the processes of transformation under way, of their origins and of their implications. This chapter aims to clarify the meaning of this transformation, particularly by focusing on the processes that are usually considered to be its triggers—the information technology revolution and the process of globalization. As we shall see, in fact, these two processes interact with others, in a very complex set of actions and reactions. But they offer a fruitful entry point to discuss the connection between the new socioeconomic system and the generation of inequality and social exclusion on an unprecedented, planetary scale.

Thus, after having characterized technological innovation, organizational change and globalization, I will analyse the various dimensions of inequality and social exclusion, showing the depth of our social crisis, and I will provide some hypotheses on the reasons for its accentuation in the last decade. I will conclude by proposing a redefinition of the field of social development, appropriate to tackle the issues that condition our capacity to live together in the new context of the “Information Age”. In proceeding along the lines of this argument, I have in mind a variety of data, from reliable sources, that make the analysis presented here somewhat plausible. However, since it brings together many of these data, I take the liberty of referring the reader to my book (Castells 1998), in order to concentrate here on the schematic presentation (and expanded elaboration) of my argument without repeating the presentation of data sources.³

The New Socioeconomic System: Information Technology, Networking, Globalization

In the last quarter of the twentieth century, a new form of socioeconomic organization emerged. After the collapse of statism, in the Soviet Union and throughout the world, it is certainly a capitalist system. Indeed, for the first time in history the entire planet is capitalist, since even the few remaining command economies are surviving or developing through their linkages to global, capitalist markets. Yet this is a brand of capitalism that is at the same time very old and fundamentally new. It is old because it appeals to relentless competition in the pursuit of profit, and individual satisfaction (deferred or immediate) is its driving engine. But it is fundamentally new because it is tooled by new information and communication technologies that are at the root of new productivity sources, of new organizational forms and of the formation of a global economy. Let us briefly examine the profile of this new world we are living in, which in fact is shared by all countries despite the diversity of their cultures and institutions.

³ See also Castells 1996, 1997, as well as the synthesis of data on world poverty presented in UNDP 1997.

Information and Communication Technology as a Strategic Tool

Information technology is not the cause of the changes we are living through. But without new information and communication technologies none of what is changing our lives would be possible. In the 1990s the entire planet is organized around telecommunicated networks of computers at the heart of information systems and communication processes. The entire realm of human activity depends on the power of information, in a sequence of technological innovation that accelerates its pace month by month. Genetic engineering—benefiting from this wealth of information processing capacity—is progressing by leaps and bounds, and is enabling us, for the first time, to unveil the secrets of living matter and to manipulate life, with extraordinary potential consequences. Software development is making possible user-friendly computing, so that millions of children—provided with adequate education—can progress in their knowledge and in their ability to create wealth and enjoy it wisely, much faster than any previous generation. The Internet—which, by the end of the 1990s, is used by about 100 million people, and set to double that number every year—is a channel of universal communication where interests and values of all sorts coexist, in a creative cacophony. Certainly, the diffusion of information and communication technology is extremely uneven. Most of Africa is being left in a technological apartheid, and the same could be said of many other regions of the world. The situation is difficult to remedy when one-third of the world's population still has to survive on the equivalent of one dollar per day.

Technology per se does not solve social problems. But the availability and use of information and communication technologies are a prerequisite for economic and social development in our world. They are the functional equivalent of electricity in the industrial era. Econometric studies show the close statistical relationship between diffusion of information technology, productivity and competitiveness for countries, regions, industries and firms (Dosi et al. 1988). They also show that an adequate level of education, in general, and of technical education, in particular, is essential for the design and productive use of new technologies (Foray and Freeman 1992). But neither the sheer number of scientists and engineers nor the acquisition of advanced technology can be a factor of development by itself (neither was enough for the Soviet Union—see Castells and Kiselyova 1995), without an appropriate organizational environment.

The crucial role of information and communication technologies in stimulating development is a two-edged sword. On the one hand, it allows countries to leapfrog stages of economic growth by being able to modernize their production systems and increase their competitiveness faster than in the past. The most critical example is that of the Asia-Pacific economies—and particularly the cases of Hong Kong, Malaysia, Singapore, South Korea and Taiwan. This is so despite the financial crisis of the end of the 1990s, which was unrelated to competitive performance and may have been related, in fact, to the attractiveness of booming Asian economies to global capital flows. On the other hand, for those economies that are unable to adapt to the new technological system, their retardation becomes cumulative. Furthermore, the ability to move into the Information Age depends on the capacity of the whole society to be educated, and to be able to assimilate and process complex information. This starts with the education system, from the bottom up, from the primary school to the university. And it relates, as well, to the overall process of cultural development, including the level of functional literacy, the content of the media, and the diffusion of information within the population as a whole.

In this regard, what is happening is that regions and firms that concentrate the most advanced production and management systems are increasingly attracting talent

from around the world, while leaving aside a significant fraction of their own population whose educational level and cultural/technical skills do not fit the requirements of the new production system. A case in point is Silicon Valley, the most advanced information technology-producing region in the world, which can only maintain the pace of innovation by recruiting every year thousands of engineers and scientists from China, India, Israel, Korea, Russia, Singapore, Taiwan and Western Europe, to jobs that cannot be filled by Americans because they do not have proper skills (Benner, in progress). Similarly, in Bangalore, Campinas, Mumbai or Seoul engineers and scientists concentrate in high-technology hubs, connected to the “Silicon Valleys” of the world, while a large share of the population in all countries remains in low-end, low-skill jobs—when they are lucky enough to be employed at all (Carnoy 1999). Thus there is little chance for a country, or region, to develop in the new economy without its incorporation into the technological system of the Information Age. Although this does not necessarily imply the need to produce information technology hardware locally, it does imply the ability to use advanced information and communication technologies, which in turn requires an entire reorganization of society (Castells and Tyson 1988, 1989).

A similar process affects the life chances of individuals. Not everybody should be a computer programmer or a financial analyst, but only people with enough education to reprogramme themselves throughout the changing trajectory of their professional lives will be able to reap the benefits of the new productivity. What about “the others”? It depends on social organization, the strategies of firms and public policies. But, left to market forces, there is an undeniable tendency toward a polarized social structure, between countries and within countries, as I will show below.

In sum, information and communication technology is the essential tool for economic development and material well-being in our age; it conditions power, knowledge and creativity; it is, for the time being, unevenly distributed within countries and between countries; and it requires, for the full realization of its developmental value, an interrelated system of flexible organizations and information-oriented institutions. In a nutshell, cultural and educational development conditions technological development, which conditions economic development, which conditions social development—and this stimulates cultural and educational development once more. This can be a virtuous circle of development or a downward spiral of underdevelopment. And the direction of the process will not be decided by technology but by society, through its conflictive dynamics.

Globalization

There is so much ideology surrounding this notion, and its implications, that it is essential to characterize globalization precisely, and then determine its extent and evolution in empirical terms (see Hirst and Thompson 1996). Although globalization is multidimensional, it can be better understood starting with its economic dimension. A global economy is an economy whose core activities work as a unit in real time on a planetary scale. Thus capital markets are interconnected worldwide, so that savings and investment in all countries—even if most of them are not globally invested—depend for their performance on the evolution and behaviour of global financial markets.

In the early 1990s multinational corporations employed directly “only” about 70 million workers, but these workers produced one-third of the world’s total private output, and the global value of their sales in 1992 was US\$ 5,500 billion—which is 25 per cent

more than the total value of world trade in that year (Bailey et al. 1993). Therefore multinational corporations in manufacturing, services and finance, with their ancillary networks of small and medium businesses, constitute the core of the world economy.

Furthermore, the highest tier of science and technology—the one that shapes and commands overall technological development—is concentrated in a few dozen research centres and milieus of innovation around the globe, overwhelmingly in Japan, the United States and Western Europe. Chinese, Indian and Russian, engineers—usually of very high quality, when they reach a certain level of scientific development—can only pursue their research by linking up with these centres. Thus highly skilled labour is also increasingly globalized, with talent being hired around the globe when firms and governments really need the talent and are ready to pay for it.

At the same time, the overwhelming proportion of jobs, and thus of people, are not global. In fact, they are local and regional. But their fate, their jobs, their living standards ultimately depend on the globalized sector of the national economy, or on the direct connection of their economic units to global networks of capital, production and trade. This global economy is historically new, for the simple reason that only in the last two decades have we produced the technological infrastructure required for it to function as a unit on a planetary scale: telecommunications, information systems, micro-electronic-based manufacturing and processing, information-based air transportation, container cargo transport, high speed trains and international business services located around the world.

However, if the new global economy reaches out to encompass the entire planet—if all people and all territories are affected by its workings—not every place, or every person, is directly included in it. In fact, most people and most lands are excluded, switched off, either as producers, or consumers, or both. The flexibility of this global economy allows the overall system to link up everything that is valuable according to dominant values and interests, while disconnecting everything that is not valuable, or becomes devalued. It is this simultaneous capacity to include and exclude people, territories and activities that characterizes the new global economy as constituted in the Information Age.

Similar processes of selective, segmented globalization characterize other critical instrumental dimensions of our society—including the media, science, culture and information at large.

Globalization and liberalization do not eliminate the nation state, but they fundamentally redefine its role and affect its operation. Central banks (including the new European Central Bank) cannot really control the trends of global flows in financial markets. And these markets are not always shaped by economic rules but by information turbulences of various origins. In order to maintain some capacity to manage global flows of capital and information, national governments band together, creating or adapting supranational institutions—such as the International Monetary Fund (IMF), the European Union, the North American Free Trade Agreement (NAFTA), or other regional cooperation agencies—to which they surrender much of their sovereignty. So they survive, but under a new form of state that links supranational institutions, national states, regional and local governments, and even NGOs, in a network of interaction and shared decision making that becomes the prevalent political form of the Information Age—the network state.

In sum, globalization is a new historical reality—not simply the one invented by neoliberal ideology to convince citizens to surrender to markets, but also the one inscribed in processes of capitalist restructuring, innovation and competition, and enacted through the powerful medium of new information and communication technologies.

Networking

No major historical transformation has taken place in technology, or in the economy, without an interrelated organizational transformation. The large factory, dedicated to mass production, was as critical to the constitution of the industrial age as the development and diffusion of new sources of energy. In the Information Age, the critical organizational form is networking. A network is simply a set of interconnected nodes. It may have a hierarchy, but it has no centre. Relationships between nodes are asymmetrical, but they are all necessary for the functioning of the network—for the circulation of money, information, technology, images, goods, services, or people throughout the system. The most critical distinction in this organizational logic is to be or not to be—in the network. Be in the network, and you can share and, over time, increase your chances. Be out of the network, or become switched off, and your chances vanish since everything that counts is organized around a worldwide web of interacting networks.

Networks are the appropriate organization for the relentless adaptation and the extreme flexibility that are required by an interconnected, global economy—by changing economic demand and constantly innovating technology, and by the multiple strategies (individual, cultural, political) deployed by various actors, which create an unstable social system at an increasing level of complexity. To be sure, networks have always existed in human organization. But only now have they become the most powerful form for organizing instrumentality, rather than expressiveness. The reason is fundamentally technological. The strength of networks is their flexibility, their decentralizing capacity, their variable geometry, adapting to new tasks and demands without destroying their basic organizational rules or changing their overarching goals. Nevertheless their fundamental weakness, throughout history, has been the difficulty of coordination toward a common objective, toward a focused purpose, that requires concentration of resources in space and time within large organizations, like armies, bureaucracies, large factories, vertically organized corporations.

With new information and communication technology, the network is, at the same time, centralized and decentralized. It can be coordinated without a centre. Instead of instructions, we have interactions. Much higher levels of complexity can be handled without major disruption. It does not follow, however, that large corporations are being replaced by small and medium businesses, or that multinationals are obsolete. We observe, in fact, the opposite: there is merger mania around the world. Bigger appears to be increasingly beautiful, as Citicorp marries Travelers Insurance, Bank of America leaves its heart in San Francisco but moves its money to North Carolina, Daimler Benz swallows Chrysler, Volkswagen upgrades itself to Rolls Royce status, and American banks digest Asian banks and financial corporations, in a historical revenge of the West against the high-growth areas of the Pacific.

But the concentration of capital goes hand in hand with the decentralization of organization. Large multinational corporations function internally as decentralized networks, whose elements are given considerable autonomy. Each element of these networks is usually a part of other networks, some of them formed by ancillary small and medium businesses; other networks link up with other large corporations, around specific projects and tasks, with specific time and spatial frames.

Yes, ultimately all this complexity boils down to the need to assure a profit. But how, and for whom? Once CEOs have served themselves, lavishly, there is still most of the capital to be distributed among increasing numbers of shareholders. Earnings do not remain in the firm (whether dedicated primarily to manufacturing, finance or services):

they are invested in the global casino of interrelated financial markets, whose fate is ultimately determined by a series of factors. Only some of those factors have to do with economic fundamentals. Because of this level of unpredictability and complexity, the networks in which all firms, large or small, are anchored, move along, readapt, form and reform, in an endless variation. Firms and organizations that do not follow the networking logic—be it in business, in media, or in politics—are wiped out by competition, since they are not equipped to handle the new model of management.

So, ultimately, networks—all networks—come out ahead by restructuring, even if they change their composition, their membership, and even their tasks. The problem is that people and territories, whose livelihood and fate depend on their positioning in these networks, cannot adapt so easily. Capital disinvests, software engineers migrate, tourists find another fashionable spot and global media close down in a downgraded region. Networks readapt, bypass the area (or some people), and reform elsewhere, or with someone else. But the human matter on which the network was living cannot so easily mutate. It becomes trapped, or downgraded, or wasted. And this leads to social underdevelopment, precisely at the threshold of potentially the most promising era of human fulfilment.

The Other Side of the Information Age: Inequality, Poverty, Misery and Social Exclusion

To analyse current trends of poverty and inequality in the world, we need to establish some conceptual clarity, first, by distinguishing between relationships of consumption and relationships of production; and, second, by differentiating four specific processes in both sets of relationships. Relationships of consumption refer to the appropriation by people of the product of their work. Here, we must differentiate between inequality, polarization, poverty and misery. Inequality refers to the unequal appropriation of wealth (income and assets) by individuals or social groups. Polarization is a specific process of inequality that occurs when both the top and the bottom of a scale of wealth distribution grow faster than the middle. Poverty is an institutionally defined norm establishing the level of income that a society considers necessary to live according to an accepted standard. Misery, or extreme poverty, is an institutionally defined level that establishes the lowest material standard of living, making survival problematic.

When we observe the evidence of social trends in the world—within and between countries and among people—in the last two decades, the following trends can be detected. There is increasing inequality between countries in the world at large, while intracountry inequality offers a mixed record, with some countries improving their condition (for example, the Asia-Pacific region, India, Spain), while others have fallen into greater inequality (Brazil, Mexico, United Kingdom, United States). Polarization is on the rise everywhere. At a global level, the ratio of income for the top 20 per cent of the population to the income of the bottom 20 per cent jumped from 30 to 1 in 1960 to 78 to 1 in 1994. And the personal assets of 385 billionaires in the world are now higher than the annual income of countries representing 45 per cent of the population of the planet.

The evolution of poverty is complex. Modernization has contributed to reducing the proportion of poor people in some very large countries—including China, India and Brazil. Still, the proportion of the poor is growing in most countries. And the *number* of people living in poverty has significantly increased everywhere. Furthermore, extreme

poverty or misery—usually defined as the proportion of people who are below 50 per cent of the poverty line—is the lot of the fastest growing segment of the poor population in almost every country.⁴

As for relationships of production, they refer to the ways and means through which people provide for their livelihood. Here, I will not go into a full-fledged analysis of all relationships of production existing in our society, but I will focus on the four conditions that seem to be decisive in affecting relationships of consumption. The first process—characterizing the Information Age as a result of its networking form of organization—is the growing individualization of labour: I refer to the process by which labour’s contribution to production is defined specifically for each individual, with little reference to collective bargaining or regulated conditions. If the industrial era consisted, in terms of the labour process, of taking a population of peasants and craftsmen and bringing them into socialized conditions of labour, the Information Age is exactly the reversal. It is the de-socialization of labour and the increasing flexibility and individualization of labour performance.

This is not necessarily either good or bad. Flexibility of labour can allow people to organize their lives better, or not. But it does transform the social relationship between capital and labour, between management and workers, and among workers themselves. And it has fundamental implications for political action.

A second characteristic of current relationships of production is overexploitation—the imposition of unfavourable norms of compensation or labour conditions on certain categories of workers (for example, immigrants, women, youth, minorities) because of their vulnerability to discrimination. Women, in particular, have been massively incorporated into paid work, but in many cases at miserable wages.⁵

A third characteristic is social exclusion—that is the process by which certain individuals or groups are barred from access to social positions that would entitle them to provide for themselves adequately, in an autonomous way, within the context of prevailing institutions and values. Usually, in informational capitalism, such a position is associated with the possibility of access to relatively regular, paid labour for at least one member of a stable household; or with the right to receive sufficient long-term benefits from a non-stigmatizing welfare system. There is currently an extraordinary increase in numbers of people who find themselves in situations of social exclusion in practically all countries of the world, with the exception of the Scandinavian democracies.⁶

Finally, there is a fourth significant type of relationship of production that is relevant to current trends of social underdevelopment: what I call perverse integration. This refers to the labour process in the criminal economy—in other words, to income-generating activities that are normatively declared to be a crime by the state. As a significant number of people are being excluded from access to regular jobs, they are moving onto this shop floor of crime. One could say that some have little choice. People who are not needed in the Information Age do not vanish: they are there. And, in fact,

⁴ See sources cited by Castells 1998:75–82 and UNDP 1997.

⁵ See data in Castells 1996:ch. 4 and 1997:ch. 4.

⁶ For sources, see Castells 1998:ch. 2.

they are increasingly there, because—with the exception of Russia—many populations have an increasing life expectancy.⁷

Links between informational capitalism and the growing social crisis

These, however, are simply observations of a growing social crisis (and not exempt from controversy concerning the selection and interpretation of data). What does the analysis mean? What is the relation of these trends, if any, to the structure and dynamics of informational, global capitalism?

First, the extreme social unevenness of the process is linked to the flexibility and global reach of informational capitalism. If everything, and everyone, who can be a source of value can be easily connected—and as soon as he/she/it ceases to be so, can be easily disconnected (because of individualization and extreme mobility of resources)—then the global system of production is populated simultaneously by extremely valuable and productive individuals and groups, and by people (or places) who are not—or are not any longer—considered valuable, even if they are still physically there. Because of the dynamism and competitiveness of the dominant system, most previous forms of production become destructured, and ultimately phased out, or transformed into subdued tributaries of the highly integrated, dynamic, globalized system.

Second, education, information, and science and technology become critical as sources of value creation (and reward) in the informational economy. While formal education has increased throughout the world, the quality of education becomes essential. Most public schools, both in developing countries and in the United States, are simply not up to the task of producing the new, informational labour force. But, even in countries with a decent educational system, the overall cultural and technological environment that is required to exercise informational skills does not mirror the dynamism of the system. So lack of education and lack of informational infrastructure lead most of the world to be dependent on the performance of a few globalized segments of their economies, increasingly vulnerable to the whirlwind of global financial flows.

Third, as new technologies, new production systems and the organization of international trade eliminate traditional agriculture (still employing two-thirds of the people in the world towards the end of the last millennium), a rural exodus of gigantic dimensions is being propelled—particularly in Asia. Rural people are destined to be painfully absorbed into the informal economy of overcrowded megacities on the edge of ecological catastrophe.

Fourth, since states are bypassed by global flows, disciplined by the enforcers of these flows (such as the International Monetary Fund/IMF), or limited by the supranational institutions they have initiated to survive somehow in the midst of globalization, welfare states come under attack, regulations break down, and the social contract, wherever it has existed, is fundamentally challenged.

New technologies do not induce unemployment—as has been repeatedly demonstrated by empirical research (Carnoy 1999). Indeed, at the world level there is a massive creation of jobs but, in most cases, under conditions of overexploitation—the most telling development is the employment of about 250 million children at a time

⁷ For more on the explosion of the criminal economy throughout the world—and, accordingly, a boom in its employment capacity—see Castells 1998:ch. 3.

when work is supposedly ending. But there is unemployment in Western Europe when firms facing tight labour rules, high wages and generous social benefits refuse to create jobs. Those firms have the possibility of automating, subcontracting and/or investing elsewhere—while still selling goods and services in the European market. Thus, under current conditions, markets overwhelm regulations and worker protection through relying on the increased mobility of resources made possible in the new technological environment. This is why, in the midst of the most extraordinary period of human ingenuity, people around the world are taken by panic. And this is why, together with affluence and prosperity for a significant minority (about one-third of the people in advanced countries, and probably about one-fifth in the world at large, who have substantially improved their living standards in the last 10 years), there is the formation of a fourth world, characterized by social exclusion.

The Fourth World

This world is composed of people, and territories, that have lost value for the dominant interests in informational capitalism. Some of them because they offer little contribution as either producers or consumers. Others because they are uneducated or functionally illiterate. Others because they become sick or mentally unfit. Others because they could not afford the rent, became homeless, and were devoured by life in the streets. Others who, unable to cope with life, became drug addicts or drunks. Others because, in order to survive, they sold their bodies and their souls, and went on to be prostitutes of every possible desire. Others because they entered the criminal economy, were caught and became inhabitants of the growing planet of the criminal justice system (almost 3 per cent of adult males in the United States). Others because they had an incident with a cop, or a boss, or some authority and got onto the wrong track. And places—entire places—become stigmatized, confined by police, bypassed by networks of communication and investment. Thus, while valuable people and places have been globally connected, devalued locales become disconnected and people from all countries and cultures are socially excluded by the tens of millions. This fourth world of social exclusion, beyond poverty, exists everywhere, albeit in different proportions—from the South Bronx to Mantes-la-Jolie, from Kamagasaki to Meseta de Orcasitas, and from the favelas of Rio to the shanties of Jakarta. And there is, as I have tried to show, a systemic relationship between the rise of informational, global capitalism, under current conditions, and the extraordinary growth of social exclusion and human despair.

Redefining Social Development in the Information Age

For millennia, social development was tantamount to social survival: the daily goal of people—with the exception of a tiny ruling minority—was to get by, make a family and steal a few moments of joy out of the harshness of the human condition. This is still the lot of many. Yet over the last two centuries, with the advent of the industrial age, social development came to involve the goal of improving people's livelihood. Capital accumulation and investment, technological development geared toward material production, and massive inputs of labour and natural resources were the generators of wealth—both under capitalism and under statism. Social struggles and political reform—or revolution—took care of diffusing the harvest of productivity within society at large, albeit

with the shortcomings of a world divided between North and South, and organized in class societies that tended to reproduce themselves.

There is something new in the Information Age. It can be empirically argued that at the source of productivity and competitiveness—which jointly determine the generation of wealth and its differential appropriation by economic units—there is the capacity to generate new knowledge and to process relevant information efficiently. To be sure, information and knowledge have always been essential factors in power and production. Yet it is only when new information and communication technologies empower humankind with the ability incessantly to feed knowledge back into knowledge, experience into experience, that there is, at the same time, unprecedented productivity potential and an especially close link between the activity of the mind, on the one hand, and material production, be it of goods or services, on the other. The old school of thought centred around the notion of human capital is fully vindicated. To invest in education is a productive investment. An educated labour force is a source of productivity. But to be educated means nothing if labour does not enjoy good health, decent housing, psychological stability, cultural fulfilment—in other words, a multidimensional improvement in the quality of life. Thus welfare states, minus their bureaucratic underpinnings, should be sources of productivity, and not simply burdens on the budget.

Yet the interaction between economic growth and social development in the Information Age is still more complex. It is the entire social organization that becomes productive or, on the contrary, an obstacle for innovation, and thus for productivity growth. Personal freedom (and therefore liberty in its fullest sense) is a prerequisite for entrepreneurialism. Social solidarity is critical for stability and thus for predictability in investment. Family safety is essential for the willingness to take risks. Trust in one's fellow citizens and in the institutions of governance is the foundation for socializing ingenuity in a given space and time, thus making it possible for others to enjoy the fruits of such ingenuity. In a word (and continuing along the seamless circle of change to which reference was made at the outset of this chapter), social development leads to cultural development, which leads to innovation, which leads to economic development, which fosters institutional stability and trust; and this underlies a new, synergistic model that integrates economic growth and the enhancement of quality of life.

Without social development, without institutional stability, there may still be a diffusion of economic development around the world, but it will be based upon a cost-lowering formula, rather than on a productivity-enhancing model. Furthermore, both spirals (the high road to informational productivity and the low road to economic competitiveness through cost cutting) are cumulative and contagious. If firms, and countries, compete on the basis of worsening the conditions of work and concentrating as much as possible of the productivity bonanza in a few hands, they will kill incentives for most workers to invest their own mental capital in a collective undertaking, they will slow down the learning curve, and they will restrict both purchasing power and the drive toward innovation. Silicon Valley will still thrive on the basis of innovation and it will still attract a substantial share of brain power in the field of information technology from around the world. But the proportion of Silicon Valley's techno-elite in relation to the population at large—even the educated population—will become so ridiculously small in comparison to its share of power and wealth, that this will be socially unsustainable. Some people's dream of a shrinking planet—made up of a highly productive, very affluent, avid consumer minority, floating on a cloud over low-skilled generic labour and ignoring the black holes into which devalued people and locales are doomed to sink—is simply untenable. It is a nightmare,

shaken by the rage of fundamentalism and by the fear of desperate terrorist threats. The disassociation between economic growth and social development in the Information Age is not only morally wrong, but also impossible to sustain.

The reintegration of social development and economic growth through technological innovation, informational management and shared world development will not be accomplished by simply relying on unfettered market forces. Neither will it be born only out of the individual efforts of states, engaging in defensive strategies. It will require massive technological upgrading of countries, firms and households around the world—a strategy of the highest interest for everyone, including business, and particularly for high-technology companies. (An appropriate use of the Internet is in fact the most important feature in such an upgrading.) It will take a dramatic investment in overhauling the educational system everywhere, through cooperation between national and local governments, international institutions and lending agencies, international and local business, and families ready to make sacrifices for a tangible improvement of their children's future. It will require the establishment of a worldwide network of science and technology, in which the most advanced universities will be willing to share knowledge and expertise for the common good. It must aim at reversing, slowly but surely, the marginalization of entire countries, or cities or neighbourhoods, so that the human potential that is being wasted—particularly that of children—can be reinvested. All people must become valued producers and consumers, and they must be recognized as human beings in forums other than the 30-second commercials of international organizations.

All this is feasible. We have the technical know-how, the technology to do it, and the economic and institutional strategies to implement it. The obstacles, of course, are political. In part, they are related to very narrow business strategies. But if we know what we want, why we want it and how to do it, we have the basic groundwork from which to try to convince business and governments. I tend to think that it is in the interest of the most enlightened business groups to support the high road of informational development, linking up productivity, quality of life, and investment in technology and education throughout the world. And if there is a strong pressure of public opinion in the world in favour of this shared development strategy—with its potentially positive payoff in environmental conservation—governments may join, ultimately, or else be ousted by their citizens.

Solidarity in a globalized world means global solidarity. And it also means intergenerational solidarity. Our planet is our only home and we would not like the grandchildren of our grandchildren to be homeless. These are basic, elementary principles of economics and policy making “as if people matter”. And they are in full coherence with the productive, creative logic embedded in our information-based society. If this sounds like wishful thinking, it is only a measure of how bewildered we have become at this critical moment of historical transition.

References

- Bailey, Paul, Aurelio Parisotto and Geoffrey Renshaw. 1993. *Multinationals and Employment: The Global Economy in the 1990s*. ILO, Geneva.
- Benner, Chris (in progress). *The Changing Labour Market of Silicon Valley*. Ph.D. dissertation. Department of City and Regional Planning, University of California, Berkeley CA.
- Carnoy, Martin. 1999. *Sustainable Flexibility: Work, Family and Community in the Information Age*. Cambridge University Press, New York.
- Castells, Manuel. 1998. *The Information Age: Economy, Society, and Culture—Vol. III: End of Millennium*. Blackwell, Oxford.

- . 1997. *The Information Age: Economy, Society, and Culture—Vol. II: The Power of Identity*. Blackwell, Oxford.
- . 1996. *The Information Age: Economy, Society, and Culture—Vol. I: The Rise of the Network Society*. Blackwell, Oxford.
- Castells, Manuel, and Laura d'Andrea Tyson. 1989. "High technology and the changing international division of production: Implications for the U.S. economy." In Randall Purcell (ed.), *The Newly Industrializing Countries in the World Economy*. Lynne Rienner, Boulder CA.
- . 1988. "High technology choices ahead: Restructuring interdependence." In John M. Sewell and Stuart Tucker (eds.), *Growth, Exports and Jobs in a Changing World Economy*. Transaction Books, New Brunswick.
- Castells, Manuel, and Emma Kiselyova. 1995. *The Collapse of Soviet Communism: The View from the Information Society*. International and Area Studies Book Series. University of California, Berkeley CA.
- Dosi, Giovanni, Chris Freeman, Richard Nelson, Gerald Silverberg and Luc Soete (eds.). 1988. *Technical Change and Economic Theory*. Pinter Publishers, London.
- Foray, Dominique and Christopher Freeman. 1992. *Technologie et richesse des nations*. Economica, Paris.
- Hirst, Paul and Grahame Thompson. 1996. *Globalization in Question*. Polity Press, Cambridge.
- UNDP (United Nations Development Programme). 1997. *Human Development Report 1997: Poverty and Inequality*. Oxford University Press, New York.

Chapter 8

Social Dimensions of Green Economy¹

UNRISD
(2012)

Economic, technological and institutional changes that currently form the basis of green economy strategies run the risk of reinforcing human insecurity and inequalities. A growing body of evidence points to diverse social consequences, and suggests key elements of alternative approaches that can promote the combined social, economic and environmental goals of sustainable development.

The Issue

In the wake of the triple crises of recent years (food, energy and finance) and in the lead-up to the 2012 United Nations Conference on Sustainable Development (Rio+20), the concept of green economy has taken centre stage in international development circles. Coined to draw attention to the lack of integration of environmental concerns in economic policy since the Earth Summit in 1992, both the concept itself and strategies to promote a green economy are highly contested. There is considerable consensus on the need to shift from high- to low-carbon systems and transform patterns of investment, production and consumption in ways that are conducive to sustainable development. But varying paths to green economy exist. Each implies different costs and benefits for different social groups, countries and regions, as well as different roles and responsibilities for state, market and community actors and institutions.

By explicitly coupling green economy with the goals of sustainable development and poverty eradication, the Rio+20 process has called attention to the importance of social dimensions of development. But the social dimensions of green economy, and how they can be addressed, remain unclear. Various United Nations studies have begun to consider such aspects. An UNRISD inquiry (box 8.1) addressed the following:

¹ Originally published as an UNRISD Research and Policy Brief (UNRISD, 2012).

- how green economy initiatives and strategies impact different social groups and patterns of inequality;
- how green economy transitions can contribute to achieving the social objectives inherent in the concept of sustainable development;
- whose values, knowledge, priorities and interests are shaping the concept and policies of green economy;
- the role of social policy, regulation, participation and collective action in promoting both green and fair economy; and
- how to realize the potential of myriad local-level livelihood and production systems that address economic, social and environmental objectives of sustainable development.

Box 8.1: UNRISD Research on the Social Dimensions of Green Economy and Sustainable Development

In early 2011, the United Nations Research Institute for Social Development (UNRISD) initiated an inquiry, involving some 50 researchers, aimed at clarifying issues and positioning the social dimensions of green economy and sustainable development more centrally in analysis and policy debates. UNRISD activities began with a call for papers that attracted over 300 submissions, and the conference, Green Economy and Sustainable Development: Bringing Back the Social Dimension, was held in Geneva on 10–11 October 2011. Attended by some 250 participants, the conference brought together academic researchers, United Nations policy makers, government officials, civil society representatives and activists from around the world.

The inquiry has so far given rise to a number of outputs, including a series of short think pieces in which researchers share their ideas and perspectives, “Greening the Economy” (a special issue of the journal *Development* in partnership with the Society for International Development), a series of 10 Occasional Papers, and six short videos on key social dimensions of green economy. UNRISD has also participated in several United Nations processes and knowledge networks examining the relationship between green economy, sustainable development and poverty reduction in the lead-up to Rio+20. (www.unrisd.org/greeneconomy)

Research Findings

Avoiding “triple injustice”

The groups and populations likely to be most harmed by climate change are the least responsible for causing it and have limited resources to cope with the consequences. This “double injustice” becomes a triple injustice when the costs of green economy transition negatively impact low-income and other vulnerable groups. The research revealed various cases and contexts where this has occurred:

- the displacement of people or food crop production (in Brazil, India and Indonesia) to make way for biofuels, which are being promoted as an alternative low-carbon energy source;
- energy policies that increase tariffs for domestic users (in the United Kingdom and other advanced industrialized countries), which are regressive given that energy comprises a far higher share of spending in low-income households;
- strict conservation of carbon sinks and other areas (in Australia), which not only constrains the livelihood opportunities of indigenous peoples but also ignores cultural systems that, historically, have respected nature; and
- male bias in job markets and governance institutions, which excludes women from participation in emerging green economy sectors.

Market-centred approaches can have contradictory social outcomes

“Selling nature to save it”—for example, through carbon trading, PES (Payment for ecosystem services) and REDD (Reducing Emissions from Deforestation and Forest Degradation)—can be highly problematic from a social perspective. For example:

- PES schemes that allocate private property rights over hitherto common property or state-owned resources often favour or target the better-off;
- conservation approaches that prioritize efficiency rather than equity undermine REDD+² efforts to achieve co-benefits associated with environmental protection and human well-being;
- monetary pricing and market-based allocation of environmental assets tend to redistribute those assets upward, favouring people and places with the greatest purchasing power;
- PES, REDD+ and incentives to produce biofuels often involve trade-offs with smallholder agriculture, biodiversity, livelihoods and food security; and
- market-based approaches often put corporate interests in the driving seat of change, which in turn may constrain the scope for policy and regulatory reform conducive to social and sustainable development.

Commodifying nature also assumes universal commensurability of nature’s values—ignoring how values differ from place to place, and in relation to the meaning, identity and use of environmental goods and services. Moreover, market prices do not reflect the full social costs of production and reproduction, giving rise to situations where the natural resource management practices of rural or indigenous peoples may, in fact, be subsidizing more affluent social groups.

The limits and contradictions of the market-liberal approach to green economy suggest the need to promote other institutional or social economy approaches for both green and fair economy. These emphasize, respectively, macroeconomic, governance and regulatory reforms, and more integrative models of natural resource management and local development.

The issue of inequality should not be ignored

While the international development community has linked green economy with poverty reduction, far less attention has been paid to inequality. Yet inequalities associated with income/wealth, power, ethnicity and gender are crucial for determining how people are affected by both climate change and green economy, their capacity to respond, and the scope for pro-poor political solutions based on consensus and compromise.

Inequality matters because:

- structural inequalities of power, and access to or control over resources, determine exposure to risk, levels of vulnerability and resilience;
- people’s capacity to take advantage of employment and other opportunities associated with green economy, and to change their consumption patterns, is correlated with inequality; and
- large income inequalities erode the social solidarity required for an active public policy and social pacts to deal with major challenges such as climate change and poverty reduction.

² REDD+ refers to Reducing Emissions from Deforestation and Forest Degradation, enhancement of carbon stock and sustainable management of forests in developing countries initiative.

Factoring in the importance of inequality points to the limits of promoting green economy through technological fixes, minimalist institutional reforms and narrow approaches to social protection, and draws attention to the issues of comprehensive social policy, regulation and effective participation discussed below.

Social policies are key tools for a fair green economy

Social policies can perform multiple functions in any economy including those of protection, redistribution, human capital formation and social reproduction. Current attention to social policy in green economy debates centres principally on protection or compensation of the vulnerable, and (re)training associated with industrial restructuring and green jobs. Other roles of social policy, including the following, deserve greater attention.

- *Labour market regulation for “decent work”.* Research on the rise of the photovoltaic industry in Bangladesh suggests the need to pay attention to not only the number of jobs created but also the quality of jobs and working conditions.
- *Redistributive policies.* Research on the OECD countries shows that substantial shifts in fiscal policy will be required to both minimize the socially regressive impacts of adequate carbon pricing (reflected in higher energy bills) and encourage green consumption. A large increase in “eco-social investment” will also be required to retrofit housing infrastructure and develop public transport. In many developing countries, land redistribution and secure land rights for disadvantaged groups may be an essential prerequisite for participating in green economy initiatives (box 8.2).
- *Social reproduction and care.* The ability of women to engage in green economy jobs or projects is constrained by multiple tasks associated with family care and other household responsibilities. Social policy (beyond social protection) can play an important role in alleviating the burdens of social reproduction, at the same time as contributing to empowerment, equity and social cohesion.

Box 8.2: Gender and land rights in South Africa

In Limpopo province, South Africa, green economy is seen as an opportunity to address poverty and employment issues. But access to land rights needs to be addressed to bring new participants—especially poor and marginalized women—into agriculture. This was apparent in the Mapfura Makhura Incubator (MMI) project, where small-scale farmers were to become biofuel producers. While the project aimed to achieve gender balance, only 30 per cent of participants in the pilot phase were women. The main problems included poor information flows and the low proportion of women who own land—a criterion for inclusion in the project.

Source: Musyoki 2012.

Identifying the winners and losers of environmental regulation

Who actually bears the costs of environmental regulations and standards? Strict conservation of forests sinks and other natural habitats has long been recognized to involve unnecessary and unjust trade-offs with the well-being of indigenous or other peoples in developing countries who are either dependent on forest resources or part of cultures that have developed livelihood systems that respect nature. As shown in research in Australia’s Cape York Peninsula, such problems may be just as pertinent in developed countries. In this case they pose a major constraint on the development of PES schemes and the participation of indigenous peoples.

Increasingly, environmental, social and governance (ESG) standards are being set by private or multistakeholder entities. Such initiatives can fill regulatory gaps that have emerged under globalization and in contexts where state regulatory capacity has been

rolled back or is constrained by global trade rules. But they also confront major limitations:

- capture by business interests;
- restricted forms of stakeholder participation in governance structures;
- weak procedures for ensuring compliance with standards;
- the tendency to crowd out small enterprises and producers in global supply chains;
and
- limited monitoring and evaluation of actual impacts.

Standards schemes may also be very selective in defining which standards matter. Concerns have arisen with certain “sustainable” palm oil initiatives, for example, that ignore the issue of land clearance and displacement of people. Research on the implementation of a hydro project in Honduras shows that actual implementation and beneficiaries of standards-based schemes on the ground may be determined less by technical capacity than by the capacity of different local interests to contest and bargain.

Policy coherence involves more than policy coordination

Awareness of the environmental and social contradictions of high-carbon growth, or “business as usual”, is directing increasing attention to the need for policy coherence, where different policies (macroeconomic, industrial, environmental and social) are better coordinated and work in synergy toward sustainable development. Research from Brazil and Ecuador notes some progress in reconfiguring growth paths in ways that support conservation, poverty reduction and economic development. Examples include schemes in Brazil that integrate smallholders in biofuel production or that link direct cash transfers to the provision of environmental services. On the other hand, research from India (in particular the state of Sikkim) illustrates ongoing contradictions in contexts where policies and projects associated with rapid economic growth and infrastructural development contradict the emerging discourse on sustainable development and create severe environmental and sociocultural problems.

Coherence is often interpreted narrowly in terms of improved coordination of certain sectoral policies and institutions. But policy coherence also needs to involve two other dimensions: coordinated and synergistic governance at multiple scales (international, regional, national, subnational and local) and between multiple actors and institutions (state, market, civil society and community). Research from the United Kingdom on Transition Towns reveals instances where governments have promoted active citizenship—via a decentralized framework for community participation and multi-actor coalitions combined with incentives for green consumption. This has led to success in both gaining consensus and generating financial resources for locally relevant climate change policies. A similar mix of policies has the potential to link sectoral objectives in Angola, Mozambique and South Africa.

Governance is both collaborative and contested

Multi-actor collaboration—involving state, private sector, civil society and community actors and institutions—is essential for generating political will and operationalizing green economy in practice. Coalitions are crucial for mobilizing the political support needed to reconfigure forces that currently favour business as usual, such as interests in fossil fuels, carbon-intensive agriculture or conventional biofuel monocultures. At the level of green

economy projects and programmes, multi-actor collaborations facilitate resource mobilization, pooling competencies and ensuring complementarities and synergies that otherwise would not exist.

But “partnerships” that work for green and fair economy may not conform to the harmonious relations typically assumed to exist in the global discourse on public-private partnerships. Indeed, anthropological analysis of forest protection and agroecology projects in Brazil suggests that ongoing contestation and bargaining between the different actors engaged in a project are not only features of the relationship but also a key for success. Such tensions or “conflicts of interest” can ensure that assets and competencies, or different types of capital—natural, economic, social and human—come together in complementary ways.

Participation is about collective organization and bargaining as much as consultation

While green economy discourse recognizes the need for participation, project design and implementation are still often top-down. Research from Brazil, Malaysia and South Africa shows that dialogue with local populations affected by green economy projects is a critical element for ensuring that external interventions have local uptake and ownership. Research on how social issues such as poverty reduction, equity and social justice are integrated into the REDD+ structure shows the importance of both national regulations and an institutional infrastructure that recognizes and engages local communities.

Participation in practice often amounts to consultation with selected stakeholders whose actual influence on the policy process may be negligible. Participation needs to be understood far more comprehensively in terms of the organized efforts of socially disadvantaged groups to gain control over resources and regulatory institutions (both state and market) that affect their lives. Participation in this sense goes well beyond consultation and involves empowerment and gaining influence and benefits through collective organization, contestation, bargaining, learning and capacity building. Such aspects were found to be key, for example, in the Deccan Development Society in India, the Yasuni-ITT (Ishpingo-Tambococha-Tiputini) initiative in Ecuador (a government-supported alternative to REDD), Bolsa Floresta in Brazil, La Via Campesina in Africa and Latin America, and some global Fairtrade schemes promoting agroecological practices.

Community-based approaches need to inform and be supported by policy

Myriad examples of community-based livelihood and natural resource management systems point to the potential of local experiences that simultaneously address multiple development objectives associated with social protection, economic and political empowerment, cultural identity and environmental integrity (box 8.3). The traditional knowledges and practices of small farmers, fisherfolk, indigenous peoples and forest dwellers are essential for crafting transition paths conducive to sustainable development. Such experiences need far wider recognition and to be given more serious support by policy makers.

Box 8.3: Integrated local development in Brazil

Araçuaí Sustentável—a popular education and agroecology project in a municipality in Minas Gerais, Brazil—aims to reverse environmental degradation and address poverty by boosting the role of conservation and agriculture in the local economy. Project success relates to valorizing what is already present in a community, not what is lacking—a very different approach from that of conventional aid or state agencies—as well as integrating economic, environmental and social policy at the local level. This involves combining resources and competencies of multiple actors and institutions (federal and municipal state agencies, civil society and community).

Source: Rival 2012.

But external support for local community-based initiatives or movements—whether from state, business or NGO actors—needs to be assessed critically to guard against co-optation, aid dependence and bureaucratization. Local initiatives often remain isolated and small in scale because they lack an enabling legal, policy and market environment. Indeed, smallholder agricultural production has often been systematically marginalized by policy biases associated with structural adjustment, export orientation, cheap food imports, and subsidies and support services favouring large commercial agriculture.

Whether or not community-based initiatives contribute to social well-being and economic development depends crucially on whether producers can add value to commodities. Currently, various “co-benefit” schemes (for example, biofuel projects targeting small farmers, or Fairtrade) often lock small producers into the role of suppliers of low value-added commodities and into value chains where other market actors appropriate the bulk of the benefits. Local producers may have greater scope for adding value when producing for the local or domestic market.

Activism needs to be grounded locally and connected globally

Local, national and global activism has a crucial role to play in framing public opinion and influencing policy. Collective mobilization is also necessary to challenge existing institutional forces, norms and values that reproduce many unsustainable practices. Movements for land rights or food sovereignty—such as the Landless Rural Workers’ Movement (MST) in Brazil, Ekta Parishad in India and La Via Campesina internationally, as well as for ethical trade, rainforest protection, water management and climate justice more generally—are not only active individually but also coalescing in networks that facilitate learning, contestation and bargaining.

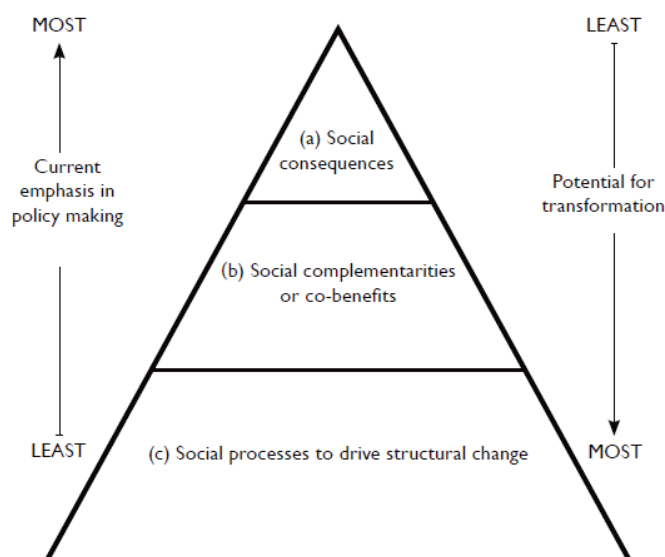
Research shows, however, the pitfalls of romanticizing such movements. In addition to internal weaknesses, their influence pales in comparison to that of more powerful interests. Finding allies in government structures at multiple levels is often key. While efforts to forge a climate justice movement at the global level have proved difficult, research indicates considerable potential in doing so from the bottom up, via movements that are rooted in the struggles of local communities, and that connect their struggles both analytically and organizationally with broader issues and constituencies. There is a strong capacity for rooted social movements and coalitions from the global South to engage in political action at multiple levels, but the main challenge is to broaden their struggle beyond their current base.

Policy Lessons

Shifting the policy focus toward a social green economy

Viewing green economy through a social lens not only suggests a range of issue areas that researchers, activists and policy makers need to address, but also calls attention to major imbalances in the orientation of policy. Policies that address social dimensions often focus, first, on issues of protection and compensation of those negatively affected by certain processes of change and, second, on attaining co-benefits (for example, green jobs or agroecology) associated with the different economic, social and environmental spheres of sustainable development. A third area of policy intervention related to rights, regulation and participation that is key for structural transformation compatible with sustainable development, receives less attention (figure 8.1). This imbalance needs to be corrected if green economy is to be conducive to sustainable and equitable development.

Figure 8.1: The policy paradox



The evidence reviewed in this chapter suggests that policies for transformative change require attention to five sets of issues:

- the bodies of knowledge that are informing policy;
- the social impacts of green economy;
- the need for diverse and deep institutional and governance reforms;
- the role of social policy; and
- the creation of an enabling environment for active citizenship.

Drawing on diverse bodies of knowledge

Dominant approaches to green economy are shaped by particular values and bodies of knowledge—to the exclusion of other perspectives that may hold important insights and lessons. Policy choices need to be informed by more diverse forms of knowledge if they

are to promote effective and equitable institutional arrangements and resource management systems. So-called local knowledge and practice are important in this regard. These need wider recognition and institutional support from policy makers.

From a disciplinary perspective, greater support for a wider range of social science research is essential to complement the natural science emphasis (that dominates climate change debates) and mainstream economics (that dominates the green economy policy response).

Monitoring and addressing social and distributional impacts

It is crucial to understand and assess the impacts of technological, economic and ecological change on different social groups (by income, ethnicity and gender), as well as on countries at very different levels of development. To do this effectively, social and ecosocial metrics and indicators are needed. These should include distributional effects of energy prices and green taxes on different income groups; the social costs and benefits of industrial restructuring, green jobs and related training programmes; standards of decent work associated with green jobs; and impacts on the livelihoods and rights of rural populations and communities of market-based conservation (PES, REDD), green growth policies (export-led agriculture, large-scale water infrastructure development) green technologies (biofuels, renewable energy), and other green economy schemes.

Strengthening institutions for behavioural, structural and equitable change

Promoting a green and fair economy requires recognition of the multiplicity of social institutions (norms, regulation, rights, trust and cooperation) and social relations (class, gender, ethnicity) that underpin people's vulnerability; the capacity of individuals, groups and organizations to respond; and likely winners and losers from processes of policy and institutional change.

Policy makers have key responsibilities in this regard: through public education and awareness-raising campaigns such as environmentally friendly production and consumption; promoting participatory forms of governance in relevant decision-making processes; decentralization and fostering cross-sectoral collaboration; and through the social policy choices they make. Governance arrangements can be designed to facilitate the collaboration of multiple actors (state, market, civil society, community) at multiple scales (international, regional, national, subnational and local). A focus on inequalities and power imbalances associated with the market economy and corporate control points to the need for effective business regulation and corporate accountability, as well as procedures for redress.

Toward ecosocial policies

Social policy has a key role to play in promoting a green and fair economy. Policies can move beyond the current focus on compensating losers, protecting the vulnerable, or facilitating the uptake of green economy jobs through training, to tackle the structural causes of vulnerability as well as using policy tools to achieve "green" goals.

In different contexts, relevant policies might include ecosocial investment (such as retrofitting housing and expanding public transport); education to facilitate access to green economy technologies and jobs; and redistributive policies (taxation, subsidies and land rights) to address inequalities that underpin vulnerability to climate change and address unequal distributional consequences of green economy initiatives. Women's

participation in green economy opportunities requires that greater attention be paid to issues of social reproduction and care. Labour market policies and regulation need to ensure that green jobs are also decent jobs, and that the growing body of voluntary standard-setting initiatives complement rather than substitute for government regulation of markets and corporations.

Enabling active citizenship

Green and fair economy depends crucially on the capacity of disadvantaged groups to organize collectively; engage in contestation, advocacy and bargaining; and be part of broader coalitions for change. To facilitate active citizenship, policy makers need to go beyond narrow interpretations of participation as consultation with selected stakeholders. Governance arrangements—from local to global scales—need to be sensitive to issues of diversity, representation and space for negotiation, and to ensure that policy processes are not dominated by narrow or elite interests. Policy makers can also cultivate an enabling environment for participation and empowerment through education and training, and the institutionalization of accountability mechanisms and basic rights and freedoms of association, expression, information and redress.

UNRISD Sources and Further Reading

Special Issue of Development

Development: Greening the Economy (Vol. 55, No. 1, 2012) a special issue in partnership with UNRISD, includes the following contributions:

- Bullard, Nicola and Tadzio Müller. "Beyond the 'green economy': System change, not climate change?" pp. 54–62.
- Jessop, Bob. "Economic and ecological crises: Green new deals and no-growth economies." pp. 17–24.
- Kumbamu, Ashok. "The agri-food sector's response to the triple crisis: Sustaining local social initiatives in Andhra Pradesh, India." pp. 104–111.
- McAfee, Kathleen. "Nature in the market-world: Ecosystem services and inequality." pp. 25–33.
- Merritt, Amy and Tristan Stubbs. "Incentives to promote green citizenship in UK Transition Towns." pp. 96–103.
- Rival, Laura. "Sustainable development through policy integration in Latin America: A comparative approach." pp. 63–70.
- Sahakian, Marlyne D. "A matter of trust in Metro Manila: Collective action towards 'green economy' transitions." pp. 126–133.
- Sano, Hironobu. "The Brazilian National Environmental Policy: The challenge of plural environmental governance." pp. 119–125.
- Srang-iam, Witchuda. "Local justice, global climate injustice? Inequality and tree planting in Thailand." pp. 112–118.

UNRISD Occasional Paper Series

The UNRISD Occasional Paper Series, "Social Dimensions of Green Economy and Sustainable Development" (2011-2012), comprises the following titles, available at www.unrisd.org/greeneconomy.

- Gough, Ian. *Climate Change, Double Injustice and Social Policy: A Case Study of the United Kingdom*. No. 1.
- Hezri, Adnan A. and Rospidah Ghazali. *A Fair Green Economy? Studies of Agriculture, Energy and Waste Initiatives in Malaysia*. No. 2.
- Bumpus, Adam. *Realizing Local Development in the Carbon Commodity Chain: Political Economy, Value and Connecting Carbon Commodities at Multiple Scales*. No. 3.
- Hirald, Rocío and Thomas Tanner. *The Global Political Economy of REDD+: Engaging Social Dimensions in the Emerging Green Economy*. No. 4.
- Banerjee, Payal and Atul Sood. *The Political Economy of Green Growth in India*. No. 5.
- Winer, Michael, Helen Murphy and Harold Ludwick. *Payment for Ecosystem Services Markets on Aboriginal Land in Cape York Peninsula: Potential and Constraints*. No. 6.
- Rival, Laura. *Sustainable Development through Policy Integration in Latin America: A Comparative Approach*. No. 7.

- Musyoki, Agnes. *The Emerging Policy for Green Economy and Social Development in Limpopo, South Africa*. No. 8.
- Bastos Lima, Mairon G. *An Institutional Analysis of Biofuel Policies and their Social Implications: Lessons from Brazil, India and Indonesia*. No. 9.
- Cook, Sarah, Kiah Smith and Peter Utting. *Green Economy or Green Society? Contestation and Policies for a Fair Transition*. No. 10.

Other related reading

- Cook, Sarah, Peter Utting and Kiah Smith. 2011. "Social policy, participation and the transition to a green economy." *The Road to Rio+20: For a Development-led Green Economy*, Issue 2, November, pp. 93–98. UNCTAD, Geneva.
- UNRISD. 2010. *Combating Poverty and Inequality: Structural Change, Social Policy and Politics*. UNRISD, Geneva.
- UNRISD. 2012. *Green Economy and Sustainable Development: Bringing Back the Social Dimension*. UNRISD Conference News.
- Utting, Peter. 2012. "Introduction: Multistakeholder Regulation from a Development Perspective." In Darryl Reed, Peter Utting and Ananya Mukherjee-Reed (eds.), *Business Regulation and Non-State Actors: Whose Standards? Whose Development?* Routledge, London.

PART II

**THE ENVIRONMENT
AND RURAL DEVELOPMENT**

Chapter 9

Seeds of Plenty, Seeds of Want: Social and Economic Implications of the Green Revolution¹

*Andrew Pearse*²

(1980)

Introduction

The book *Seeds of Plenty, Seeds of Want* is about the social and economic implications of the so-called Green Revolution.³ Its central task is to bring into focus the relation between modern capability in agricultural technology and adequate feeding of the world's peoples. This is approached by showing what happens when the new technology is introduced into different societies, so as to help clarify the issues and problems, especially for those who are involved in making and carrying out policies to assist rural people, dependent on agriculture, to achieve adequate diets and assured livelihood.

We shall, therefore, be discussing a number of questions that lie at the very heart of the problem of food and also some of the ways that the problem itself is perceived, for example by governments, by technicians and researchers, and by those people on whom the success of any policy or programme ultimately depends: the cultivators themselves.

The Green Revolution was an international campaign aimed at increasing the productivity of land by means of the introduction of a science-based technology (referred to throughout for convenience rather than for accuracy as “the new technology”) in the production of foodgrains. The campaign succeeded in bringing about the introduction of the technology on a sufficient scale to give it great socioeconomic significance and to merit the closest inspection as to its implication—hence the study known as Global Two

¹ Originally published as the introductory chapter and chapter 9 in *Seeds of Plenty, Seeds of Want: Social and Economic Implications of the Green Revolution* (Clarendon Press, 1980). UNRISD is grateful to Oxford University Press for permission to reproduce this work here.

² At the time of writing, Andrew Pearse was Research Coordinator at UNRISD.

³ As will be seen, the main sponsors of the campaign to implement the technology shared a common doctrine of development strategy, so that the catch-phrase “Green Revolution” came to mean the technology plus the strategy, expressed in country programmes and international research policy.

sponsored by the United Nations Development Programme (UNDP) and carried out between 1970 and 1974 by the United Nations Research Institute for Social Development (UNRISD), on which this book is based.

Essentially, three related aspects of the process of technological change in the agricultural/rural sector were studied. These were: (i) identification of the factors facilitating or obstructing the acquisition and use of a “genetic-chemical technology”; (ii) identification of the economic and social changes that follow the large-scale introduction of the technology to be observed in the agrarian structure, in the level and quality of livelihood of the participants, and in the social structure of the rural society; and (iii) assessment of measures and programmes proposed and carried out by governments in order to manage or modify the processes set off by technological change.

Research guidelines

Studies were contracted to agronomists, sociologists, agricultural economists, anthropologists, political scientists and historians. They sought to illuminate and explain the emergent situations at different levels and in different ways. An inventory of what seemed to be significant issues was provided but the researchers nevertheless gave the characteristic angle to their individual studies according to their sensitivity to local issues, their own situation in the society, and their respective disciplines.

Each used his or her own methods of research. No standardized instruments were insisted upon but it was made clear that field studies were required that would approach the livelihood and social relations of the different groups and classes of persons involved in agricultural production, the functioning of agrarian institutions, the operation of units of production, and forms of marketing and exchange at the local level, as well as the real performance of governments, private sector agencies and purveyors of the elements of the technology in question.

Most of the studies that resulted attempted to look at the introduction of the new technology in the context of one or several primary rural settlements or, better still, in the context of such settlements and their relations with the urban market centres on which they were partially dependent.

A number of studies, however, used data gathered by sample surveys of productive units within a more extensive area. While these studies provided aggregate data comparable with regional and nationwide statistics, they were seldom able to provide explanations of the persistence or alteration of the form and content of social and economic behaviour, which, however, becomes evident in the framework of community relations and in the specificity of the locality at a particular point in its history.

Objectives and assumptions

The evaluation of policies and programmes of course required clearly established and agreed notions about what the objectives of the introduction of the new technology were. This key problem was finally solved by taking the position that governments, scientific institutions and technical assistance or development agencies were able to give their assent to the proposition that the two main objectives of the technological changes contemplated were: (i) freedom of nations from food dependence through accelerated increases in food production leading toward food self-sufficiency; and (ii) freedom from hunger for their populations. While the prime importance of these two objectives is

generally agreed, the relation they have to one another and the order of priorities and means of realization are the subject of disagreement and conflict.

In United Nations circles, there was ambiguity over the assumptions underlying the study, especially in regard to its evaluative character and the nature of policy recommendations that should arise out of it. Certain voices could be heard urging that the general policy of the Green Revolution should not be questioned but that research should identify any undesirable social consequences and, it was hoped, put forward some practical measures for countering these. Other voices favoured a less restricted approach.

The propriety of making policy recommendations to the governments of member states was also held in question, and there was an understandable sentiment among the social scientists who were responsible for the research that a statement of recommendations would be out of place.

The advisory committee for the project agreed that the research should lead to a report to be presented to governments, accompanied by a text that might be paraphrased as follows:

Sirs, if you are about to embark on discussions about your agricultural development policy, and especially if you are interested in finding a land-saving cereal crop technology, we pray you to scan this report first since it gives an account of what took place in a number of countries, some of which bear a resemblance to your own. It may point to some of the issues that require your special attention.

It was in this spirit that the study was carried out but, nevertheless, by the time the fieldwork was completed two years later, it was assumed by the sponsors that policy recommendations—even if they were to be presented under the title “Policy Alternatives”—were a required product of the research. And indeed, by this time, those who had set out on a task involving analysis and explanation had reached firmer convictions that they felt had acquired some authority.

A 50-page document (UNRISD 1974) finally emerged, presenting a series of conclusions arising from the field research and the analysis of other studies and public statistics. It was published in Geneva in 1974 and at the same time it was circulated to member states by the United Nations Secretariat, with an introduction by the UNDP Administrator. This document consisted of three parts—the first dealt with conditions and constraints affecting the introduction of the new technology, the second with changes at the local level associated with its adoption and the third with policy implications. Its contents and language go rather beyond a sort of highest common factor of the various interests involved, in the direction of an area of policy consensus of the researchers. Although it was circulated to all member states—probably to their planning offices and ministries of agriculture—the author is not aware of any feedback at the national level and can make no comment on its impact.

Sixteen reports were published and are listed by author in the references. The present volume is an overview of the whole research and will be followed by an additional volume containing a selection of grassroots “vignettes”—studies at the level of the rural locality.

The whole problem about a discussion of “policy implications” is of course that the range of feasible alternatives open to governments is limited by the interests of the sectors supporting them, and what may be feasible in one national situation can only be described as utopian in another. Nevertheless, utopian or not, the United Nations is identified with a commitment to freedom from hunger, and this fact establishes an obligation to propose a strategy that would ensure not only adequate production for

overall needs, but also a pattern of distribution that would ensure to all families a minimum of food necessary for health.

In fact, the achievement of basic food security by the poor in a market-centred post-colonial economy would require a most difficult kind of transformation. Not surprisingly, our studies reveal the prevalence of tendencies leading in the opposite direction as new technology and facilities are injected into agricultural societies already dominated by excessive inequalities and debt. We have named these tendencies the *talents-effect* after the well known Biblical parable in which it is recounted that one servant receives money to the value of ten talents from his master and is able to invest and prosper, while the very insecurity of his humbler fellow restrains him from utilizing the single talent entrusted to him, which is wrathfully reappropriated by the master, and given to the successful investor.

For unto everyone that hath shall be given and he shall have abundance: but from him that hath not shall be taken away even that which he hath. (Matthew, ch.25, v.29)

The issues involved in this contradiction are central to the discussion of policies and strategies in the chapters of the volume *Seeds of Plenty, Seeds of Want*.

The Critical Issues

The findings of the study are summarized: in unequal societies the new technology can facilitate “take-off” for cultivators with land and some capital but institutes changes that marginalize the small cultivators without capital and land, and undermines the essential and customary means of livelihood of an ever-increasing number of people in rural areas.

The purpose of this chapter is to draw together the critical issues that have come to light or been verified by the UNRISD studies of rural localities and their response to programmes for the introduction of the new technology. This leads us to re-examine the intrinsic consequences of the technology, the appropriateness of its introduction at a particular place and time, and the strategy embodied in the programmes and other measures by which the introduction is effected.

The re-examination is made more difficult by the fact that the introduction of a technology on a large scale is an intervention in a complex situation that includes social forces with a potential for dynamic change, and that outcomes depend on differences in agrarian structure and on the degree of industrial development and of infrastructural elaboration. They also depend on the capacity of governments to establish efficient services, on the style of development pursued by the government, and on the extent to which it enjoys or looks for political support from one or another of the classes engaged in the productive process.

The essential change sequence

Underlying the differences between programmes and between the social situations in which they operate, there is a common change sequence issuing from the intrinsic nature of the technology and its immediate results.

High-yielding varieties (HYVs) require a greater input of energy per unit of land—especially of nitrogen and of motive force—for a more complex, more controlled husbandry than is required in customary cultivation routines, in which local varieties are used that rely heavily upon their environment and are adapted to its idiosyncrasies.

Amounts of nitrogen in the quantity required by the recommended packages are such that in most cases this input can be supplied only by manufactured artificial fertilizer. Irrigation requirements are best satisfied by canal systems or by ground water, and in practice controlled supplies of ground water, requiring oil-driven or electric pumps, have been the most effective suppliers of controlled moisture. In most of the areas under consideration, efficient irrigation is therefore also a consumer of energy.

At the same time, where the technology is agronomically successful, considerable increases in yield follow, producing an even greater rise in the market surplus.

The great increase in the surplus of grain offered for sale and the similarly increased purchase of industrially produced inputs and means of production combine to increase the mercantility of the farm or unit of production greatly.

In thus changing the agronomic and economic character of the farm, the optimal requirements for the success of a cultivator are also changed. Where it is possible to combine economies of scale offered by labour-saving machinery with a strong bargaining position in commercial transactions and access to cheap capital, a high level of profitability may be achieved. In areas favourable to the new technology, therefore, farming becomes an attractive investment and novel conditions prevail, changing many existing relationships.

Incorporation and external dependence

Wherever the new technology replaces or is added to the older agricultural systems on a large scale, and mercantility inevitably increases, there is further incorporation of local economic systems and livelihood support patterns in the urban-industrial macrocosm. The process of incorporation has different consequences for different rural strata.

Thus, local cultivators must purchase fertilizers, chemical products, machinery, fuel and machine maintenance from the industrial sector: their seeds, propagated by scientific research centres, are obtained through urban distributors or large-scale cultivators, usually from outside the locality. Local cultivators also come to depend upon technical services and suppliers of institutional credit from outside. They must learn to sort out, decode and evaluate the scientific and economic messages that reach them from bureaucracies, banks and experimental stations.

The implications of increased dependence of the locality upon the urban-industrial network is an aspect of social change that leads in several directions. It biases the distribution of advantage in favour of those who have the experience and social attributes necessary for confronting the city and the bureaucracy, the printed instructions and the political caucuses; and it puts a relative handicap on those whose assets include traditional knowledge of the local idiosyncracies of soil and climate,⁴ and whose energies are absorbed by the labours of husbandry rather than in manipulating the rural-urban nexus.

External dependence implies a swing away from local self-reliance; it implies the local community and the individual productive unit becoming a part of a larger system of production and exchange that has a potential for diversifying and enriching life and livelihood. In the agrarian society with a low technological level, most rural families must produce the food they live by, and in this sense they enjoy some security—though

⁴ The weight and prestige given to the new expertise is quite capable of overriding local experience in such a way that practice suffers.

subject to the chances of regional catastrophe and local extortion. The linkage established by the new technology between the local community of producers and the larger society tends to withdraw much of the decision-making autonomy from the former, and subjects it to national and international episodes of politics and trade and the repercussions of distant war.

Self-provisioning is based on attachment to a particular piece of productive land, and it is the ultimate refuge of the peasant, enabling him to opt out of the confrontations and struggle. To embrace the new technology and the commercialization that accompanies it may increase peasant incomes, but implies a movement away from this refuge. Colonial history offers many examples of market flux, now leading peasantries into market production, now leaving them to readapt to fuller self-provisioning. While the large farmer with resources and investment alternatives may deliver himself entirely to capital-intensive market production of cereals, so long as this is profitable, the poor cultivator with a tenacious hold on his land may attempt to retain a self-provisioning capacity as free as possible from debt.

The new external dependence of the locality also makes for changes in its power structure. Power based on hereditary land monopoly is rivalled by power accruing to those who can control the traffic between the local community and the larger society—the “nexus people”.⁵

This process of incorporation—of which the propagation of the new technology and the majority of rural development programmes both form a part—places many of the blessings of science and industry within the range of vision of rural people, though their capacity to take advantage of the offerings depends on their assets, their socioeconomic status, their credit-worthiness.

In order to appreciate the social and economic implications of the new technology, therefore, it is necessary to look at its consequences in the framework of the larger process of incorporation, and above all to give some account of terms of incorporation that can be secured by the various categories and classes of person affected—broad categories established by their relation to both the old (locality bound) and the new (urban-industrial dependent) productive systems, and their capacity to deploy the assets and attributes they control.

Our explanation, therefore, centres around *the struggle over the terms of incorporation* by different classes of protagonist.

Emergence of the entrepreneurial cultivator

Entrepreneurial cultivators have appeared significantly in wheat production⁶ in India, Mexico⁷ and Pakistan, and have achieved a high level of profitability in relation to units of output as well as on capital invested.

⁵ Namely, those who manage commerce and the officials, whether outsiders or insiders, who manage government agencies connected with law and order, health, public works, agriculture and development programmes; those who become the recognized political chiefs and are responsible for arousing and maintaining support for their parties among the local population, and canalizing those favours that the parties, in or out of power, can pass down; and those who control communications and transport. All these elements are to be found in the elites who handle agricultural development at the local level in a variety of alliances and compacts.

⁶ Large-scale entrepreneurial production of rice is to be found in many parts of the world, but there is little information available about its emergence in the Asian peasant setting, for example, in Malaysia or the Philippines. It is, of course, possible to speak about small-scale entrepreneurship in farming. For instance, a Taiwanese cultivator with half an acre of land refrains from subsistence-oriented production in favour of a more profitable crop and freedom to buy and sell—an

Entrepreneurs have been chiefly owners of middling and large farms favoured by access to capital and access to (and confidence in) technological know-how. This qualification obviously is inclined to accompany a higher level of education, and some familiarity with urban and bureaucratic ways. Moreover, two features of the strategy of most of these programmes have fitted them with a further bias toward polarization and uneven growth, favouring the cultivator in these conditions—namely, concentration of programmes and investment in the best agricultural areas, and the “progressive farmer” approach.

The first of these elements of policy has much to recommend it from the point of view both of those who wished to mark up rapid and early successes in adoption and yields, and of those who wished to build on the highest possible levels of existing investment in infrastructure and productive equipment. An alternative to this policy would involve a spreading of investment and the application of agricultural and social sciences to the problems of cultivators, especially small ones, working in indifferent and marginal lands as well as those enjoying optimal conditions. Just what it would take to obtain successes by such a policy—both in terms of overall production results and in terms of raising the farming and living standards of the poorer rural sectors—is discussed more thoroughly in chapters XI, XII and XIII of *Seeds of Plenty, Seeds of Want*. But it would be hard to get such a policy accepted in political and administrative quarters in a society that relied on market forces for its driving impulse—the political will would be lacking.

The other element of policy common to most programmes and tending to accentuate polarization was the so-called “progressive farmers” approach (see p.175 of *Seeds of Plenty, Seeds of Want*). It is of course true that enthusiasm for innovation varies among cultivators and may be found among poor ones. But in practice the “progressive farmer” commonly turned out to be the cultivator with relatively ample landholdings and access to capital as well as reasonably easy relations with the authorities and an above average education. It was seldom difficult to persuade such farmers to adopt the package recommendations since they had already made the critical leap into predominantly commercial farming and recognized the deal offered as a good one: inputs, credit and technical advice were assured and in some cases the product price was supported or at least subject to a guaranteed minimum.

The tactic was widely successful and in most cases the first year’s operation, carried out on the best lands of the “progressive farmers”, was rewarded with markedly higher yields. Where successful, the results encouraged other cultivators—many of them less well-endowed with land and capital and less well-connected—to experiment. In optimum areas even poor cultivators strained themselves to obtain credit for inputs. But with the wider diffusion of the HYVs, average yields declined, manifesting great variation on account of the patchy quality of irrigation systems, irregular supplies, increased disease and improperly applied methods.

Where the “progressives” were able to demonstrate the unusual profitability of the new technology organized in capitalist farms, cultivation itself as an enterprise began to appear attractive to those with some capital resources. Landlords who had formerly been content to receive share-rents in kind from meagre harvests were tempted to become

opportunity that family self-provisioning would not permit. But the Taiwanese paddy cultivator is something of an exception. (See Wang and Apthorpe 1974.)

⁷ For an interesting account of the entrepreneurial cultivator as a social category in Mexico, see Hewitt de Alcántara 1976.

direct producers, repossessing their rented land from their tenants to work it with hired labour or to mechanize and to work it with family labour.

Other important consequences, where the new profitability became an established fact, were an increased demand for land and consequently a sharp upward trend in land values, and a vigorous demand for commercial tenancies on a cash rental basis.

Agricultural entrepreneurship also became an attractive option as a sideline for professionals and as a retirement occupation for civil servants, ex-officers of the armed forces, and other middle-class groups who would not have considered it before.

The new class

In those parts of India where the new technology has shown itself to be patently profitable, and where various forms of assistance have been offered by the government, the effects have been several. In many cases, landowners have become direct producers themselves, dismissing their tenants and taking their land under direct cultivation. In others, these landowners have been less interested in becoming entrepreneurs but, taking advantage of the widespread demand for access to land, they have changed the terms of tenancies, so that the new profits accrue mainly to them.

A second trend in India was the return of petty landowners whose social aspiration and capacities had led them to prefer to seek a better livelihood in the towns than could be afforded by small-scale unimproved agriculture.

Joshi points to the increasing importance in India of those landowners “who are changing over from a feudalistic type of relationship with the direct producers to a commercial and capitalist type of relationship” (1971:20). He divides these into two groups: (i) the commercial type who utilizes the traditional agrarian tenancy framework, but “plays an active part in the supervision and management of land and [is] more inclined to make investments in agricultural improvements for maximizing...gains than the old landlord was”; and (ii) the “capitalistic type of landlord who has switched over from the use of tenancy to that of wage labour”.

It is the second group that we refer to as the entrepreneurial cultivator. In the case of the tenant farms on the lands of the first—whatever the aspirations of the tenant cultivators, even if the landowner encourages the tenant to use improved methods, makes certain investments in the means of production and provides his tenant with credit—the division of entrepreneurial decision making between the two parties and conflict over the transfer of profits from the tenant to the landlord are likely to hold back progress of this productive unit and the necessary investment in land improvement, irrigation and productive equipment.

In India, the entrepreneurial farm is mainly in the hands of individual cultivators who have acquired a dominant position in the village as landowners, who have the resources to operate freely as entrepreneurs and whose land is of sufficient size to prevent the untimely interference of family subsistence requirements with their freedom to buy and sell. This may mean that he must be able to put by a sufficient amount of grain for household purposes.

Bapna (1973) describes two such entrepreneurial cultivators in the Rajasthan (Kota) study. One of them had been a landowner with tenants and had also worked for the local authorities as a driver. As farming prospects improved with the introduction of HYVs in 1967–1968, he took over the cultivation of his own land, amounting to 34 acres, with three permanently employed farm servants. His social position and relationship to the local authorities (*Panchayat Samiti*) gave him a direct relationship to the Block officials,

and facilitated his access to technical information and services. As Chairman of the Cooperative Credit Society, he was also well placed to receive institutional credit. He had recently purchased a tractor and a thresher, and with the hiring out of the thresher alone he had earned one-quarter of his total income. He invested substantially in fertilizers and obtained high yields with his wheat, paddy and pulses. Tractor and thresher ownership gave him a great advantage in speed over cultivators using bullock power, making it possible to grow paddy as a second crop, which was a more profitable crop than *jowar* (a low-quality grain), grown by the bullock cultivators.

The situation of this cultivator was one of great entrepreneurial resilience and he was free to choose between land and water improvement, renting in more land to make better use of his machinery, or the extension of his custom hire business for agricultural operations and transport.

But there is a second stream flowing into entrepreneurial farming, mentioned by various writers, that consists of “moneyed men from the business and professional classes, retired members of the bureaucracy and the army, and influential and affluent politicians” (Joshi 1971). It is assumed that the profitability of the new technology has caused many people to choose to become cultivators who otherwise would not have done so. But it is probable that most of them come from landowning families. A large part of the bureaucracy is recruited from peasant proprietors’ families, while the military propensities of the Punjabi peasantry are well known.

What is important in India, however, is that this growing class of agricultural entrepreneurs has come to have enhanced political power in its own right during recent years, and already has a powerful voice in state politics on such questions as the price of grain, land ceilings and the taxation of agricultural income.

Above all, the emergent rural middle strata are likely to continue to block redistributive legislation in favour of the land-poor and landless, whose economic improvement they perceive as a threat to their cheap and subjected labour force, their rents, their interest and their petty monopolies.

In all the situations studied at close quarters, the outlines of this emergent class began to appear—whether as agricultural entrepreneurs (as in India) or as petty landlords and townfolk whose livelihoods are supported by activities outside the agricultural sector (in Sri Lanka and the Philippines) or as elements of the new bureaucracies (as in certain African countries). Their role in relation to the prospects for small-scale agriculture is a fundamental one, and their different economic functions and modes of operation from one rural society to the next provide an interesting point of entry for understanding agrarian structures.

The talents-effect and the terms of incorporation

In a landed society, proprietorship is the basis of prestige, power and the control of other resources. The distribution of landownership therefore provides a guide to the concentration and exercise of power. Where land is relatively evenly distributed, there is little evidence that smallness is accompanied by domination or discrimination. Where there is great inequality in proprietorship, smallness carries with it social handicaps confining entrepreneurial freedom and putting the small cultivator in a situation of contractual inferiority in his market relations as well as in his attempts to obtain legitimate access to public facilities. And where small farms are in tenancies of the common pre-capitalist mode, an additional element of handicap is added that may raise

the livelihood threshold to twice its prevailing level for a proprietor in the same locality. It may also involve subjection by permanent manipulated debt.

Our studies revealed that small cultivators lacked the time, influence, literary and social affinities possessed by the large proprietors that made it possible for the latter to be in touch with government programmes and facilities and receptive to technical information. Thus, peasants may find themselves competitors for credit or irrigation facilities with agriculturists who have city houses and political connections; poor villagers may have to compete for institutional credit with the local elite who make up the village committees that allocate the credit; illiterate, ill-clad cultivators may have to argue their case in town offices with status-conscious officials.

Furthermore, the small cultivators are frequently the dependants of members of the local elites for consumption credit, access to water, use of equipment and facilities, and even for contact with the rural development bureaucracy.

It is the social situation of the small cultivator vis-à-vis the purveyors of his inputs, coupled with the economic fragility of his enterprise due to his penurious supply of land, that turns the excellent agronomic potential of the new technology into an indifferent bargain. Continued use of a hardy low-cost technology for his food supplies usually offers him a safer option in the real world, which he knows all too well.

Readers will recall that field studies suggested a surprisingly high proportion of small tenant cultivators in Indonesia, Malaysia, the Philippines, Sri Lanka and even India, and though the figures that emerged were not reliably representative, the current movement into tenancy involving a steady growth of petty bourgeois non-cultivating proprietorship should be looked into as a serious obstacle to the mobilization of the poor cultivator for development.

Inseparability of the farm and the household economy

Family farm arrangements also contain complexities that may make technological change difficult. The umbilical attachment of a family to a specific plot of land from which the members of the family draw the major part of their own food and a negotiable surplus to use in exchange for their other needs continues to be the basis of rural livelihood throughout the developing world. In principle, the farm is expected to maintain the family and the family to supply the labour needs of the farm. Unlike the capitalist farm, where labour is hired as and when required, the family farm must be organized around the imperative of feeding the family, which is its *raison d'être*, throughout the year. The productive round of the farm does not need the family labour throughout the year, while for certain types of crops (for example, rice) additional labour may be required at certain seasons. On the other hand, food is not produced all the year round and supplies must be stored from harvest to harvest if possible.

One result of this situation is that the peasant family, operating a farm too small to produce substantial reserves, necessarily incurs debts for consumption purposes, normally at high rates of interest. Adoption of the new technology involves an even deeper commitment. Already in debt for pre-harvest consumption and for occasional ritual obligations, the small cultivator faces the necessity of doubling or trebling his indebtedness if he is to change over to the new technology.

The locality studies show that such transformations do take place, but they are likely only when both agronomic and market factors are favourable and give assurance of success. Among these factors, an efficient inputs delivery system and the availability of low-interest loans play a very important part. The gravity of the problem is revealed by a

glance at figures about size and distribution of landholdings in most of Asia and Latin America. These show that a large proportion of cultivators work farms that fall short of the livelihood threshold, and must therefore attempt to enter the labour market in order to maintain the health of their families. This condition is aggravated by a trend, caused by the pressures of large families, toward further fragmentation and diminution of the average size of holding.

At the same time, self-provisioning agriculture itself is weakened as a system of production and livelihood by the advance of monetization and the increased commercialization of the relations of production and exchange. More items of daily use have to be bought for cash as village crafts are replaced by manufactured goods. Sons require monetary compensation for work on their fathers' lands. Exchange labour is replaced by wage labour, and the spare resources that were available for emergencies and for the village destitute tend to fall under a stricter accountancy. And the increased need for cash, for purposes other than productive inputs, may be accompanied by a decline in farm size.

The studies throw up with great urgency the problem of the small cultivators, who constitute the larger part of the rural population of the Third World and whose numbers continue to increase. In addition, wherever the new technology increases the expectation of increased net returns, the price of land increases in such a way as to prevent the expansion of the smallholder, either by driving tenancies out of the market or by further adjusting exploitative conditions in such a way that entrepreneurial capacity is inhibited. In the product market, the small cultivators have to compete with large-scale producers whose costs can be lowered far below the point at which the small producer would fail, while in the factor market a variety of social dispositions put him in a situation of contractual inferiority vis-à-vis those who control access to inputs.

What this means is that the number of cultivators who may be described as small, in the sense that they own or have access to sufficient land to maintain family livelihood, may be stable or declining, but there is a larger and increasing number of cultivators who can only be described as marginal, since they have access to "sub-livelihood" lands only and must complement their own production with other income—from the sale of labour to larger cultivators, from trade, from crafts, from migrant labour, and so on.

In fact, the problem here is not that which is generally posed, namely the intractability of "subsistence agriculture", but its decline to the point where it does not even provide subsistence. The movement out of agriculture implied in this process is a long-term trend that can be expected to take place, and which is a positive feature of development so long as alternative earning opportunities exist, but in most of the countries studied the alternative opportunities for productive occupation were so few that they were frequently insufficient to absorb the natural increase in urban population.

In these circumstances, the decline into marginality marks the inexorable destruction of the essential and customary means of livelihood of an ever-broadening stream of rural people dependent upon the labour market.

Village polarization

It will be objected that our research in new technology areas shows that the labour requirement per acre in these areas tends to rise, except where favourable conditions for fuller mechanization exist. However, our study was unable to cover the course of events in the 80–90 per cent of areas where conditions do not favour the new technology, and it is here that marginalization will take place and where the marginalized cultivator is least

likely to find adequate complementary means of livelihood. That is to say, unless governments can establish some system of continual sounding in order to register agrarian trends, the problem is capable of acquiring critical dimensions unperceived.

In fact, the process of polarization taking place in village life has a dynamic aspect that is more clearly revealed by two field examples. One of these—a study of the effects of various programmes of rural development in four villages in the state of Uttar Pradesh in India—shows how the class/caste hierarchy compartmentalizes relations in these villages and ensures the cornering by village elites not only of government facilities supposedly available on an equity basis, but also of technical and other information diffused by radio and the printed word. The lower strata were found to have been excluded from places where public broadcasts were relayed and, being also illiterate, were still ignorant of most of the essential data content of welfare and development programmes several years after their introduction—including that related to the new technology and the facilities available for obtaining inputs and credit.⁸

A second study (Franke 1972) is about a rice-growing area of central Java. The whole region is characterized by skilled husbandry and a high level of cropping intensity in excellent climatic conditions, but it suffers from excessive pressure on land and offers little by way of occupational alternatives to agriculture. As a result, there is excessive land poverty and landlessness and a tight, unremitting struggle for existence. An intensive study was made by Franke of the village of Lestari in the year 1972, when he found that of its 266 families, 168 had no arable land at all or simply garden plots, and the total area in paddy, the main food crop, was no more than 75 hectares (which, however, was cropped twice a year) and it was roughly calculated that normal harvests could produce sufficient food for 150 of the 266 families.

As a result of conditions like these, in many parts of central Java the institution of labour debt has become widespread. Variations in family income of the poorer majority, whether derived in kind from the family's farming activities or in cash from wages or gains on petty trading, created occasions when food for survival was lacking. If the needy family were that of a cultivator whose harvest was still many weeks off, he might raise a loan in cash or kind in return for a promise to sell the harvest or by recourse to a "green sale"—that is to say, by selling his crop to the lender-buyer at a reduced price while it was still growing in the fields. Or he might receive his loan in return for the pledging of his future labour to the lender at reduced wages. The effect of this institution, therefore, was to lower future production costs for the cultivators who disposed of surpluses, and this made it possible for them to accumulate further production capital.

For the cultivator with lands that did not attain the livelihood threshold, some security against periodic hunger was provided, but at the cost of decreased income from labour sold and decreased freedom to choose how to dispose of his labour. It was found that 109 family heads had incurred labour debt obligations, and these supplied cheap labour when required to 17 surplus-producing cultivators.

Although the government programme introducing the new technology made credit available to cultivators, none of those who had incurred labour-debt took advantage of it.

⁸ This was accounted for quite simply by the obvious conflict of interest in relation to the availability, docility and price of human labour. So long as an important section of the rural population was landless, the elite, whose extensive holdings required labour, could obtain it at a low price. But official schemes to distribute state lands to the landless or to improve the entrepreneurial potential of the poorest cultivators were seen as damaging to elite interests and were successfully opposed by maintaining a close monopoly on incoming information, inputs and welfare measures.

It is easy to see that this group, characterized by lack of reserves and vulnerability to seasonal fluctuations of income, would be dubious about substantial new debt-involvements, even though the prospects of greater gains at harvest time had been demonstrated.

From his overall knowledge of the order of social relations in the village, Franke (1972) considers that a move by one of the labour-debtors to use the new technology by participating in the institutional arrangements of the government would have amounted to “an act of political resistance to the control exercised by the large capital-holders”. He considers that “the entrepreneurial activity of the poor would be a threat to the entire structure of privilege and security built up not only for the poor themselves but also for the wealthy who receive most of the rewards”.

Talents-effect

Perhaps the most important aspect of the rural situation illustrated by these two case studies is the fact that rich and poor do not simply coexist. The accumulation of land by the rich creates a demand for labour, which the poor are obliged to satisfy because of their land-poverty or landlessness. Moreover, the entrepreneurial success of the rich is made possible by the hunger and importunity of the poor cultivator, who is obliged to surrender his bargaining freedom and even to pledge his future labour at a reduced price in order to sustain his family and meet current obligations. Excessive pressure on land for cultivation and a steadily growing population intensify and dramatize the operation of this principle.

However, the descriptions make it clear that the economic peculiarities of land and labour are not alone in making exploitation possible: the advantages of the buyer of labour and the handicaps of the seller also rest on local class systems involving privileges and the consequent acquiescence by the majority (voluntarily or involuntarily) in the use of sanctions such as physical punishments, differential access to information about legal, administrative and financial systems by means of literacy and learning, the cornering of political influence, and on other social factors.

The interplay of the social and the economic that tends to strengthen the rich and enrich the powerful, as well as to weaken the poor and impoverish the weak, is so ubiquitous a phenomenon and so fundamental in its operation that some simple phrase is required that goes beyond systematic economic concepts and is more widely human in its application. We are therefore adopting the phrase *talents-effect* to refer to situations in which this process of polarization is induced. At base we are using this phrase to connote the most elementary axiom of competitive behaviour, namely, that the more talents the player has at his disposal, the more he is able to pile up—using talents to mean counters in the universal game of seeking a livelihood. The greater the number and variety of counters, the better equipped is the player, while the holder of few counters has the greatest difficulty in retaining those few.

While other societies—including many of the rich industrial ones—have developed mechanisms to control the momentum of this process, Third World rural societies undergoing further penetration by national and world market forces and “modern” institutions are critically vulnerable. Economic growth or “development” by a capitalist penetration of the prime zones of production and incorporation in the international economy appear to carry with them a dynamic poverty-generating principle unless the process can be understood and the political will is present to inspire governments to counteract economic polarization.

Inequality and the distributive services

Experience with development programmes poses a crucial question about the possibility of equitable access to facilities in a highly stratified society or a society with wide social differences. It is easy enough to see that in an open market situation the talents-effect is fully operative, and control over resources facilitates the acquisition of further resources, further control, and so on. However, customs and institutions in most societies stand in the way of the fulfilment *ad absurdum* of this trend, and development programmes provide an example of such institutions. We find that agricultural services provided by the state are nominally available to every cultivator—the implicit principle being one of fair shares—and are therefore supposed to offset the dynamics of acquisitiveness. However, worldwide observations gathered together in the present study seem to demonstrate that such open distributive services (indeed one might say this of public services in general) operate on the basis of equity only where inequality is limited.

Equity-based programmes are introduced by governments based on constitutions that pronounce citizens' equal rights and planned by officials who may aspire to a society having a truly common citizenship. Yet the realities of these societies manifest excessive inequalities and differences of lifestyle—a prevailing mentality that continues to accept and act upon such inequalities—and an attitude of reverence to a life devoted to the accumulation and appropriation of private property. The problem facing development planners is that distributive services and open institutions inevitably founder on such rocky bottoms.

The inequalities of rural society that turn open services into organs of discrimination are of several types. The simplest type of inequality is that based on the skewed distribution of landed property, which is directly concerned with income. To this form of economic inequality is added the fact that possession of land also makes possible access to capital.

A second type of inequality shown by our studies to be a critical obstacle to change and development is the dependence of the property-less on those who have property. This condition has self-perpetuating features, since the indebted ones see in dependence on their creditors some prospect of averting destitution, while the creditors (as individuals or as a class) find in the debtors a source of cheap and docile labour.

A third type of inequality is to be found where the population is differentiated along ethnic, religious, linguistic/cultural, caste and class lines, and these sectors are considered to have differential rights, involving the domination of one by the other.

Very few of the situations studied were free from gross inequalities of one or more of the types given above, yet where such relative freedom was found, the services seemed also to operate more efficiently. This fact is commented on by Hameed (1977) in the Sri Lanka country study. Four localities were studied, one of which was a recently formed settlement (Minipe) in which cultivators had received equal endowments of land, and in which a common interest in the efficiency of the services seemed to outweigh individual temptations to subvert them for private advantage.

In the other localities studied, no serious caste divisions kept a sector of the population in handicap, yet it was observed that power and community decision making had become somewhat withdrawn from cultivators and lodged in the hands of village elites consisting of officials, traders and other groups who had been able to obtain control of substantial amounts of land, which they rented out.

Thus a relative inequality in land distribution, a system of tenancy that separated those cultivators unfortunate enough to be tenants from most of the benefits of their skill

and labour, and a concentration of power in the village elite, all tended toward the abuse of the existing measures and services provided for agricultural development.

It is in the light of the patterns of inequality and dependence that the “progressive farmers” approach needs to be appraised. The planners of the High-Yielding Varieties Programme in India were particularly interested in obtaining early successes with the new seeds in order to place on view a veritable jump in yields as a reward for using the new technology. The experience of the extension services during earlier activities and campaigns was that the advances they could promise were too small and too slow to galvanize the cultivator into changing his methods, increasing his investment and his workload. They were also too insignificant to transform the rentier landlord into an active entrepreneur. Consequently, a strategy was developed around the idea of the “progressive farmer”—usually but not necessarily one who owned a medium or large farm, was better educated, had already adopted some of the elements of the new technology, and had sufficient resources and financial backing to accept the risks involved in experimentation.

In fact, it was the resources and connections of these cultivators that led to their selection and, while they were progressive enough to accept the invitation, the implication that they were necessarily more progressive in outlook than small cultivators with poor connections must be resisted in most of Asia.⁹ The strategy seems to have given the richer farmers a headstart and, at the same time, made it more difficult to convince the small farmers that they too could manage the new technology. It also accustomed the extension worker to operate through the rich farmer, whose more substantial livelihood made all things easier.

Concern for a broader rural development urges the consideration of a strategy focusing on the poor but aspiring farmer as initial adopter, since his success can have much greater influence on the majority than that of the rich farmer.

Jacoby (1973) feels that while very good results can be achieved through extension services in pilot projects and on a small scale, the cost of finding, training and paying staff of the necessary high level is prohibitive when applied to a whole country for working with traditional smallholders. The Provisional Indicative World Plan (FAO 1970) proposes a figure of one field worker to 500 farm families with a supervisor for every five field officers and a smaller number of specialists. Other experts have suggested 200–250 farm families per field worker. Jacoby draws the conclusion from these calculations that the economic limits on efficient extension for small farmers are a major obstacle to agricultural development—indeed sufficient to warrant the adoption of collective or state forms of production unit, into which the extension function would be built.

Bearing in mind the requirements of the new technology in regard to the extension function, new approaches may be tried. As we indicated above, agricultural production now requires two kinds of technical knowledge—that of the field and its physical ambience and that of the laboratory. The extensionist cannot be an expert in the laboratory, where a full response to a technical problem requires the work of several disciplines. He can, however be an expert in the field, especially if his education has consisted partly of a struggle to produce livelihood from the field. The possibility of

⁹ The use of the term “progressive” seems to have more meaning in Africa, where numerous observers have drawn attention to a profound change of outlook that a certain minority undergoes as a result of experience outside the tribal society, and which implies a rapid and enthusiastic embracing of new elements of technology, coupled with a rejection of communal authority, beliefs and attitudes. See, for example, Weintraub 1973 and Feldman and Lawrence 1975.

training a corps of field extension workers recruited from the peasantry (those who have been reduced to minifarms not requiring much attention) and whose identity with the peasantry continues, might be explored, since it has interesting implications for the mobilization of poor cultivators and also for the economics of extension work.

Regular irregularities

The whole relationship between a government policy or a programme for agrarian development and the cultivator is managed and mediated by a staff whose interests lie in pleasing their employer—the government. It follows that the manner in which the relevant roles are performed is crucial to the successful transmission of the programme's change-inducing content.

While it is obvious that the quality of personnel running a programme is fundamental for success, it is a difficult and sensitive subject, requiring intimate and prolonged observation of a particular point of interaction between programme and peasant.

Mencher (1970) reports on such observations in India and what we learn from her is that the most vital link in the chain, the village-level worker, cannot expect progressive rewards in his career for faithfully performing his functions and is therefore driven to seek the most advantageous personal position he can by means of a distortion of his professional work. With regard to the superior category of Agricultural Extension Officer, we learn that he is not so desperately shut off from promotion, but that his conduct is oriented by his solicitude for his own prestige (relevant to his promotion) and the importance of satisfying his superiors. This second concern expresses a profound dysfunction of the system since it militates against the transmittal of information about agricultural practice back to the centre of the organization, or to the laboratory.

The same kind of analysis, but carried further, was done by Sylvia Hale (1975), who made a careful and suitably quantified study of the performance of development programmes in four villages of what was considered to be a progressive district in Uttar Pradesh, India.

Situations of the kind revealed by Hale have of course been discussed, noted and commented upon before but usually the observed pattern has been taken to be an "irregularity". The value of Hale's tough-minded interpretation of the state of affairs in her villages is that, given certain features of the social setting, such behaviour patterns are regularities, and predictable. Take, for instance, what we might call the "compacted nexus", that is to say, the self-rewarding arrangements made by the representative of the government agency with the leader in the village. Both individuals have a nexus function to fulfil for those on whose behalf they act, but they compact to subvert their legitimate functions for their own profit.

Writing about the village he studied in Sri Lanka, Selvanayagam (in Hameed 1977) says:

The suspicion of younger members regarding the integrity of village elders and leaders also seems to be justified. Since most village leaders are landholders and traders, they naturally have a greater influence in village matters...Under the present set-up it is impossible for any welfare measure to seep down to the larger community; whatever small benefit that is intended for the community is quickly seized upon by this small coterie of men. (Hameed 1977)

While the government representatives are not directly involved here, elsewhere in Selvanayagam's report we find evidence of the compacted nexus in relation to seed distribution:

Certified seed varieties are not always adequately available to cultivators. A few influential landowners manage to take the available seed paddy. Sometimes the seed paddy is adulterated. It was alleged that the local Agricultural Instructor (from a neighbouring village) used to favour 'his' men, especially the rich landowners from his village. (Hameed 1977)

Luisa Pare's account of the same phenomenon (in Pearse 1975) is based on observations made in several dozen credit societies in Mexico and the systematic self-benefiting arrangements made by the leaders of the credit societies and the official credit bank.

Danda and Danda (1971), in their study of Basudha, show a still unincorporated community in which one government official continues to be regarded as an outsider, while another—apparently as a result of an act of identification with the community members—comes to be accepted.

It is in a different situation again, and under different conditions, that the villager is expected simply to pay the government official for his services in the Swamp-Rice Scheme in Sierra Leone, and is described as follows here:

Apart from legitimate if excessive delays in distributing the scheme 'bonus' to participants, there is evidence that there are other, 'illegitimate', reasons why participants are not receiving their subsidy. An unbalanced relationship between the Agricultural Instructor and the farmer made it relatively easy for the former to gain advantage from the situation to the detriment of the latter. (Weintraub 1973:151)

Assessments of extension and community development programmes are inclined to refer to these distortions with some delicacy and to prescribe improved training and more careful selection. It must be faced, however, that the universality of these kinds of distortion reflects the fact that conduct cannot be regulated by moral norms assumed in planning field services, and individuals who are recruited to serve at different levels in government have many competing loyalties, which they consider as legitimate as that which they owe to the service.

In a profoundly unequal society in which the spirit of *laissez-faire* self-enrichment has been let loose, government office provides opportunities for individual "development" that are refused only by exceptionally motivated personnel. And such motivation is most likely to be derived from political, ethnic or religious solidarities.

In attempting to understand the forces that generate both wealth and poverty, it must be recognized that the privileges of office may be on the same footing as the possession of land, a strong social position, creditworthiness, a knowledge of the new technology or of the workings of bureaucracy; all may serve indiscriminately as "talents" (coin) serving the "development" of the individual.

Critique of the Green Revolution strategy

What emerges from the evidence is inevitably a critique of Green Revolution strategy and not a rejection of the technology itself, the application of which can be widely beneficial under the appropriate conditions. The critique is recapitulated here, and in chapter XIII of *Seeds of Plenty, Seeds of Want*, a number of crucial issues are held up for discussion in the search for strategies that may fit individual country circumstances and conjunctures and also offer more humanly acceptable development paths.

It has been asserted that the package approach is frequently discriminatory since it calls on the cultivator to amend too many distinct aspects of his technology all at once, and to attempt a radical leap forward in which there is discontinuity between the existing and the new. Following visits to the Philippines and to Thailand, Ishikawa has commented on the absence of a distinct phase of varietal comparison and improvements and pure-line selection among native varieties such as had taken place in the technological development of rice-growing in his own country (Ishikawa 1970:6).

He insists that, in many cases, greater progress in peasant husbandry could be secured by initiating improvements at the point reached by the existing state of technology and developing the more scientific use of traditional inputs, or effecting a quality improvement of existing irrigation by the construction of terminal water distribution and drainage systems. This technological leap is the first hurdle at which the common cultivator, lacking the advantages of the elite or progressive farmer, is likely to stumble.

In contrast to these views, the Asian Development Bank's *Asian Agricultural Survey* (ADB 1968), echoing Green Revolution strategy, explicitly rejects the belief "that there are development strategies that can provide enduring production growth by a judicious mixing of some aspects of modern science with the so-called realities of traditional belief and methods".

Handicap of size

The doubling and trebling of the cash cost of cultivating a hectare of cereal using the HYV package sets up a second discriminatory obstacle to pass: the cultivator must use his savings or borrow on an unaccustomed scale. But in fact only the well-off cultivators hold savings in normal years—the common cultivator is more likely to be in debt already as a result of his borrowings to maintain his family in the lean season or to meet the expenses of essential lifecycle ceremonial. Should he be convinced that agronomic and business success in the new technology will not elude him and that his gains will enable him to meet the additional costs of production, then he may borrow in order to pay for seeds, chemicals and wages. Should he be fortunate enough to have fair access to institutional credit arrangements, there is a good prospect that his enterprise will be duly rewarded.

The majority of small cultivators, however, are likely to have decided already at an earlier stage that their life situation could not provide the necessary conditions for successful entrepreneurship in view of the known handicaps of poverty and the unknown hazards of the technology itself and of the external dependence to obtain supplies.

The discriminatory character of the package strategy and the obligatory leap into capital-intensive commercial farming is aggravated by the selective "progressive farmer" field tactic and the concentration of capital and technical services in already favoured areas. The result is self-fuelling pressure toward polarization magnified by a variety of political, social and economic factors pushing larger cultivators toward a qualitatively more profitable agriculture and greater competitive strength in the market, accompanied by increased political power.

A misleading "scale neutrality" was claimed for the new technology on the basis of the divisibility of seeds and chemicals—its main components. In fact, the socioeconomic magnitude of the cultivator is of the utmost importance for his economic success, where he must compete with well-capitalized larger farmers.

Much of the outstanding success of the technology has been built around the control of water supplies through tube-well ownership, while the benefits of multi-

cropping require tractor power to secure rapid harvesting and land preparation. Economically, smallness means absence of reserves with which to confront risk, and below a certain level it imposes the necessity of finding other economic activity to maintain the family throughout the year. Just occasionally, off-farm earnings are available at the right time as farm operating capital, but usually these are so exiguous that they are immediately absorbed for the purchase of food.

Finally, there is the probability that smallness is accompanied by powerlessness and dependence (through extortionate tenancy and debt) in a manner that interferes with effective entrepreneurship and bargaining power in the market place—whatever the technology.

The net result, therefore, is that whatever may be the formal scale neutrality of chemicals and seeds, the great majority of cultivators are handicapped by their size in competing with cultivators who have ample access to land and credit. Advantages and handicaps are complementary to one another and polarization becomes cumulative—the talents-effect is active.

References

- ADB (Asian Development Bank). 1968. *Asian Agricultural Survey: Regional Report*. ADB, Manila.
- Apthorpe, R. 1977. *The Burden of Land: An Asian Model Land Reform Re-analysed*. Paper presented at the Institute of Social Studies 25th Anniversary Conference, The Hague, the Netherlands, 16–20 December.
- Bapna, S.L. 1973. *Social and Economic Implications of the Green Revolution: A Case Study of the Kota District*. A Global-2 Report. Mimeo. Agro-Economic Research Centre, Vallabh Vidyanagar, India.
- Danda, Ajit K. and Dip Ali G. Danda. 1971. *Development and Change in Basudha*. National Institute of Community Development, Hyderabad.
- Dore, R. 1959. *Land Reform in Japan*. Oxford University Press, Oxford.
- FAO (Food and Agriculture Organization of the United Nations). 1970. *Provisional Indicative World Plan for Agricultural Development: Summary and Main Conclusions*. FAO, Rome.
- Feldman, D. and P. Lawrence. 1975. *Africa Report*. A Global-2 Report. UNRISD, Geneva.
- Franke, R.W. 1972. *The Green Revolution in a Javanese Village*. Harvard University Ph.D. thesis. Mimeo.
- Hale, S.M. 1975. "Barriers to free choice in development." *International Review of Community Development*, Vol. 33/34, pp. 89–122.
- Hameed, N. D. Abdul. 1977. *Rice Revolution in Sri Lanka*. Report No. 76.7. UNRISD, Geneva.
- Hewitt de Alcántara, C. 1976. *Modernizing Mexican Agriculture: Socio-Economic Implications of Technological Change 1940–1970*. Report No. 76.5. UNRISD, Geneva.
- Ishikawa, S. 1970. *Agricultural Development Strategies in Asia: Case Studies of the Philippines and Thailand*. Asian Development Bank, Manila.
- . 1967. *Economic Development in Asian Perspective*. Kinokuniya Bookstore Co., Tokyo.
- Jacoby, E.H. 1973. *Extension-Credit-Input Delivery*. A Global-2 Report. UNRISD, Geneva. Mimeo.
- Joshi, P.C. 1971. *Agrarian Social Structure and Social Change*. Institute of Economic Growth, Delhi. Mimeo.
- Mencher, J.P. 1970. "Change agents and villagers: Their relationships and role of class values." *Economic and Political Weekly*, Vol. 5, No. 29/31, July, pp. 1187–1197.
- Pearse, A. 1980. *Seeds of Plenty, Seeds of Want: Social and Economic Implications of the Green Revolution*. Clarendon Press, Oxford.
- . 1975. *The Latin American Peasant*. Frank Cass, London.
- UNRISD (United Nations Research Institute for Social Development). 1974. *The Social and Economic Implications of Large-Scale Introduction of New Varieties of Foodgrain: Summary of Conclusions of a Global Research Project*. Report No. 74.1. UNRISD, Geneva.
- Wang, S. and R. Apthorpe. 1974. *Rice Farming in Taiwan: Three Village Studies*. Institute of Ethnology Nankang, Taipei.
- Weintraub, L. 1973. *Introducing Agricultural Change: the Inland Valley Swamp-Rice Scheme in Sierra Leone*. University of Wisconsin Ph.D. thesis. Mimeo.

Chapter 10

The New Frontier: Farmers' Response to Land Degradation—A West African Study¹

*Kojo Sebastian Amanor*²

(1994)

Many of the burnt tree-trunks were now putting forth fresh green shoots, and the clearings were bright with colour. New roads were already in existence, and with the winter rains flowers sprang up around the crosses that had been planted in the ground the winter before. This year alone the forest of Sequeira Grande was diminished by almost half. It was now surrounded by clearings and burnt tracts and was, in brief, living its last winter. On rainy mornings workers would go by, scythes on their shoulders, singing their sad songs, which died away in the mysterious depths of the giant wood:

*Cocoa is a good crop,
And there's a new crop coming...*

—Jorge Amado, *The Violent Land* (Collins Harvill, London, 1989)

The expansion of the world capitalist market has involved the opening up of new geographical, socioeconomic, cultural and technological frontiers. The emergence of the European world economy is entwined with the rise of large maritime commercial centres. These centres have been able to organize trade, capital, communications and warfare to bring the economies of the periphery into the ambit of world commercial centres. Areas on the fringes of commodity production have eventually contributed to the vast store of wealth of world commercial centres, as producers of commodities and as consumers of the wide array of articles gathered in the great metropolitan warehouses. From 1500 the burgeoning world economy grew from a centre in the Mediterranean and Western Europe to embrace all the maritime regions of the world by the beginning of the

¹ Originally published as the introductory chapter to *The New Frontier: Farmers' Response to Land Degradation—A West African Study* by Kojo Sebastian Amanor (UNRISD and Zed Books, 1994). UNRISD is grateful to Zed Books for permission to reproduce this work here.

² At the time of writing, Kojo Sebastian Amanor was Research Fellow, Institute of African Studies, University of Ghana. Previous to that he had worked as a consultant at UNRISD.

nineteenth century. During the nineteenth century the expansion of the world economy proceeded inland from the maritime trading centres established in earlier epochs on the seaboard of the five continents. Various cities in turn have been at the throbbing centre of this world economy—from Venice in the fifteenth century to Amsterdam, Antwerp, London and, in the present era, New York.

The expansion of the world economy has transformed the populations and cultures of the world. Faced with the burdens of poverty and frustration in old world centres, people have migrated to these new frontiers of untold opportunity. In some areas, such as the Americas and Australia, the old populations of these frontiers have been decimated to pave the way for the conquest of the wilderness by commodity production, while in other instances new heterogeneous populations and cultures have often emerged from the miscegenation of frontier life.

The expansion of the frontier has often been carried out by indigenous producers and traders. The people involved in the opening up of frontiers are socially differentiated and involved in commodity production in different ways. The dominant social classes within the expansionary movement bring to the frontier a knowledge of the metropolis, a taste for metropolitan commodities and a cosmopolitan culture rooted in commodity fetishism. They bring the promise of new opportunity, of the untold wealth of the metropolis; they bring dreams that often shatter into the bleak reality of economic stagnation, marginalization and impoverishment.

The frontier is a creation of the metropolis and its economy arises as an extension of the metropolis—an extractive economy provisioning the metropolis with a “windfall”, a “free gift” (Webb 1952). As the world economy expands, the new frontier increasingly becomes a caricature of an economy, an area in which one easily exploitable resource is writ large and determines the fortunes of the inhabitants. This is a reflection of the constraints of administering the natural resources of the world from the metropolitan centre, and the rapidity with which new frontiers have been assimilated into the world economy in the last 200 years. Given the impulse of frontier conquest, the incorporation of new areas into the world market could not be based on a balanced exploitation of resources. It was founded on the extraction of easily exploited resources. Considerations of quantity rather than quality informed the administration of the world’s resources. History was impelled by the desire to increase the metropolitan storehouse of commodities rather than to develop stable and balanced economies in specific localities, districts and regions. In the metropolitan mind, colonies were often synonymous with commodities:

Gold Coast: cocoa	Ceylon: tea	Brazil: coffee
Malaya: rubber	Zanzibar: cloves	Madagascar: vanilla
Jamaica: sugar	Cuba: sugar, cigars	Dominica: bananas

This was glorified in classical economic theory by Ricardo’s conception of comparative advantage in which foreign trade

binds together, by one common tie of interest and intercourse, the universal society of nations through the civilized world. It is this principle which determines that wine should be made in France and Portugal, that corn shall be grown in America and Poland, and that hardware and other goods shall be manufactured in England (Ricardo 1955:81).

However, such a division of labour results in inequality in the intercourse of nations, and those who continue to be providers of single commodities for the dining table of the metropolis remain its servants. Only those who decide to enter into the production of “hardware and other goods” are guaranteed any security, a place at the world dining table.

For the colonies, this mode of exploitation of resources, in response to the insatiable but shifting desires of metropolitan commodity markets, has often resulted in serious land degradation. Previously diverse but backward economies are replaced by monocrop economies. Natural environments are felled and destroyed to make way for cultivation and extraction of these resources. In this fashion, the forests of the world have been felled to make way for sugar estates, coffee plantations, cocoa, cattle ranches, etc. Timber has become a synonym of forests. Colonial foresters sought to poison non-economic timber species in forest reserves to promote maximum growth of prime timber species. While the history of resource exploitation in tropical colonies preceding their integration into the world economy has often involved utilization of a wide range of forest products,

somewhere down the course of history, timber and timber products assumed such major importance in human affairs that they appeared to be the only significant output of the forests. They dominated in national and international statistics, were promoted rigorously in all sorts of media, adapted rapidly to the changing tastes of urban consumption, and generally basked in an exaggerated measure of self-importance. (Francois 1992)

Resources have also moved around the world as centres of world commerce opened up new areas to develop the most favourable terms of trade for the metropolitan markets. Tea was moved from China to India, rubber (*Hevea brasiliensis*) from Brazil to Southeast Asia, the oil palm from West Africa to Southeast Asia, and cocoa from Latin America and the Caribbean to West Africa. At each juncture old markets were displaced, leaving behind decaying settlements with only memories of their former glory.

The frontier is completely expendable. It is mercilessly exploited for today, and tomorrow the great waste of lost environmental and economic potential is left behind for posterity. Meanwhile, the frontier moves further into the interior or into completely new geographical regions. In a study of the history of the frontier in the São Paulo area of Brazil, Dean concludes:

The fate of the São Paulo frontier was to be despoiled of its easily exploitable resources and to suffer extreme degradation of its ecosystems. The process was nevertheless regarded by those who accomplished it as a brilliant achievement. It was accompanied by genocide. It did not result in a broadening of human potentialities of the victors, since it replicated, and even caricatured, the inequality of the metropolis. It is true that the export of coffee made possible the importation of an array of human and capital resources that soon produced a higher level of material standards, but this form of development thereafter suffered the consequences of a weakened agricultural base. In the wake of severe environmental degradation, the successors of the original settlers have undertaken to manage their remaining resources rationally. Nevertheless, extractive practices and attitudes have persisted into the present because the frontier itself continued its march into Parana, Mato Grosso, Goiás and beyond, to the border of Peru and Colombia (1983:97–98).

Today the last frontiers are being opened up. The expansion of the commodity markets has filled every nook and cranny in the world. The frontier is no longer so expendable. The waste in the vast old frontier areas is now becoming evident. The remaining frontiers, as in Amazonia, have become a rallying ground for the new global

environmentalism, which is emerging as the champion of indigenous peoples—those who still lie beyond the fringe of commodity fetishism. A grand ode is now being sung to the cultural systems of these native peoples, to their vast knowledge of forest plants and medicines. This knowledge is being fetishized, however, fashioned into a commodity, a new commodity for the age of biotechnology. Popular knowledge has become exotic, transformed into a catalogue of exotic commodities and natural resources with rich promises for the future like the spice trade of old. Knowledge is being deprived of its dynamism, its history, its experiential base, its relation to social, economic and political processes.

Meanwhile, what about the forgotten peoples of the old frontiers—those tainted and immersed in commodity production, those who have seen the environment and their livelihoods crumble under the insatiable desire of frontier colonization, those who can reflect on the futility of past developments, and who have observed processes of degradation and decline, those who have undertaken “to manage their remaining resources rationally”, those who have been consumed and are now marginalized? These are the people who inform this investigation, which examines their experiences of land degradation and their responses to their plight.

This study critically explores contemporary policy frameworks for the environment and for development. It places land degradation and economic decline within a political economy framework. Since it focuses on agriculturalists, it also examines agricultural development frameworks in the context of paradigms of development and institutional frameworks for technology generation. It is concerned with the interface between science as a system of understanding and changing the world and the production systems and aspirations of the people as an expression of humanity and its relationship to nature. Finally, the study is concerned with commoditization as it affects both the frontiers of science and popular production.

Environmental Policy

There are two conflicting paradigms of the environment. The first is concerned with the limits that nature poses to human growth, and is characteristic of environmental determinism, Malthusianism, and much of recent debates on population control and carrying capacity. The second stresses the potential of human labour to transform nature and the capacity of peoples to create new systems of material production that transcend contemporary economic constraints and the environmental problems that are symptomatic of economic malaise. In the latter approach the major economic and environmental constraints are seen as emanating from the world capitalist system and the economic structures of the world commodity markets (Redclift 1989).

These conflicting paradigms underlay many of the debates at the 1992 Earth Summit. A Northern industrial perspective of environmental problems, broadly shared by the centres of world capitalism, confronted a Southern developing perspective, broadly shared by dependent former colonies. The Northern perspective was based essentially on constraints and the Southern perspective on the notion that a more stable utilization of the environment could only be attained once basic levels of economic development are achieved. Conservation could be undertaken by Southern governments, however, in return for Northern aid to facilitate development.

The environment as constraints paradigm, as developed in the North, also revealed political and economic self-interests. From the US perspective, the interests of the US market and free consumer choice were considered sacrosanct: the environment could not violate the narrow economic interests of powerful multinational firms. As George Bush commented, “we cannot permit the extremes in the environmental movement to shut down the United States”. William Reilly, administrator of the US Environmental Protection Agency, commented that the biodiversity treaty would have “blown away” intellectual property rights and patents of US companies in the business of marketing genetic materials. Yet these same intellectual property and patenting rights are freely drawing on and appropriating the genetic materials developed by farmers in the South without acknowledgement.³ Furthermore, patenting rights and commoditization of science are seriously eroding the freedom of exchange of research information between scientists in the North.

Northern environmental frameworks reflected the globalization of capitalism and the impact that degradation in the South may have on the world economy. Thus concerns with protecting tropical forests as international property resources reflect interests of preserving them as carbon sinks for Northern industry and as hunting grounds of biodiversity for biotechnology and pharmaceutical firms. Ecotourism reflects the expansion of the Northern tourist industry and its penetration into the South, and not the interests of local peoples who are unlikely to manage or gain access to the major profits of this industry.

A critical point arises from the environment as constraints argument: what is going to be constrained, and who will do the constraining? At this juncture, the definition of causes and parameters of environmental degradation becomes political and ideological. Attempts to use notions of carrying capacity as a basis for policies of sustainable development in dependent countries are blatantly ideological in conception (Martinez-Alier 1990). Their ideological nature is reflected in the highly simplistic solutions offered in much recent discourse on population and degradation—which, should they be implemented, may have alarming implications for the freedom of peoples to determine their own destinies:

[P]rojects focusing only on soil and water conservation or prevention of salinization may turn out to be ineffective in the long run because they deal with symptoms and not underlying causes. Similarly, projects that encourage commercial cropping to raise rural incomes may intensify pressures on the land. In the long run, birth control programmes may be the most effective policy to halt land degradation. (Dixon et al. 1989:45)

Attempts to define degradation as the result of poverty are also ideological, shifting the onus of environmental degradation onto the developing world and absolving the rich lifestyles, industrial waste and parasitism of the North from the environmental debate. This critique was a major element in the Southern Earth Summit perspective. It was argued that the contrast in the total and per capita consumption of energy and non-renewable resources of peoples in the North and South was more relevant than total population figures.

Emphasis on environmental constraints and the rural poor also carry disquieting political implications. They converge with policy trends of the 1980s at international and

³ Kloppenburg 1988; Berg et al. 1991; Mooney 1983, 1993.

national levels to shift the burden of the world economic crisis onto the backs of the people. The growth of recent political liberalism and concern with social inequity in international policy frameworks is paradoxical, since increasing poverty, immiseration and affliction have arisen from the economic policies of the 1980s, which are still in place. Within many developing countries, regimes with reputations for afflicting the people are enthusiastically developing environmental policies that point to the poor as the main perpetrators of environmental degradation. The new global environmental thinking opens up possibilities for further political intervention into the ways of life of the people, appropriating their resources and patterns of resource utilization in the name of protecting the environment. In this respect, global environmental managerialism opens up avenues for the development of what has been termed “ecofascism” (Pepper 1984; Guha 1985): the legitimization of oppressive actions against the poor in the name of protecting the environment.

The main limitation of the Southern perspective at the Earth Summit was its failure to question seriously the whole process of development over the last 200 years of colonial and neocolonial domination. There was a reluctance to envisage a new course of economic development responding to both popular aspirations and ecological concerns, based on a more diversified utilization of the environment and involving a break with dominant patterns of commodity trade.

Despite the articulation of a Southern perspective on the environment, there is not a great variation, in practical reality, between environmental policy in developing and industrial nations. Most developing nations are implementing institutional frameworks for environmental policy that are based on Western European and US models, and that are supported with funding from these donor nations.⁴ This policy direction is essentially based on a technocentric, managerial model for the environment.

Environmental Technocentrism and the Globalization of Research

The technocentric approach is characterized by a belief that environmental problems can be solved by the introduction of new methodologies, technologies and controls based on a combination of the following elements.

- The incorporation of environmental costing into economic planning and legislation that will require that companies and producers pay for the cost of the degradation they cause.
- The development of “green” technologies in soil and water conservation, reforestation and agroforestry.
- The introduction of population control.
- The promotion of equity by developing technologies relevant to the needs of the poor and improved access to and distribution of resources, and through increasing participation of rural peoples in implementing and carrying responsibility for environmental projects.
- The conceptualization of environmental objectives within the strictures of the free market and trade liberalization, and an unwillingness to examine the impact of the ideology of the free market on the environment.

⁴ Hosier et al. 1982; Conlin 1985; Perry 1986.

This central framework is usually articulated through an environmental protection agency, which coordinates the environmental programmes of various ministries, government research sectors and projects, and which builds linkages with community-level projects and non-governmental organizations (NGOs). However, within many developing countries, particularly in Africa, the capacity to carry out research into the environment is seriously limited.

Research, development and the environment

The constraints and limitations on research in developing countries are rooted in both national underfunding and an international research structure in which the research institutions of developing nations are expected to focus on adaptive research—the fine-tuning and packaging of technologies developed in international centres to suit national conditions. The serious business of basic and applied research is carried out in international centres. International research is considered to be superior since it has “universal appeal”, technologies of wide applicability and generalized data that can be processed easily by international policy and fund-disbursing agencies. As a result, international centres can command the lion's share of resources and the cream of developing country scientists, who are accorded higher prestige, better remuneration and broader support for research activities. Poverty of research at the local and national level will result, however, in inappropriately conceived problems, methodologies and structures of research at the international level.

Regional and national environmental problems are frequently defined at the international level and do not arise from ongoing research within national research centres. The national structures of environmental policies are often carbon copies of their Western counterparts, which have been foisted on dependent nations by aid-disbursing agencies. The fact that these institutional frameworks have no track record of solving environmental problems in industrial nations does not seem to be relevant. Developing nation states willingly put these structures in place since they are prerequisites or inducements for the disbursement of aid. As a result of this utilization of credit, sector and ministerial agencies of the state are drawn toward international environmental prescriptions and have much stronger linkages with international science and policy than with the people. Weak research traditions and poor understanding of problems are covered up by a disdain for the people and a lack of willingness to investigate their problems. The espousing of old and worn international prescriptions is given more priority than encouraging new and innovative national research into environment and production systems. Frequently the various sector organs and ministries merely paraphrase international environmental proclamations while bemoaning the ignorance of the people.

Within the technocentric model of environmental managerialism, the international centre is the font of all knowledge and the national agency the expert in implementing this knowledge within the confines of the national state. Environmental actions are thus defined by the technologies and policy frameworks generated by international centres. The main research structures at the national level are concerned with implementing policy rather than with critically evaluating its short-term and long-term implications, investigating the way of life, problems and aspirations of people, and seeking for innovative alternatives generated within the milieu of the nation.

Researchers working in institutes at the developing national level are frequently marginalized when they are interested in pursuing their own research findings; or in

forms of research concerned with the life of the people and their cultural, production and technical domains; or in the complexity of interactions between social, historical and environmental factors. Researchers willing to allow their own research agendas to be defined by international centres are gaining new leases of life. In the natural sciences, researchers interested in developing projects concerned with biodiversity for biotechnology, or with aspects of local genetic materials in which international research is interested, are likely to find research funding. Meanwhile, researchers interested in developing taxonomies or creating national floras are marginalized for their interest in basic research. Yet the classification of plants must form a basic requisite for the development of a genuine interest in biodiversity. This, however, constitutes a form of pure and independent research that is given low priority in international research funding for developing or dependent nations. The international structure of science reflects global political and economic relations and research is constrained by dependency in developing countries. Consequently, there is little scope or support for national research to carry out innovative and critical research, appraising the peculiarities of the natural and social environments within the confines of the nation state and opening up new lines of enquiry that can make fresh contributions to world science.

Commodity sector research

Environmental policy frameworks are being globalized. But this globalization is taking place through a fracturing of the social and natural world into commodity sectors. Despite attempts to develop an increasing interdisciplinary focus within international agencies, this only takes place within the confines of the policy agenda of the agency. There are rarely overarching structures that enable the development needs and environmental problems of particular localities to be articulated in an integral framework that relates technology development to the socioeconomic context. While a large number of international and national agencies are employing social scientists, they are usually confined to the role of brokers between technicians and their "clients". They are usually employed to work within existing policy frameworks rather than to develop a critical policy analysis that incorporates political economy perspectives and opens up new frontiers for subsequent development.

Few international centres have a competence to develop true interdisciplinary research, despite recent attempts at reform within the Consultative Group on International Agricultural Research (CGIAR) system to develop multidisciplinary approaches, increasing orientation toward natural resource management and ecological zones. Attempts to develop a new international research centre with a mandate to cover agroforestry and forestry have likewise failed. The International Council for Research in Agroforestry (ICRAF) has been unable to accept changes to its mandate to include forestry. As a result, alternative plans have been put into motion to create the Center for International Forestry Research (CIFOR) as a new forest commodity-based research institution (Ravnborg 1992). Since justifications for research in agroforestry include the extent of degradation of the forest and the impact of forms of shifting agriculture on forest lands, agroforestry needs to develop a conception of the interaction between forests and social systems before it can claim to transcend narrow commodity-oriented approaches and contribute toward the development of an interdisciplinary environmental science. While ICRAF feels unable to include research into the forest environment in its mandate, the products of its research into fast-growing leguminous trees are being rapidly promoted and disseminated as the solution to the problems of shifting cultivators within

the forest. Most of ICRAF's work on farming systems has focused on inventories of economic tree species utilized on-farm and not on interactions between forest tree species, fallow regeneration and cycles of crop production. Despite these shortcomings, ICRAF has been one of the international agencies most concerned with developing an interdisciplinary approach and participatory social science research methods (Nair 1989).

The environment is being perceived through a series of narrow commodity-sector windows that see resources as things in themselves, rather than as integral parts of processes. Frequently, the complex interaction between social relations, the production base and natural systems is disregarded. Miracle solutions to the problems of the developing world, extolled with a missionary zeal, often give disappointing results when taken up in popular production systems. Given the international emphasis on applied research in developing countries, knowledge of human ecology and popular production systems is limited. In place of the emergence of an approach to the environment rooted in the history of land use, settlement patterns and environmental change, feasibility studies and environmental impact assessment often approach localities with pre-established parameters rooted in commodity sector development.

Since commodity research is internationalized, it searches for standardized solutions applicable to a wide range of environments. In the Green Revolution approach, this has been achieved by fostering a technology that is intended to minimize the impact of the host environment and to create an artificial environment of high-input technology (including pesticides, fertilizers, herbicides and irrigation), which protects the technology from stresses in the host environment. However, in many areas this technology interface is difficult to achieve as a result of remoteness, poverty and highly fragile or harsh environments. The Green Revolution has failed to march into many marginal areas where local resilient varieties and techniques still dominate, despite an agricultural extension system promoting modern techniques.

The successful uptake of modern variety technology has resulted in environmental problems. These include pollution from pesticide and fertilizer residues, and salinization from prolonged reliance on irrigation. Another serious problem is genetic erosion. This is the result of a narrow range of high yielding varieties (HYVs) replacing the wide variety of landraces that characterized the agricultural endeavour when seeds were bred by farmers in specific localities rather than multinational agribusiness.⁵ Genetic erosion of landraces has disturbing implications for the seed industry, since the future development of germplasm is dependent upon access to a wide range of genetic materials with new traits that can strengthen the vulnerability of the narrow genetic base of modern varieties.⁶

Even when dealing with technologies that are not highly commoditized and that have been developed specifically for poor people and to promote environmental conservation, modern technology still tends to produce highly standardized, uniform packages that can alienate farmers. Much of the technology and many of the species utilized in agroforestry have been drawn from the fallows and experiences of small-scale farmers in the tropics. But these resources have been developed into packages that often alienate farmers by failing to take into account specific environmental characteristics and the production factors available to farmers (Thrupp 1989). Modern agricultural science

⁵ Mooney 1979; Cooper et al. 1991; de Boef et al. 1993.

⁶ Frankel 1970; Harlan 1975; Wilkes and Williams 1983.

tends to regard the agricultural system as divorced from the natural environment and frequently fails to consider synergetic interactions between the agroecosystem and nature.

This emphasis on commodities rather than on systems, processes and interfaces results in an institutional structure of development that gains its strength from its knowledge of a particular standardized brand of commodity, and its ability to create the conditions through which this commodity can thrive in a wide range of environments. In this system it is not necessary to have specific knowledge of particular environments. It is thus difficult for sector specialists to understand the environmental interaction of technology, or the specific needs, aspirations and long-term strategies of producers. These factors lie beyond the realm of commodities. The focus on commodity packages leads to a top-down structure of research and development based on a *transfer of technology* mode (Biggs and Farrington 1991). Technical solutions are transmitted without specific problems and interrelationships of problems being understood within their context. Commodity sector agencies can easily alienate producers, through making technical recommendations that do not fit their struggles, aspirations, preoccupations and life experiences.

The transfer of technology approach to development is rooted in dualism—a bygone model of economic development that arose in the 1950s.⁷ This views underdeveloped economies as consisting of an introduced, progressive, modern industrial sector and a backward and static traditional sector. Development comes through the expansion of the modern sector and its ability to transform the traditional sector. The dualist thesis was a product of the peculiarities of the postwar boom, with the rapid growth of agroindustries and expansion of tertiary consumer and light processing industries. It was linked with the pumping of bilateral aid and loans to developing countries to purchase machinery and technology and invest in import substitution industry. It encouraged the investment of capital in the purchase of agroindustrial and manufacturing equipment as a means to modernization.

Recent global policy frameworks implicitly reject the dualist thesis, and recognize the fact that the enclave of the modern “progressive” state sector has been a failure—a drain on resources. This is reflected in policy frameworks concerned with divesting the state sector of its sector agencies and in growing concern with small-scale producers. Concerns with equity, poverty alleviation, the environment and linkages are recognition of the fact that social and institutional factors are as important in development as technology dissemination.

Nevertheless, the institutional frameworks of commodity sector institutions are rooted in technicist conceptions. At present, there are growing tensions between global policy objectives that often lack a theoretical grounding and consistency, and commodity sector organizations that are unable to reform to carry out the new objectives required of them. In many cases, sector agencies declare new objectives but continue working in the old familiar modes. Many agricultural sector agencies are now proclaiming the need for sustainable agriculture. Sustainable agriculture is defined in terms of the need to replace the backward traditional farming systems of the peasantry, which encourage environmental degradation. This is the very same framework in which it was declared that farmers need to take up modern input farming. But with what sustainable technologies are farmers going to replace their outmoded techniques? The technologies promoted by

⁷ Lewis 1954; Higgins 1956; Jorgensen 1961; Myint 1958.

extension services over the last 30 years can hardly claim to be rooted in sound environmental frameworks. Thus the authoritative proclamation of the age of sustainable technology heralded in by expert commodity sector agencies is misplaced. Nevertheless, these strains and contradictions are opening up debates and searches for new paradigms of development.

Popular Participation in Research

During the 1980s, popular participation became an important buzzword in international development circles. There are different senses and objectives with which the term is employed: as a mode of political administration, as a paradigm for processes of technology generation, and as a concept in examining policy and institutional frameworks.

The origins of popular participation in development can be located in disillusionment with the large-scale projects of the 1960s and 1970s, which were often poorly designed, failed to take local realities into consideration and alienated local people from developing initiatives within them (Pearse and Stiefel 1979). During the 1980s, however, community participation developed another relevance in relation to decentralization of the state and its apparatus (Vivian 1992). This is associated with the crisis of the state and its need to cut public sector investment, and with the uptake of structural adjustment prescriptions that seek to reduce the burden of aid-disbursing nations funding inefficient dependent states. Concepts of community participation often entail shifting the burden of the provision of the basic infrastructural amenities of life from the state to local communities. From this perspective, the participation of local communities is limited to the provision of labour for specific projects (Oakley 1991). Such projects often bear a striking similarity to colonial conceptions of forced or communal labour. In many African countries, local chiefs are experiencing a new resurgence as the agent with power to enforce participation in public works programmes. During the early independence period chiefs in several African countries experienced a waning of power as they were identified as collaborators in colonial domination (Crowder and Ikeme 1970).

Within many sectoral agencies, community participation has been picked up as a means of both rationalizing public expenditure on infrastructure development programmes and producing more appropriate management and technology design. Agencies are shedding their roles as implementers of projects to NGOs and community organizations, and developing new roles of monitoring, evaluating and providing technical assistance to independent programmes. The emphasis is on developing more appropriate feedback mechanisms from producers or “clients” to sectoral agencies, which can be utilized in fine-tuning technology options or result in more appropriate management practices. This conception is perhaps most highly developed in agricultural technology development.

Participation in agricultural technology development

Several studies have pointed to the abilities of small-scale farmers in experimentation and adaptation of technology to their needs.⁸ Several projects have attempted to use the skills of farmers in testing and evaluating their programmes.⁹ At the International Potato Center (CIP), Rhoades and Booth (1982) developed the “farmer back to farmer” paradigm of a participatory approach to technology generation. Research is a continuous, interactive process in which farmers participate in an ongoing appraisal of technology problems. After a participatory diagnosis of problems and possible interventions, information is carried back to the research station for incorporation into technology testing and development programmes. This feedback generates a process of continuous technology adaptation and improvement that refers to farmers’ experience with the technology for further development. In this conception of participation farmers help researchers to continually improve technology. However, the researcher still has monopoly control over technology and technology generation, and success in fine-tuning will strengthen this monopoly over research.

Richards (1987) argues that the conception of farmer participation may actually marginalize farmers’ own experimenting traditions, by co-opting them into formal research programmes. Essential elements of this experimenting tradition that do not fit into formal research procedures may be relegated from research programmes and marginalized by researchers, while other elements less alien to formal science may be encouraged. This may distort farmers’ independent research traditions and threaten their integrity and autonomy.

Van der Ploeg (1990) has argued that the research traditions of farmers are built on disparate tradition from those of modern commercial agriculture. They are characterized as “*l’art de la localité*”, a system based on continually adapting and matching technologies to changing environmental conditions. The system is threatened by modern agricultural technology that seeks to transform farmers into consumers of commodity technology, and to replace the dynamic process of adaptive responses to changing micro-environments with the consumption of standardized inputs that transform and mask human interactions with the environment.

More sensitive targeting of small-scale farmers by agricultural science and participation in programmes generated by research institutions and technicians may undermine farmers’ own adaptive responses and their independent technologies. The development of farming systems research and farmer participatory research may form part of the onslaught of the commoditization of agricultural technology, a long-term strategy to transform the remaining independent farmers into consumers of agribusiness technology. Thus, issues of participatory technology development need to be viewed in a wider institutional and political economy setting.

Strengthening farmers’ own traditions of experimentation

An alternative approach to the interface between farmers, research and technicians is to use research facilities to strengthen the experimenting traditions of farmers. Researchers

⁸ Johnson 1972; Box 1988; Richards 1985; McKorkle et al. 1988; Haverkort et al. 1991; de Boef et al. 1993.

⁹ For references, see Farrington and Martin 1988; Amanor 1990.

act as a catalyst to local development, evolving forms of support that enable local communities to transcend existing constraints (Biggs 1989a).

This requires new institutional arrangements and paradigms of research systems (informing research organization) that incorporate a recognition of the fact that farmers are not only consumers but also generators of technology (Röling 1990) with their own networks of experimentation (Box 1986). A paradigm of the international research system needs to recognize that technology is generated from multiple sources, including farmers and interactions between farmers and NGOs (Biggs 1989b).

In recent years a number of projects have come into being that focus on the knowledge systems of farmers. Many of these projects have been initiated by NGOs and are concerned with natural resources, farmers' genetic materials and the conservation of local crops and landraces from the onslaught of modern varieties. This research is often highly critical of the commercialization of modern agriculture, its reliance on petrochemical inputs and the negative impact of the promotion of Green Revolution technologies on small-scale farmers.¹⁰

Formal sector plant breeding research institutions are also developing an interest in linking up with such projects. This has grown out of a recognition that the genetic diversity of landraces is based upon human/crop interactions and a system of crop development played out in small farming systems. *Local crop development* (Hardon and de Boef 1993) refers to a conservation activity based on supporting farmer/crop interactions within specific localities to complement both in situ conservation (in wilderness areas) and ex situ conservation (preservation of genetic materials in gene banks). The aim of local crop development is to foster, support and strengthen existing farmer activities of crop conservation and improvement, to maintain processes that have resulted in the development of landraces and to increase the potential of research to develop improved varieties for marginal environments, outside of mainstream commercial breeding based on standardization. This also involves strengthening farmers' ability to organize autonomously or building new development initiatives into older modes of social organization (Berg 1993). This support may include provision of new germplasm for farmers to experiment with, or the preservation of farmers' existing landraces in gene banks, to enable farmers to experiment adventurously, knowing that if they make mistakes they can go back to their old proven varieties (Worede and Mekbib 1993).

The concept of local crop development is important in according the knowledge of farmers a dynamic role, and in associating it with development in addition to conservation. It provides a context in which peasant societies can contribute to modern science. This contrasts with much of the literature, which sees indigenous knowledge as a static system rooted in endless tradition disrupted by social change and modernization. Unlike some of the literature on farmer experimentation, the concept of local crop development also provides an environmental context in which innovation takes place that is independent and autonomous of international agricultural research.

¹⁰ Altieri 1987; Altieri and Hecht 1990; Tan 1986; Cooper et al. 1991; de Boef et al. 1993.

Knowledge, Commodity and Political Economy

Mooney (1983, 1993) raises important issues concerning the ulterior motives for interests of international agricultural research in indigenous knowledge of genetic materials. He points out that for many years the international agricultural research centres have been collecting genetic materials from farmers in tropical regions and making them accessible to commercial firms and agribusiness in the North. This genetic material is used in the development of modern varieties that are then patented. The contribution of the farmers to this is largely unacknowledged and uncompensated. The expansion of patenting laws into developing countries also threatens the basic right of farmers to produce and experiment with their own seeds. Alternative Technologies Project (PTA), a Brazilian NGO working on rescuing and developing farmers' varieties of maize, has found that the development of patenting laws in Brazil will enable seed companies to establish a monopoly over the breeding of local varieties and threaten the right of access of farmers to germplasm (Cordeiro 1993). In India, on 29 December 1992, angry farmers stormed the offices of Cargill in Bangalore and destroyed seeds. They were protesting against changes in Indian patenting laws that would give agribusiness companies monopoly rights in the production of seeds. They were demanding "the rights of farmers to produce, modify and sell seeds" (*Ecologist* 1993:1).

Researchers championing indigenous knowledge of genetic materials and farmer participation in genetic resource conservation and development may unwittingly be furthering the process of the expansion of agribusiness, and laying conditions for the further marginalization of farmers. Since control over plant genetic resources includes control over knowledge about seeds, indigenous knowledge of germplasm is important to the biotechnology industry.

These developments are mirrored in other industries. While an emphasis on indigenous knowledge may appear to be new in agricultural and environmental science, biologists collecting taxonomies of plants and the pharmaceutical industries have long collected inventories of the local uses of plants, which are often tested for the development of medicines. Juma (1989) comments:

The search for knowledge and new plants was already part of the culture during the early period of colonial expansion and imperialism. The role of genetic resources in the rise of the British Empire is an example of this process and the imperatives that led to the redrawing of the global genetic map. (1989:48)

In his introduction to *Plants of the Gold Coast* (1930), Irvine is largely concerned with indigenous perceptions of plants and their uses. He concludes:

The field of investigation on the value of such West African native medicines is one that is full of scope for further enquiry, especially along pharmaceutical lines, and much valuable information remains to be brought to light. (Irvine 1930:xxiv)

Thirty years later, in his introduction to *Woody Plants of Ghana* (1961), Irvine writes:

Special attention has been given to the economic uses of plants, including local medicinal uses. The names of active principles are given, where known, as are details of any scientific experiments made to demonstrate their medicinal uses. It is hoped that there will be further research along these lines, as the knowledge of medicinal uses by African herbal doctors is still enormous. (Irvine 1961:xiv)

The local knowledge of colonial peoples has made great contributions to science, including such important medicines as quinine taken from the bark of *Chinchona* (Juma

1989) and contributions of crop genetic resources.¹¹ While the North seeks to patent its knowledge of genetic materials, the genetic knowledge from developing countries has often been appropriated for free. In the case of Chinchona, genetic materials were smuggled out of Bolivia for cultivation in India by British botanists, in contravention of Bolivian national laws, which stated that export of the plant was a government monopoly (Juma 1989).

An emphasis on the knowledge of rural producers is not new in science. What is new is the incipient critique of the commoditization of science that accompanies much recent discourse on indigenous knowledge and promises of empowering local communities.

Empowerment is associated with the end of marginalization, and the development of a science that “listens” to the people, respects their knowledge, and builds this knowledge into processes of technology generation. This tends to neglect the fact that marginalization is associated not only with the perimeters of scientific interest but also with market forces. There are many agricultural communities that were formally centres of production and now lie marginalized because market forces have left them behind, seeking greener pastures elsewhere. This is applicable to agricultural communities not only in developing countries, but also in Europe and North America. Many former centres of industrial production have experienced similar fates, with generations of the children of workers doomed to unemployment as industry relocates to more profitable areas of the world.

While the discourse on indigenous knowledge is critical of commodity-oriented science, it has not been able to free itself of commodity orientation. It is still largely concerned with knowledge of commodities or potential commodities, of particular crops and genetic resources, rather than the framework of the generation of knowledge about production and its relation to the agricultural environment, the natural environment, and the position of producers in society.

Popular Perceptions of the Environment

Folk knowledge is largely considered to be utilitarian, and its role in development is now defined by the interests of science and capital rather than by the producers themselves. That is to say, indigenous knowledge tends to be robbed of its own autonomous consciousness and a global consciousness is imposed on it.

Some recent research on the environment stresses the ways in which traditional African societies used their knowledge of the environment to create systems of production that ensured the protection of the environment. These systems are now supposed to be breaking down because of modernization and population growth. This approach marginalizes local knowledge by questioning its relevance in the present period and by giving it an unconscious conservation objective or ethic, which mirrors modern international environmental and development concerns, but may be at odds with the present “unsustainable” livelihood strategies and aspirations of the people.

Theoretically, this approach is in danger of teleological functionalism, of reducing technical knowledge and knowledge of the environment to a purposive action solely

¹¹ Mooney 1983; Kloppenburg 1988; Juma 1989.

concerned with preserving the environment. This mirrors earlier developments in social anthropology and sociology, which saw social institutions as functioning to preserve the stability of society, and in cultural ecology, which saw ritual and social institutions as functioning to preserve an equilibrium with the environment.

Human ecology, equilibrium and consciousness

In the study of human ecology or human interactions with the environment, human interpretation of the environment has often been ignored and social organization and culture assumed to respond mechanistically to the environment (Ellen 1982). In much of the anthropological tradition, the ritual domain is the focus of human interactions with the environment, where homeostatic pressures on human utilization of the environment, or the regulation of ecological and social systems, are worked out in symbolic systems that lie above cognition of the natural world. In his analysis of mating ritual cycles in New Guinea, Rappaport (1968) argues that a complex chain of events and signals serves to determine pig festivals, which regulate the pig population and ensure that the environment is not degraded. He sees this as forming a homeostatic mechanism that lies beyond conscious awareness. Such an analysis is functional in that it reduces human organization and consciousness to a regulative mechanism for preserving an equilibrium. It robs society of its history.

While theories of equilibrium, homeostatic and cybernetic systems have made a major impact on studies of human ecology, equilibrium models of the natural world have been questioned by a number of biologists.¹² They argue that nature is not in a state of self-regulatory balance, but in a continually transient state, being disturbed from time to time, moving in one direction and then another under the influence of climatic and other geographical processes. Throughout history natural species have changed; some have disappeared and others have come into being.

History also furnishes many examples of pre-modern land degradation.¹³ The problem then facing neofunctional models of human society is to analyse and account for the conditions under which nature and human consciousness break out of homeostasis, and the effects of changes in nature on human-environmental equilibrium.

Alternatively, an analysis of human-environment interactions must examine human perceptions of the environment and give an account of purposive behaviour that focuses on the transformation of the natural world through the utilization of natural resources to meet specific objectives (Bennett 1976). As Levins and Lewontin (1985:69) argue, “consciousness allows people to analyse and make deliberate alterations, so adaptation of environment to organism has become the dominant mode”. Thus, human conceptions of the environment are concerned with transforming the environment to meet production goals, and reflect the negative and positive results arising from this transformation.

While knowledge of the environment may be manifest in classificatory systems of nature,¹⁴ which arise out of a familiarity with a relatively stable environment, the act of transforming nature gives rise to an understanding of the process involved in harnessing natural forces and the “capability of becoming aware of the disturbances created by humans in the milieu, and how these might be avoided if there is evidence of danger”

¹² May 1973; Holling 1973; Levins 1968; Levins and Lewontin 1985.

¹³ Westoby 1989; Hughes and Thirgood 1982; Thirgood 1986.

¹⁴ See Ellen 1982 for a review of the literature.

(Bennett 1976:35). This will give rise to a knowledge that is more process oriented than that rooted in classificatory structures. This type of knowledge may be characterized as an adaptive system (Bennett 1976). Adaptive systems are:

open systems—they freely exchange energy with the environment, and contain internal innovation. Adaptive systems are dynamic systems, because the innovative solutions to problems tend to create new problems, which must be coped with some time in the future. Adaptation is a behavioural process that seeks satisfaction for present needs, with greater or lesser concern for the future: where there is great concern, the system will change slowly and undesirable consequences may be avoided; where the concern is weak, the system will change relatively rapidly and easily, and the problems will accumulate. (Bennett 1976:94)

Periods of change will be characterized by much searching for solutions to problems without knowing the precise outcome. The environmental knowledge brought into play will be based on a reflection and knowledge of the responses of nature to the interventions of humans, and on the unintended outcomes of human interventions. This knowledge will be innovatory, experimental, interactive and dialectical, rather than arising from an intimate and timeless relationship rooted in equilibrium with a static nature. While it may not be concerned with wide and broad classificatory systems of natural resources, it will contain knowledge of process, energetics and ecology. It will arise from a tendency of humans to play with and explore the environment (Campbell 1966). The unforeseen consequences of these interactions will give rise to new perceptions of the environment.

In times of crisis, this knowledge may be concerned with solving environmental problems. In other periods, knowledge of ecology and energy flows may be harnessed for different purposes and subsumed under different adaptive strategies that seek to harness energy to accommodate nature to particular objectives. Thus, shifting agriculturalists may harness the energy of fire to minimize labour inputs on the farm. In contrast, high-input agriculturalists may harness the energy of petrochemicals to raise yields to the maximum possible.

In each instance, interactions with the environment are influenced by the nature of social relations and the development and utilization of technology. Human relations with nature are a reflection of social and production relations. The social and production relations change proportionate to interactions with the natural world, the responses of the natural world to productive activity, and new knowledge about nature and natural resources. As Bennett (1976:41) writes, “we act on Society just as we act on Nature, and our actions toward Nature may be defined for us by actions on Society. Hence Nature becomes Society”.

The study of human ecology has much to contribute toward an understanding of popular perceptions of nature and natural resources, which goes beyond the narrow utilitarian approach of the development commodity disciplines. However, the roots of human ecology in functionalism, and concerns with equilibrium models and adaptation to nature, have limited its scope to examine the impact on the environment of societies drawn into commodity production and incorporated into the world economy. The dominant concerns are with small-scale social formations and tribal people rather than with peasant societies organized around large urban centres and nodes of world trade. In reality, many of these societies will be involved in commodity production and participate in wider political and socioeconomic formations, but the integration of these wider social formations has not been the object of study.

Bennett (1976) argues that human ecology needs to develop into a policy science of the adaptive consequences of human activities. However, by focusing on culture and on the behavioural aspects of human relations with the environment, and in relegating the socioeconomic and political economy, Bennett is in danger of producing an overgeneralized methodology concerned with an essential human nature, in which social dimensions are subsumed under the problem of the human need for gratification and its impact on the environment. The impact of political and economic systems on human-environmental interactions is removed from this equation. The central question is one of how policy makers can control human actions that result in land degradation within a democratic system. This is in danger of producing a technocentric approach to the environment, in which the central problem is seen as the introduction of regulation to control environmental utilization and the use of coercion to enforce this. However, the perceptions of what needs to be regulated and who does the regulation are socially constructed.

This raises similar problems to the “lifeboat ethics” of Hardin (1972). Hardin, one of the early progenitors of global environmental technocentrism, argues that the overpopulated masses of the Third World are a major threat to the survival of Earth. They are in danger of capsizing the lifeboat, the “spaceship Beagle” (global environmentalism), that is destined to save the world. Only those underdeveloped countries that show a willingness to control their population should be helped aboard the lifeboat or should be provided with aid by the developed world. The rest are a dispensable entity threatening the global environment or modern society. Those who obey what the captain says will be helped, but those who persist in their own viewpoints will be allowed to perish. The sensibilities of the lifeboat captain reveal an ethnocentrism in which the concept of the environment is equated with the world-view of Western capitalist life, from which other parts of human diversity and experience can be cut off.

Environmentalism of the Poor

Recent literature has unearthed the phenomenon of environmental movements among the marginalized, poor and dispossessed tribal and peasant peoples in developing countries. This includes social movements that oppose the actions of the state and large companies that cause land degradation and threats to popular livelihoods. These social movements oppose deforestation, large dam projects, enclosure of common lands for agribusiness and the extension of patenting laws.¹⁵ In contrast with the consumer environmentalism of well-endowed middle-class Europeans and North Americans, these movements are rooted in production and livelihood struggles. They represent the interests of people whose livelihoods are threatened by the increasing commoditization of the environment and the expansion of capitalism into the last frontier areas. They represent a desperate defence of the people against the enclosure of the common lands they have utilized for centuries, and against the appropriation of nature by large-scale

¹⁵ See Hecht and Cockburn 1990 on Brazilian rubber tappers and Indians; Guha 1989 on the Chipko movement in India, with strong representation from tribal people, which seeks to protect forests from deforestation; Shiva 1988 and Agarwal 1993 on women’s environmental movements in India, including movements against dams; Colchester 1992 on a wide range of popular movements in South and Southeast Asia; *Ecologist* 1993 for movements concerned with agribusiness control over seeds.

commerce. They represent the right to use land and resources on the basis of established historical and cultural experiences and in ways that are determined by local needs and livelihoods rather than commodity markets. They represent local consciousness of the environment (including the human environment and pre-capitalist values) defining its space outside of global environmentalism, and challenging capitalist economic development.

While these social movements are being interpreted as something new, they are part of a continuum, with roots in popular rebellion and resistance to the encroachment of the world economy.¹⁶ Colchester gives examples of popular resistance to imposed development projects in Southeast Asia resulting in the use of intimidatory tactics by the state and culminating in popular uprisings. He also notes that not all these social movements are environmentally benign. Tribal people in Bihar who have lost rights to land have mobilized against official forestry programmes, and developed a “forest cutting programme”. They use forest clearance as a means of asserting rights to land that can be upheld in the context of forestry law. In Karnataka and Thailand people have mobilized successfully against the appropriation of land by forestry programmes, sabotaging eucalyptus plantations and uprooting seedlings, bringing development projects to a standstill, and winning the right to manage land.

If these movements are not new, international recognition and support for their struggles are. In the past, popular resistance to the march of progress has often resulted in decimation and genocide. Increasing familiarization with the state and the politics of development has also enabled popular movements to articulate their struggles in modes through which they have been able to gain public support at the national and international levels. At the international level many struggles of tribal or indigenous people have attained the status of icons, while national environmental movements rooted in the middle class or commodity-producing peasantry are marginalized (Viola 1992; Redclift 1989)—as are the environmental struggles of working people and national minorities in developed countries against their living conditions.

International recognition for environmental movements, and their incorporation into international development objectives, may form part of a process of co-option (Vivian 1992). The struggles of tribal peoples may in the end be packaged into new rainforest flavours of ice-cream for the environmentally sensitive consuming classes of the North (May 1991), a symbolic representation of the new frontier of genetic resources. Support for the struggles of the common people for the common land may reflect a larger conflict between international and national capital for access to land for different resource usages. The interests of international capital may be associated with preserving the resources of tropical forests as international “common property” resources, since the enclosure of the tropical rainforests by national capital may preempt the future interest of international capital in genetic resources.

Environmental movements are seen as important levers for the creation of sustainable development agendas, bringing local knowledge and experiences of the environment into the development debate, containing the cost of development and enlarging the benefits (Redclift 1989). They have also been seen as contributing to the emergence of ecological economics by forcing capital to internalize some of the externalities of environmental degradation (Martinez-Alier 1990).

¹⁶ Colchester 1992; Jackson 1993; Guha 1989.

Environmental movements have not emerged uniformly throughout the world. Their existence is likely to be related to political conditions, traditions of struggle and organization, and the reality of marginalization. The lack of environmental movements in particular areas does not preclude the emergence of an awareness of the political economy of the management of resources. This may take the form of disquiet about certain forms of national and international development policy, or resistance to adopting forms of development behaviour promoted by the state and its allies.

To divorce environmental movements from their historical and socioeconomic context and to promote them as a lever for environmental accountability and sustainable development agendas is to reduce them to functionalism. They need to be studied in the context of how economic, social and political factors influence the utilization of resources; the ways in which people associate resources in particular niches of production; the articulation of the expansion of commodity markets and the world economy in patterns of utilizing resources; and the responses of people to change and encroachment on their livelihoods, their neighbourhood and their way of life.

Political Economy and the Frontier

The study of environmental perceptions and consciousness among rural people can be carried out in a political economy framework that examines the relationship between people and the natural environment, the relations of people to production, and the incorporation of the production interface between people and nature into wider political and market relations, into the nation state and the world economy.

This requires a framework that examines the interaction between local production and global markets and between global and local socioeconomic stratification. In this, three levels of analysis need to be combined: local production and economy within the context of the regional economy, the regional economy in the context of the national economy and state, and the nation state and its economy in the context of the world economy.

Production is a useful activity around which the interaction between people and the environment can be observed, but analysis needs to go beyond examining those commodities produced for markets, to the perceptions of the producer of nature and natural resources and the impact of the market economy and its associated political and social outlooks on the utilization of resources. The interaction between people and the environment must go beyond an understanding of a few principles of ecology and introduction of systems analysis into socioeconomic frameworks. It must document patterns and ranges of resource usage and perceptions of resources, and their relations to socioeconomic and micro-environmental differentiation. It needs to develop a historical dimension that incorporates changing patterns of resource utilization and perceptions of the environment with the dynamics of socioeconomic transformation, economic growth, decline and marginalization.

The concept of the frontier is a useful tool for the building of such an analysis, uniting a wider world economy with the local economy, and society with nature.¹⁷

¹⁷ There is now a large literature on the frontier. Some notable examples include Billington (1966), who examines the frontier thesis as originally developed by Turner (1920) and its subsequent reinterpretation. Webb (1952) provides a particularly stimulating extension of the frontier thesis that examines the implications of the decline of the frontier for American

Frontiers represent first encounters between nature and society, arenas in which society shapes nature in its own image, and where people are eventually shaped by the dominant political and economic structures in society. People migrate to the new frontier with the hope of starting a new life, but often they find themselves caught in a web as society reconstructs itself in its old image. In recent years the frontier has received much attention as a result of growing world awareness of tribal peoples, particularly in the Amazon. However, few studies examine old frontier areas, districts that have been despoiled and now lie forgotten.¹⁸ These areas have usually become marginalized because of the culmination of land degradation resulting from the ramifications of frontier ideology and the pressures of frontier markets; and because settlers can move to the new frontier beyond, which will be more profitable to exploit than solving the mounting environmental problems.

The whole process of frontier expansion is important to policy frameworks of the environment and for the analysis of the unevenness of development throughout various regions within a nation. While people remaining in old frontier districts have to contend with environmental degradation, they are frequently marginalized since development resources, infrastructure and resources for the maintenance of infrastructure have moved to the new frontier areas. In this respect, marginalization applies not only to peoples beyond existing technology (the sense in which it is frequently used by commodity sector disciplines) but also to people who have been consumed by previous modes of technology utilization, and are left to suffer the consequences and find their own solutions.

The dynamics of frontier development introduce new dimensions into the human-environmental interface, not accounted for by systems analysis with its focus on the matrix of environment, technology and demography. This relates to the movement of peoples, infrastructure and market places, responding to the opening up of new markets, which develop the capacity to despoil an environment rapidly through intensified production. The expansionary nature of capital ensures that the potential of a windfall profit at the frontier is highlighted, but not the consequences—which capital does not have to bear as long as new frontiers exist.

Commoditization and Value

Commoditization is used here in two senses: it refers to the processes by which science becomes increasingly subject to commercial pressures and seeks to promote commercial values; and to the processes through which farmers become captured by commercial agricultural input markets, and increasingly dependent upon the consumption of agribusiness packages for production. Commoditization involves the incorporation of farmers into markets for modern genetic materials and increasing dependency on packages of chemical inputs, labour and technical advice. At its most developed, it involves dependency on marketing outlets through outgrower and contract farmer schemes in which agribusiness chooses the varieties that farmers grow and markets them.

society, and the impact of the frontier on the development of capitalism in both Europe and America. Wolfskill and Palmer (1983) is a useful collection on the application of the concept of the frontier worldwide. Moran (1981) and Hecht and Cockburn (1990) examine the ecological and socioeconomic implications of the opening up of new frontiers.

¹⁸ One notable exception is Dean's (1983) study of the frontier in São Paulo, Brazil. This traces the whole history of frontier development in this area up to the time when the frontier moves to new districts. Webb (1952) also provides a framework that considers the whole history of the frontier.

Agribusiness firms control the markets in seeds and inputs, and are also monopoly buyers and processors of farm output.¹⁹

Development programmes often seek to create an interface between farmers and agribusiness. They create infrastructures of credit and technical support to encourage farmers to consume the products of agribusiness. They create a dependency, based on the integration of rural society with dominant market relations (van der Ploeg 1990). Farmers may respond by attempting to develop a relatively autonomous agriculture, which creates buffers against the market. This may include mechanisms that promote forms of self-sufficiency, that value autonomy, inventiveness and the freedom to pursue independent strategies and styles of farming beyond commercial considerations. This involves forms of economy in which resources are valued and utilized as use values as much as exchange values. This enables producers to resist total incorporation into unfavourable markets and to maintain autonomous forms of production and relations to the environment that are not determined solely by market conditions (van der Ploeg 1990). This may be interpreted by the forces of development as conservatism or a sentimental attachment to the land.

In recent years the agricultural and development disciplines have become increasingly aware of their limitations, the negative environmental impact of modern technologies, the implications of reliance on non-renewable petrochemical resources for expansion of yield and the potential of new unexploited genetic materials. Increasingly they are interested in a range of genetic resources that were previously marginal, including minor crops, new crops, landraces and medicinal plants. They are also interested in environmental considerations as a result of the failure of standardized technology packages to make inroads into marginal environments, the consequences of environmental degradation and the widespread erosion of genetic resources as a result of development initiatives.

Approaches to these resources, however, reveal frameworks that if logically developed will lead to the total commoditization of nature. This includes environmental accounting, the attempt to place exchange values on environmental degradation, genetic resources and the associated local community knowledge. This may lead to a validation of the knowledge of rural communities, in which their contribution is recognized and recompensed to a certain degree. But it may also lead to the introduction of a degree of commoditization in rural life that may threaten its intellectual frameworks and information networks. This may lead to the guarding of knowledge and genetic resources in much the same way in which genetic science in the United States and Western Europe is a protected world, highly commoditized and plagued by patenting laws and commercial considerations that threaten the free exchange of knowledge. This commoditization of genetic resources and associated human knowledge systems may have a negative impact on the cultures of rural communities, and create conditions for further appropriation by agribusiness. These are complicated issues that are not easily resolved. They show that in the study of environment the concept of value (and the nature of value) is of central importance in the nexus of relations between producers, markets, science and the environment.

¹⁹ Bernstein 1976; Levins and Lewontin 1985; van der Ploeg 1990.

This Case Study

This study is concerned with how rural people utilize resources and the impact of markets, national policy and environmental degradation on the utilization of resources. It is not concerned with specific prized genetic resources or highly cherished environments, such as centres of genetic diversity or pristine rainforests. It focuses on marginalized environments in areas that were formerly centres of export crop production but now suffer from increasing degradation and are conveniently forgotten. It deals with small farmers who are involved in commodity production, and with cultivators on the edge of the forest who have not embraced modern high-input farming and who have reservations about modern technologies and development prescriptions.

The New Frontier is based on a case study that focuses on a line of settlement in the forest ecotone of southeast Ghana, in the Manya Krobo district of the eastern region. This is a highly fragile area on the edge of the forest, with markedly different micro-environments, ranging from areas with relict forest to grassland. It is one of the oldest frontier areas in Ghana and was incorporated into the world economy in the early nineteenth century. Manya Krobo was first known for its oil palm production but decline in the oil palm world market in the late nineteenth century led the area to convert to cocoa production. By the 1940s cocoa had been decimated by disease and the Krobo next focused on food crops, becoming Ghana's largest food-producing area for the home market. However, movement to food in a predominantly export-oriented economy signalled the beginning of marginalization in Krobo. This was compounded by the opening up of new agricultural frontiers in Brong Ahafo in the 1960s and 1970s, which became a central focus of the drive for agricultural modernization. The Manya Krobo area has been forgotten and left to deal with its own problems. Land degradation is pronounced, the result of 100 years of export-oriented production with a frontier consciousness. With decline, many people have moved on to the new cocoa frontier, the new oil palm frontier and the new food-producing frontier. The once thriving market of Asewewa—the largest food wholesale market in Ghana between 1940 and 1970—has declined pitifully, although it is still recognized as a market of quality palm oil and maize.

Those left behind are forced to struggle with an increasingly harsh environment, in which the former forest has been invaded by aggressive pan-tropical and savannah weeds, in which rainfall has become increasingly unreliable and yields have fallen dramatically. People still move to newer frontier areas as life becomes increasingly difficult, but this option is less and less attractive as land becomes scarce in these frontiers and stories are carried back of the hardships people have to withstand at the hands of rapacious landowners.

The state agricultural services have a poor presence and are demoralized by the lack of uptake of the technology they promote. Without help, farmers are left to reflect on their experiences of frontier development, on the crisis in the agroecosystem, and on the responses of the environment to their interventions. They adapt and experiment in adapting to changing conditions, and some attempt to ameliorate environmental degradation. The study examines the ways in which farmers utilize and interact with the environment. It contrasts the adaptive responses of farmers in the worst degraded micro-environments, which are dominated by grassland, with more forested environments. The more degraded environments are found to be hotbeds of experimentation and innovation, with a high consciousness of environmental issues. However, there is no support for this spirit of innovation within the agricultural and development services, which are busy promoting their own solutions emanating from the international circuit

of technology development. These international solutions sometimes have shortcomings already realized by farmers. The different perceptions of farmers, researchers and policy makers are examined, as are the implications for the frameworks of development.

In chapter 2—on the political economy of the frontier in the forest zone of Ghana—*New Frontier* goes on to examine the wider regional setting, placing the agrarian system within its historical context. It looks at the factors that have influenced the emergence and decline of frontier agriculture. It also explores the impact of the frontier on socioeconomic relations and integration into the world economy, and on the formulation of agricultural policy. International and national policy frameworks are still rooted in models of export crop production and frontier colonization. They are trying to recreate the golden years of frontier boom, to extract the last windfalls from the frontier (particularly in the form of timber) and to rehabilitate cocoa in areas in which the frontier has gone. Without any conception of the role of the windfalls of frontier colonization, they face a task as herculean as the one that confronted Don Quixote and Sancho Panza. Unlike Don Quixote, they have the power to pull levers and exert pressures to reorganize agrarian production and to aggravate the growing immiseration of the rural folk.

Chapter 3 develops a detailed analysis of the impact of the frontier within the Manya Krobo district. It traces the relationship between the expansion of the frontier and integration into the world economy, and shows how farming strategies and farmer perceptions of the environment have changed with the transformation of the frontier.

Chapter 4 of *The New Frontier* moves into the locality of Upper Manya Krobo in which research was carried out. It investigates the social conditions of production, the relations of production, access to productive factors within communities and the impact of micro-environmental variations on production. The interaction between commoditization and land degradation results in an economy in which the cost of production is high and returns are declining, resulting in a highly capitalized neosubsistence economy.

Chapter 5 is concerned with adapting to changing patterns of resource utilization within communities in response to degradation and the market. It examines the diversity of natural resources used in communities and problems emerging from the interactions between a diversification of use values in households and a market system that focuses on a narrow range of exchange values. The chapter also touches upon the stratification of markets, and upon the implications of monopoly market control for a more diversified and environmentally sensitive utilization of resources.

New Frontier continues in chapter 6 with an exploration of the adaptive and experimental skills of farmers in coping with and adjusting to changes in the agroecosystem and land degradation. Farmers are experimenting with evolving new regenerative technologies. The chapter examines the factors encouraging experimentation in different localities and the implications for the relationship between farmers and formal scientific research and development. It argues for a new structure for research and development that is more exploratory in its approach to problems and diagnosis and that seeks to strengthen and support the independent research capabilities of farming communities.

Finally, chapter 7 draws up a critical framework for the analysis of contemporary environmental and development policy. It is argued that this has to examine the structures and modes through which nation states and producers are integrated into the world economy, rather than focus on abstracted rural producers as the problem. Throughout history the world economy has influenced and redefined the relationship

between producers and their environment. What is needed is a political economy approach rooted in historical experience that explores the fundamental contradictions in development policy and integrates a critical policy framework with the objectives of creating popular participation in technology development and development planning. This would provide new models that support the regeneration of environments and districts in accordance with the aspirations of producers.

References

- Agarwal, B. 1992. *The Gender and Environmental Debate: Lessons from India*. Paper presented at the UNRISD Conference on Social Dimensions of Environment and Sustainable Development, Valletta, Malta, 22–25 April.
- Altieri, M. (ed.). 1987. *Agro-Ecology: The Scientific Basis of Alternative Agriculture*. Westview, Boulder CO.
- Altieri, M., and S. Hecht. 1990. *Agro-Ecology and Small Farm Development*. CRC Press, Boston MA.
- Amanor, K.S. 1990. *Analytic Abstracts in Farmer Participatory Research*. Agricultural Administration Unit Occasional Paper No. 10. ODI, London.
- Bennett, J.W. 1976. *The Ecological Transition: Cultural Anthropology and Human Adaptation*. Pergamon Press, Oxford.
- Berg, T. 1993. "The science of plant breeding: Support or alternative to traditional practices." In W. de Boef, K. Amanor, K. Willard, with A. Bebbington (eds.), *Cultivating Knowledge: Genetic Diversity, Farmer Experimentation and Crop Research*. IT, London.
- Berg, T., Å. Bjørnstad, C. Fowler and T. Skrøppa. 1981. *Technology Options and the Gene Struggle*. Development and Environment No. 8, Occasional Paper Series C. NORAGRIC, Oslo.
- Bernstein, H. 1979. "African peasantries: A theoretical framework." *The Journal of Peasant Studies*, Vol. 6, No. 4, 412–443.
- . 1977. "Notes on capital and peasantry." *Review of African Political Economy*, Vol. 10, pp. 60–73.
- Biggs, S.D. 1989a. *Resource-Poor Farmer Participation in Research: A Synthesis of Experiences from Nine National Agricultural Research Systems*. OFCOR Comparative Study Paper No. 3. ISNAR, The Hague.
- . 1989b. *A Multiple Source of Innovation Model of Agricultural Research and Technology Promotion*. Agricultural Administration (Research and Extension) Network Paper No. 6. ODI, London.
- Biggs, S.D., and J. Farrington. 1991. *Agricultural Research and the Rural Poor: A Review of Social Science Analysis*. IDRC, Ottawa.
- Billington, R.A. 1966. *The Frontier Thesis: Valid Interpretation of American History?* Holt, Rinehart and Winston, New York.
- Box, L. 1988. "The experimenting farmer: A missing link in agricultural change?" In J. Hinderink and E. Szulc-Dabrowiecka (eds.), *Successful Rural Development in Third World Countries*. Study No. 67. Netherlands Geographical Institute, Utrecht.
- Campbell, B. 1966. *Human Evolution: An Introduction to Man's Adaptations*. Aldine, Chicago.
- Colchester, M. 1992. *Sustaining the Forests: The Community-Based Approach in South and South-East Asia*. Discussion Paper No. 35. UNRISD, Geneva.
- Conlin, S. 1985. "Anthropological advice in a government context." In R. Grillo and A. Rew (eds.), *Social Anthropology and Development Policy*. Tavistock, London.
- Cooper, D., R. Vellvé and H. Hobbelink (eds.). 1992. *Growing Diversity: Genetic Resources and Local Food Security*. IT, London.
- Cordeiro, A. 1993. "Rediscovering local varieties of maize: Challenging seed policy in Brazil." In W. de Boef, K. Amanor, K. Willard, with A. Bebbington (eds.), *Cultivating Knowledge: Genetic Diversity, Farmer Experimentation and Crop Research*. IT, London.
- Crowder, M. and O. Ikeme. 1970. *West African Chiefs: Their Changing Status under Colonial Rule and Independence*. University of Ife, Ife.
- De Boef, W., K. Amanor, K. Willard, with A. Bebbington (eds.). 1993. *Cultivating Knowledge: Genetic Diversity, Farmer Experimentation and Crop Research*. IT, London.
- Dean, W. 1983. "Ecological and economic relationships in frontier history: São Paulo, Brazil." In G. Wolfskill and S. Palmer (eds.), *Essays on Frontiers in World History*. University of Texas Press, Arlington VA.
- Dixon, J.A., D.E. James and P.B. Sherman. 1989. *The Economics of Dryland Management*. Earthscan, London.
- Ecologist. 1993. "Angry Indian farmers destroy Cargill's seeds." Vol. 23, No. 2, March-April, p. 1.
- Ellen, R. 1982. *Environment, Subsistence and System: The Ecology of Small-scale Social Formations*. Cambridge University Press, Cambridge.

- Farrington, J. and A. Martin. 1988. *Farmer Participation in Agricultural Research: A Review of Concepts and Recent Practices*. Agricultural Administration Unit Occasional Paper No. 9. ODI, London.
- Francois, J. 1992. "Foreword." In J. Falconer, *Non-timber Forest Products in Southern Ghana: A Summary Report*. Forestry Series No. 2. ODA. London.
- Frankel, O. 1970. "Genetic dangers of the Green Revolution." *World Agriculture*, Vol. 19, No. 3, pp. 9–14.
- Guha, R. 1989. *The Unquiet Wood: Ecological Change and Peasant Resistance in the Himalayas*. University of California Press, Berkeley.
- . 1985. "Eco-development debate: A critical review." *South Asian Anthropologist*, Vol. 6, No. 1, pp. 15–24.
- Hardin, G. 1972. *The Voyage of the Spaceship Beagle: Exploring New Ethics for Survival*. Viking Press, New York.
- Hardon, J.R. and W. de Boef. 1993. "Linking farmers and plant breeders in local crop development." In W. de Boef, K. Amanor, K. Willard, with A. Bebbington (eds.), *Cultivating Knowledge: Genetic Diversity, Farmer Experimentation and Crop Research*. IT, London..
- Harlan, J.R. 1975. "Our vanishing genetic resources." *Science*, Vol. 188, pp. 618–621.
- Haverkort, B., J. van der Kamp and A. Waters-Bayer (eds.), *Joining Farmers' Experiments: Experiences in Participatory Technology Development*. IT, London.
- Hecht, S. and A. Cockburn. 1990. *The Fate of the Forest: Developers, Destroyers and Defenders of the Amazon*. Penguin, London.
- Holling, C.S. 1973. "Resilience and stability in ecological systems." *Annual Review of Ecology and Systematics*, Vol. 4, pp.1–23.
- Hosier, R., P. O'Keefe, B. Wisner, D. Wisner, D. Shaakow. 1982. "Energy planning in developing countries: Blunt axe in a forest of problems?" *Ambio*, Vol. 11, No. 4, pp. 180–187.
- Hughes, J.D. and J.V. Thirgood. 1982. "Deforestation, erosion and forest management in ancient Greece and Rome." *Journal of Forest History*, Vol. 26, pp. 60–75.
- Irvine, F.R. 1961. *Woody Plants of Ghana*. Oxford University Press, Oxford.
- . 1930. *Plants of the Gold Coast*. Oxford University Press, Oxford.
- Jackson, C. 1993. "Environmentalism and gender interests in the Third World." *Development and Change*, Vol. 4, No. 4, pp. 649–678.
- Johnson, A.W. 1972. "Individuality and experimentation in traditional agriculture." *Human Ecology*, Vol. 1, No. 2, pp.149–160.
- Juma, C. 1989. *The Gene Hunters: Biotechnology and the Scramble for Seeds*. Zed Press, London.
- Kloppenborg, J.R. 1988. *First the Seed: The Political Economy of Plant Biotechnology, 1942–2000*. Cambridge University Press, Cambridge.
- Levins, R. 1968. *Evolution in Changing Environments*. Princeton University Press, Princeton NJ.
- Levins, R., and R. Lewontin. 1985. *The Dialectical Biologist*. Harvard University Press, Cambridge MA.
- Martinez-Alier, J. with K. Schlüpmann. 1990. *Ecological Economics: Energy, Environment and Society*. Blackwell, Oxford.
- May, P.H. 1991. "Building institutions and markets for non-wood forest products from the Brazilian Amazon." *Unasyva: Forest Products*, Vol. 42, No. 165, pp. 9–16.
- May, R.M. 1973. *Stability and Complexity in Model Ecosystems*. Princeton University Press, Princeton NJ.
- McKorkle, C.M., R.H. Brandsletter and G. McClure. 1988. *A Case Study on Farmer Innovation and Communication in Niger*. Communication for Technology Transfer in Africa. Academy of Educational Development, Washington DC.
- Mooney, P.R. 1993. "Exploiting local knowledge: International policy implications." In W. de Boef, K. Amanor, K. Willard, with A. Bebbington (eds.), *Cultivating Knowledge: Genetic Diversity, Farmer Experimentation and Crop Research*. IT, London.
- . 1983. "The law of the seed." *Development Dialogue*, Vol. 1, No. 2, pp. 1–172.
- . 1979. *Seeds of the Earth: A Private or Public Resource?* Inter Pares, Ottawa.
- Moran, E.F. 1981. *Developing the Amazon*. Indiana University Press, Bloomington IN.
- Nair, P.K.R. (ed.). 1989. *Agroforestry Systems in the Tropics*. Kluwer Academic Publications, Dordrecht.
- Oakley, P. 1991. *Projects with People: The Practice of Participation in Rural Development*. ILO, Geneva.
- Pearse, Andrew and Matthias Stiefel. 1979. *Enquiry into Participation: A Research Approach*. UNRISD, Geneva.
- Pepper, D. 1984. *The Roots of Modern Environmentalism*. Croom Helm, London.
- Ravnborg, H.M. 1992. *The CGIAR in Transition: Implications for the Poor, Sustainability and the National Research Systems*. Agricultural Administration (Research and Extension) Network Paper 31. ODI, London.
- Redclift, M. 1989. *Sustainable Development: Exploring the Contradictions*. Routledge, London.
- Rhoades, R.E. and R.H. Booth. 1982. "Farmer-back-to-farmer: A model for generating acceptable agricultural technology." *Agricultural Administration*, Vol. 11, pp. 127–137.

- Ricardo, D. 1955. *Principles of Political Economy and Taxation*. Everyman. London.
- Richards, P. 1987. *Experimenting Farmers and Agricultural Research*. Department of Anthropology, University College, London.
- . 1985. *Indigenous Industrial Revolution: Ecology and Food Production in West Africa*. Westview Press, Boulder CO.
- Röling, N. 1988. *Extension Science: Information Systems in Agricultural Development*. Cambridge University Press, Cambridge.
- Shiva, V. 1988. *Staying Alive: Women, Ecology and Survival*. Zed Books, London.
- Tan, J.G. "A participatory approach in developing an appropriate farming system in eight irrigated lowland villages." In C.B. Flora, M. Tomecek (eds.), *Selected Proceedings of Kansas State University's Farming System Research Symposium*. Kansas State University, Manhattan KS.
- Thirgood, J.V. 1986. "The Barbary forests and forest lands, environmental destruction and the vicissitudes of history." *Journal of World Forest Resource Management*, Vol. 2, pp. 137–184.
- Thrupp, L.A. 1989. "Legitimizing local knowledge: 'Scientitized packages' or empowerment for Third World people." In D.M. Warren, L.J. Slikkerveer, S.O. Titlola (eds.), *Indigenous Knowledge Systems: Implications for Agriculture and International Development*. Technology and Social Change Studies 11. Iowa State University, Ames.
- Turner, F.J. 1920. *The Frontier in American History*. Harvard University. Cambridge MA.
- Van der Ploeg, J.D. 1990. *Labor, Markets and Agricultural Production*. Westview, Boulder CO.
- Viola, E.J. 1992. *The Environmental Movement in Brazil (1971–1992) and the New Challenge of Sustainable Development*. Paper presented at the UNRISD Conference on Social Dimensions of Environment and Sustainable Development, Valletta, Malta, 22–25 April.
- Vivian, J. 1992. *Collective Action for Sustainable Development: Towards a Theoretical Framework for Research*. Paper presented at the UNRISD Conference on Social Dimensions of Environment and Sustainable Development, Valletta, Malta, 22–25 April.
- Webb, W.P. 1952. *The Great Frontier*. Riverside Press, Cambridge MA.
- Westoby, J. 1989. *Introduction to World Forestry*. Blackwell, Oxford.
- Wilkes, G. and T. Williams. 1983. "Current status of crop germplasm." *Critical Reviews in Plant Science*, Vol. 1, No. 2, pp. 133–181.
- Wolfskill, G. and S. Palmer (eds.). 1983. *Essays on Frontiers in World History*. University of Texas Press, Arlington VA.
- Worede, M. and H. Mekbib. 1993. Linking genetic resource conservation to farmers in Ethiopia." In W. de Boef, K. Amanor, K. Willard, with A. Bebbington (eds.), *Cultivating Knowledge: Genetic Diversity, Farmer Experimentation and Crop Research*. IT, London.

Chapter 11

Ecological Conflicts and the Environmental Movement in India¹

Madhav Gadgil² and Ramachandra Guha³

(1994)

The Sites of Struggle

Introduction

As the centre of power and patronage, the Indian city of New Delhi is the venue of year-round demonstrations by organizations representing different classes, castes and ethnic groups. Farmers demanding the provision of subsidized power and fertilizer, industrial workers campaigning for higher pay and ethnic minorities fighting for a separate state all recognize the symbolic significance of a show of strength in the national capital. Assured of widespread coverage by the print media, these demonstrations are often held at the Boat Club lawns, a stone's throw from the Houses of Parliament and the government secretariat.

May 1990 saw a series of events unprecedented even in New Delhi: a demonstration followed within a week by a counter-demonstration. First, villagers to be displaced by the massive Sardar Sarovar Dam being built on the Narmada river in Central India, assembled in a peaceful *dharna* (sit-down strike) on Gol Methi Chowk in the heart of New Delhi, and very close to the residence of the then Prime Minister V.P. Singh. Consisting mostly of poor peasants and tribals, the demonstration lasted for several days, with singing, dancing and exhortative speeches by the protest leaders. Most of the

¹ Originally published in a special issue of *Development and Change* (Vol. 25, No. 1, 1994) on Development and Environment: Sustaining People and Nature. UNRISD is grateful to Wiley Blackwell for permission to reproduce this work here.

² At the time of writing, Madhav Gadgil was Professor at the Centre for Ecological Sciences of the Indian Institute of Science, Bangalore.

³ At the time of writing, Ramachandra Guha was Professorial Fellow at the Nehru Memorial Museum and Library, New Delhi, India.

demonstrators had come from Madhya Pradesh, the state containing a majority of the villages to be submerged by the dam. They dispersed only after the Prime Minister met a delegation of the protesters and assured them that the Sardar Sarovar project would be reviewed. Immediately, politicians in Gujarat, the state that stands to benefit most from the project, set about organizing a counter-demonstration. After a public meeting at the Boat Club, the Gujarat protesters themselves went to meet V.P. Singh. The Prime Minister granted them an audience immediately (he had kept the Madhya Pradesh peasants waiting for days) and told them what they wanted most to hear—that he and his government were fully committed to the implementation of the Sardar Sarovar project.

A few months later, the two opposing groups were involved in a face-to-face encounter hundreds of miles from New Delhi, on the Madhya Pradesh/Gujarat border. On 25 December 1990, the “Narmada Bachao Andolan” (Save Narmada Movement), an organization working among the potential oustees of the dam, began a 250-kilometre march from Rajghat in Madhya Pradesh to Kevada colony, the site in Gujarat of the Sardar Sarovar Dam. The marchers, several thousand in all, were stopped by the Gujarat police at the border village of Ferkuva, and prevented from entering the state. On the Gujarat side, a large group, including students and plainclothes policemen, had assembled to heckle the marchers. A stalemate lasting several days ensued, with the pro-dam agitationists shouting slogans in favour of the dam and against the Narmada Bachao Andolan and one of its leaders, the respected Gandhian Baba Amte. For their part, the protesters insisted on their right to march peacefully to the dam site at Kevada.

On the second day of the New Year, a group of 25 protesters, with their hands tied to emphasize the non-violent nature of their struggle, entered Gujarat, only to be stopped by the police 150 metres inside the state; two more groups, again with their hands tied, joined them the next day. On 5 January, Baba Amte and another group of 25 protesters also entered Gujarat. After being allowed to cross the border but not proceed farther, they began an indefinite *dharna* on the Gordah river bridge, barely 30 metres inside Gujarat. The next day, a group of anti-dam activists including Medha Patkar, perhaps the movement’s most important leader, went on a hunger fast on the Madhya Pradesh side of the border. With the Gujarat government unrelenting, the stalemate continued for several weeks until, on 28 January, with their lives in danger, Patkar and her associates were persuaded to give up their fast (Anonymous 1991).

The Narmada controversy is just one, especially charged, example of a wide spectrum of social conflicts over natural resources in contemporary India. Competing claims over water and forests, in particular, are now a visible presence on the social landscape. They arise, typically, when one group of resource users—for example, industry or commercial farmers—is seen as violating (often with the aid of the state) a prior claim of another set of resource users—for example, subsistence peasants or tribals. With the resources in question becoming increasingly scarce owing to environmental degradation, these conflicts seem certain to intensify.

Social conflicts over nature and natural resources add a third category to the two generic forms of conflict widely studied by social scientists—those over cultivated land and its produce and those within the factory. Struggles between landlords and agricultural labourers/sharecroppers over wages and the disposal of produce, or between peasants and the state over taxes and prices, have been closely studied for decades, as have conflicts in the industrial sector—whether between capitalists and workers or between industrial enterprises and the state. By contrast, nature-based conflicts are as yet hardly documented and very poorly understood, both within the social science community and outside. Like

conflicts over land and in the workplace, conflicts over natural resources typically pit against each other two unequal antagonists. To return to the example of the demonstrations in New Delhi in May 1990, the transport and food needs of the opponents of the Sardar Sarovar Dam were met by modest voluntary contributions from numerous individuals and organizations. By contrast, the defenders of the dam came all the way from Gujarat (a distance of more than 800 kilometres) in buses owned by the Gujarat government, their transport and living expenses fully subsidized by the state and its ruling political party. When the same protagonists squared off at the Ferkuva border over the New Year, the Madhya Pradesh tribals were staying in tents at the height of winter, cooking by open fire, while the Gujarati supporters of the dam were ensconced in schools and other public buildings, again well looked after by their state government.

In contemporary India, conflicts over nature—just as much as the more conventional agrarian and industrial conflicts—raise important questions about distributive justice and economic efficiency. The distinguishing feature of this third generic form of socioeconomic conflict is that it simultaneously raises issues of environmental sustainability. In so far as the natural resources in question are also vital to the agrarian and industrial sectors, the fate of these conflicts is intimately connected to the development process as a whole.

The first part of this chapter provides a broad-based survey and analysis of natural resource conflicts in contemporary India—we shall demonstrate that nature-based conflicts lie at the heart of the Indian environment debate. The second part investigates the vocabularies of protest characteristic of the Indian environmental movement and its ideological expressions. The chapter ends with a brief comparison between First World and Third World environmentalism.

Forests: For whom and for what?

In the final decade of the twentieth century, water-based conflicts—of which the Narmada controversy is at the moment the most contentious—are likely to dominate the environment debate in India. Ever since the mid-1970s, conflicts over forest resources have been more visible, and perhaps more widespread. Indeed, the origins of the Indian environmental movement can be fairly ascribed to that most celebrated of forest conflicts involving the Chipko movement of the Central Himalaya. In April 1973, the peasants of Mandal, an interior village in the Garhwal Himalaya, effectively thwarted commercial felling in a nearby forest by threatening to “hug the trees”. This brought to the fore a simmering but widespread resentment among the hill peasantry, directed at state forest policies that had consistently favoured outside commercial interests at the expense of their own subsistence needs for fuel, fodder and small timber. Thus the “Chipko” (Hug the Trees) movement was born. In the following decade, a wave of protests against commercial logging swept the Himalayan foothills, coordinated by Gandhian as well as Left-wing activists. It is worth noting that the region had a long history of peasant protest, which Chipko both drew upon and furthered. As a powerful statement against the violation of customary rights by state forestry, Chipko brought into sharp focus a wide range of issues concerning forest policy and the environment debate as a whole (Guha 1989a).

Because of its novel techniques and Gandhian associations, the Chipko movement rapidly acquired fame. Yet it was representative of a far wider spectrum of forest-based conflicts. In the tribal areas of central India, economic dependence on the forests is possibly even more acute than in the Himalayan foothills where Chipko originated. Here

the 1970s witnessed escalating conflict between villagers and the forest administration in tribal districts of the states of Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra and Orissa. In tribal India, moreover, forest conflicts often have a sharper political edge. Thus in Bihar, they have been an integral element in the popular movement for a tribal homeland, while in the four other states mentioned, the question of tribal forest rights has been actively taken up by revolutionary Maoist groups.⁴

Academic research inspired by the forest conflicts of the 1970s also revealed their long lineage. Indeed, local opposition to commercial forestry dates from the earliest days of state intervention. Before the inception of the Indian Forest Department in 1864, there was, by and large, little state intervention in the management of forest areas, which were left in the control of local communities. The takeover of large areas of forest by the colonial state thus constituted an important watershed in many ways: a *political* watershed, in that it represented an enormous expansion of the powers of the state, and a corresponding diminution of the rights of village communities; a *social* watershed, in that by curbing local access it radically altered traditional patterns of resource use; and an *ecological* watershed, in that the emergence of timber as an important commodity was to fundamentally alter forest ecology (Gadgil and Guha 1992:chs. 5 and 6).

The imperatives of colonial forestry were largely commercial. From the point of view of this analysis, its most significant consequence was the intensification of social conflict between the state and its subjects. Almost everywhere, and for long periods of time, the takeover of the forest was bitterly resisted by local populations for whom it represented an unacceptable infringement of their traditional rights of access and use. Hunter-gatherers, shifting cultivators, peasants, pastoral nomads, artisans—for all these social groups free access to forest produce was vital for economic survival, and they protested in various ways at the imposition of state control. Apart from forest laws, new restrictions on *shikar* (hunting) for local populations (while allowing freer hunting for sport by the British and the Indian elite) were another contributory factor in fuelling social conflict (Rangarajan 1992).

Throughout the colonial period, popular resistance to state forestry was remarkably widespread and sustained. In 1913, a government committee in the Madras Presidency was struck by the hostility toward the Forest Department, which was the most reviled government agency along with the Salt Department (likewise concerned with a commodity ostensibly low in value but of inestimable worth to every village household). Two thousand miles to the north, in the Garhwal Himalaya, a British official wrote at almost the same time that “forest administration consists for the most part in a running fight with the villagers” (quoted in Guha 1989a:105). Popular resistance to state forestry embraced forms of protest that minimized the element of confrontation with authority, such as covert breaches of the forest law, as well as organized rebellions that challenged the right of the state to own and manage forest areas.⁵

Ironically, in the post-independence period the process only accelerated. Economic development implied more intensive resource use, which in the prevailing technological and institutional framework inevitably led to widespread environmental degradation. In the forestry sector, the industrial orientation became more marked, exemplified by the

⁴ Calman 1985; PUDR 1982; Sengupta 1982.

⁵ Gadgil and Guha 1992—see especially chapters 6 and 8.

massive monocultural plantations begun in the early 1960s, while other development projects like dams and mines exerted a largely negative influence on the forests.

Not surprisingly, the conflicts between the state and its citizens have persisted, and the Forest Department continues to be a largely unwelcome presence in the Indian countryside. However, forest conflicts in independent India have differed in one important respect from conflicts in the colonial period. The earlier conflicts emerged out of the competing claims of state and people over a relatively abundant resource; now these conflicts are played out against the backdrop of a rapidly dwindling forest resource base. In other words, a newer *ecological* dimension has been added to the moral/political/economic dimensions of social conflicts over forests and wildlife.

Cumulatively, these processes have worked to further marginalize poor peasants and tribals—the social groups most heavily dependent on forest resources for their subsistence and survival. A long-time student of Indian tribals poignantly captured their frustration with state forestry:

The reservation of vast tracts of forests, inevitable as it was, was...a very serious blow to the tribesman. He was forbidden to practice his traditional methods of (swidden) cultivation. He was ordered to remain in one village and not to wander from place to place. When he had cattle he was kept in a state of continual anxiety for fear they would stray over the boundary and render him liable to what were for him heavy fines. If he was a forest villager he became liable at any moment to be called to work for the Forest Department. If he lived elsewhere he was forced to obtain a license for almost every kind of forest produce. At every turn the forestry laws cut across his life, limiting, frustrating, destroying his self-confidence. During the year 1933-34 there were 27,000 forest offences registered in the Central Provinces and Berar and probably ten times as many unwhipped of justice. It is obvious that so great a number of offences would not occur unless the forest regulations ran counter to the fundamental needs and sentiments of the tribesmen. A Forest Officer once said to me: 'Our laws are of such a kind that every villager breaks one forest law every day of his life'. (Elwin 1964:115)

Popular movements in defence of customary rights have focused on two issues central to the direction of forest management. First, they have contended that the control of woodland must revert to communal lands, with the state gradually withdrawing from ownership and management. Second, those opposing forest management have pointed to the contrast between the subsistence orientation of villagers and the commercial orientation of the state. This contrast can be illustrated by two strikingly similar incidents, separated in time by a few months and in space by some 2,000 miles. The first took place in Kusnur village in the Dharwad district of the southern state of Karnataka. Protesting against the allotment by the state of village pasture land to a polyfibre industry that intended to grow eucalyptus on it, the peasants of Kusnur and surrounding villages organized a "pluck-and-plant" *satyagraha* (insistence on truth) demonstration on 14 November 1987, when they symbolically plucked 100 eucalyptus saplings and replaced them with useful local species. Less than a year later—and probably without knowledge of the Kusnur precedent—Chipko activists in the northern state of Himachal Pradesh were arrested on charges of causing "damage to public property". Their "crime" had been to lead villagers in uprooting 7,000 eucalyptus saplings from a forest nursery in Chamba district, planting indigenous broad-leaved species in their stead. The Dharwad and Chamba episodes vividly illustrate the continuing cleavages between village interests and the commercial bias of state forestry (Kanvalli 1991; Modi 1988).

The clash between subsistence agriculturists and industry over the usufruct of state lands is only the most visible of forest conflicts. Localized opposition has also arisen

among village artisans facing increasing difficulty in obtaining raw material from forest areas. Typically, the state has diverted to industrial enterprises, resources previously used for generations by artisans. Thus reed workers in Kerala, bamboo workers in Karnataka and rope makers using wild grass in the Siwalik hills of Uttar Pradesh have all resisted the Forest Department's plans to give preferential treatment to the paper industry in the supply of biomass from forests owned by the state.

In most areas, forest-dependent artisans have yet to be politically organized. That is no longer the case with millions of tribals in central India for whom the collection and sale of "minor" (that is, non-wood) forest produce is vital to survival. For decades, tribals collecting non-wood forest produce have been severely exploited by merchants who control the trade. For these merchants, the most lucrative of all "minor" forest produce is the *tendu* leaf, used in making the *bidi* or Indian cheroot. Over the last two decades, social activists have organized *tendu* leaf pluckers in a bid to increase their collection wages. On the eve of the 1991 plucking season, 24 organizations working among tribals in five contiguous states of central India announced that they had fixed the price of *tendu* leaves at Rs. 50 per 5,000 leaves (the merchants' acquisition rates varied from Rs. 9 per 5,000 leaves in Bihar to Rs. 25 in Maharashtra). In several areas, tribal forest labourers have been organized by Left-wing revolutionaries, leaving the alarmed traders to seek the protection of the state. Sadly, but perhaps inevitably, violence has escalated in the tribal forest districts of Madhya Pradesh, Maharashtra and Orissa (PUCL 1985; *The Statesman* 1991).

These varied protests against state forestry coalesced in the coordinated opposition to the Draft Forest Bill of 1982—an act that sought to strengthen the punitive powers of the Forest Department significantly. Several dozen grassroots organizations lobbied hard against the proposed legislation, which the government finally withdrew (Fernandes and Kulkarni 1983; PUDR 1982). Popular opposition has also forced some notable changes in forest policy, such as the abandonment of programmes for clearfelling natural forests to replace them with plantations of industrially useful exotic species. These modest successes, along with the eventual loss of interest in any single issue that is a characteristic of democratic politics, has led to an attenuation—if not on the ground at least in the public imagination—of forest-based conflicts in recent years.

Dams and the damned

In the Indian environment debate, the space vacated by forests has been quickly filled by major dams. A small but revealing indication of this shift is contained in the dedications of the first two citizens' reports on the state of India's environment (CSE 1982 and 1985). While the first was dedicated to the "Women of Chamoli" who were among the originators of the Chipko movement, the second was dedicated simply to the "dam-displaced people of India". Through the 1980s and beyond, different river valley projects—from Tehri in the north to Silent Valley in the south, Koel Karo in the east to Sardar Sarovar in the west—have been the subject of bitter controversy. The critics of multipurpose river valley projects have operated on several flanks. From an economic perspective, they have argued that the cost-benefit ratios derived by the government to justify various dams invariably overvalue benefits and undervalue costs. Using official data, they have also shown that siltation rates have usually been much higher than anticipated, thereby shortening the life of reservoirs. From an ecological perspective, the high incidence of waterlogging and the wholesale submergence of forests and wildlife have been presented as examples of the unacceptable costs of dam building. The

construction of large dams has also been shown to disrupt fish life seriously and to assist the spread of waterborne diseases.⁶

These economic and environmental criticisms have considerable force and yet it is the *social* implications of dam construction that have evoked a major popular response. It has been estimated that in the last three decades, more than 11.5 million people have been displaced by development projects in India without being properly rehabilitated—and it is indisputable that major dams have been the main contributors to this process of forcibly uprooting people from their traditional homes (Fernandes and Ganguly Thukral 1988). With evidence steadily accumulating of the deprivation—cultural and psychological as well as economic—suffered by the displaced communities of past projects, new dams have been increasingly opposed by populations anticipating such dislocation. Movements representing people displaced by dams have gathered force in the last 20 years; we shall come to these contemporary protests presently, but we must first note one important, though as yet little known, precursor. Known as the Mulshi Satyagraha, this was the opposition to a dam being built near Bombay by the flourishing industrial house of the Tatas. This episode is virtually unknown to Indian environmentalists but, in view of the remarkable parallels between the Mulshi Satyagraha and ongoing protest against large dams, its history is worth recording at some length.

In the years following the First World War, the Tatas had in fact planned an ambitious series of dams on the Sahyadri hills, chiefly to supply power to the rising industrial city of Bombay. When the first dam was built near the hill station of Lonavala, the farmers whose lands were submerged were paid no compensation whatsoever. When the Tatas came to Mulshi for the next phase of the project, however, they ran into trouble. At first, the company moved on to the farmers' lands and began their test trenches without any legal formalities. But Mulshi was very close to Pune (Poona), then an epicentre of the Indian freedom movement. So when a peasant objected to a trench being dug in his field and a British engineer threatened him with a pistol, there were strong protests in Pune. The ensuing opposition to the dam, led by a young Congressman called Senapati Bapat, succeeded in halting construction of the dam for a year. The Bombay government then promulgated an ordinance whereby the Tatas could acquire land on payment of compensation. This caused the resistance to the dam to split into two factions: while the Brahmin landlords of Pune, who owned much of the land in the Mulshi valley, were eager to accept compensation, the tenants and their leader, Senapati Bapat, were totally opposed to the dam project. With the landlords, the power company and the state all ranged against them, there was little the peasants could do, and the movement collapsed in its third year. Tragically, the compensation was pocketed by the landlords, and the actual tillers of the soil were left high and dry. Nonetheless, the movement had at least succeeded in forcing the Tatas to provide reasonable, negotiated compensation for the submerged lands, one consequence of which was that they did not proceed with the other hydroelectric projects they had intended for the Sahyadris.

When the Mulshi Satyagraha broke out, the British District Collector had toured the area, extolling the virtues of the dam. He remarked that the electricity produced by it would light up the latrines of the Bombay *chawls*, the dwelling homes of the city's industrial workers. This drew the sharp retort that the government and the Tatas sought

⁶ CSE 1985; Kalpavriksh 1988; Paranjpye 1989; Sharma and Sharma 1981; and, for a global survey and critique, Goldsmith and Hildyard 1984.

to extinguish wick lamps in thousands of rural homes in order to light up the latrines of Bombay (Bhuskute 1968).

This exchange, apocryphal as it might be, could just as well have taken place in 1990—in either Ferkuva or New Delhi—between proponents and opponents of the Sardar Sarovar Dam. In fact, when the Narmada controversy was at its height, *The Times of India*, whether by accident or design, reproduced in its archive section a report on the Mulshi Satyagraha, dated 2 May 1921. Here the paper's correspondent had succinctly represented the main objections to the Tata project, as well as its most powerful justifications. The origins of the Mulshi Satyagraha, he concluded, lay in:

1. A strong sense of wrong and deep feeling of resentment among the peasantry whose lands are affected by the project, against the Government for sanctioning the scheme more than two years ago, without taking them in its confidence, i.e., without consent, knowledge or consultation of the peasant-owners of the land...
2. Suspicion and distrust in both the Government and the Company, due chiefly to the procedure of acquisition, as to the bonafides of their intentions to award full compensation, or equivalent...land somewhere else, and other facilities already enjoyed by them or necessary for fresh colonization...
3. Reluctance to part with the land on account of its extreme productivity, the natural facilities of irrigation and nominal amount of land revenue.
4. Reluctance to part with lands, ancestral homes, and traditional places of worship and see them submerged under water.
5. Natural reluctance in this class of peasantry to emigrate from one place to another...

For the other side, the main claims of the project promoters were listed:

1. One and a half lakh (1,50,000) electrical horse-power would be created by the Mulshi Peta Dam.
2. It would save 525,000 tons [of] coal every year. This quantity of coal at the present rate costs Rs. 1,83,00,000.
3. The saving of coal means a corresponding saving of Rs. 1,05,50,000 worth of fuel to the mill industry of Bombay.
4. The quantity of coal saved on account of the scheme would require 26,250 wagons for transport. These would be saved and utilized for other public purposes.
5. Water once used can be directed for agricultural purposes after electrical power is created.
6. Electricity thus created would give work to 300,000 labourers. If it is utilized for cotton mills, every day 51 lakh yards would be manufactured.
7. The projected electrification of the Bombay suburban railway lines would give to Bombay city much faster and more frequent trains, thus enabling the development of housing schemes in purer air and healthier circumstances. (*The Times of India*, 2 May 1921)

Here lies an uncanny anticipation of the ideological roots of the conflicts over large dams that were to erupt half a century later. On the one side, the interests of subsistence-oriented peasants; on the other, the interests of urban centres and industry. When the major push toward river valley projects took place after Indian independence, it was easy to represent the former as static and backward, the latter as dynamic, forward looking and coterminous with the national goals of progress and development. The villages to be submerged by the new projects were then expected to make way for the greater national interest, all the more so as the new schemes (unlike Mulshi) were owned and executed not by private capitalists but by the state, itself the legatee of a broad-based, popular national movement.

Of course, displaced people were not entirely unyielding. A comprehensive but somewhat euphoric survey by the political scientist Henry Hart of the first wave of large dams built in independent India, noted the resentment of villagers confronted with the prospect of displacement. Thus in 1953, the residents of the town of Narayan Deva Keri, in present-day Andhra Pradesh, hoped desperately that the new reservoir on the Tungabhadra river would not fill up to capacity, thereby sparing their town. Disregarding the warnings of engineers, the townspeople stayed on till the last moment, having to be evacuated in haste when surrounded on three sides by water. Despite these signs, there was general agreement, at least among the devotees of dam building, that “the suffering of the displaced people was for the good of the greatest number”; there was not much doubt of the “willingness of the Indian villager to make way for a nation building project, provided he is convinced that the sacrifice he is called upon to make is unavoidable” (Hart 1956).

It is true that the massive—one might, following Hart, call them heroic—river valley projects of the 1950s met with little opposition. They included the Bhakra-Nangal Dam in Punjab, the Tungabhadra project in Andhra Pradesh, the Hirakud Dam in Orissa and the Rihand Dam in Uttar Pradesh, each displacing tens of thousands of people. Yet, over time, the Indian villager has developed a marked unwillingness to make way for “nation-building” projects. A major reason for this growing hostility is the actual experience of communities displaced by earlier projects. The resentment of dam evacuees has been uniform: rates of cash compensation have been very low; the promise of land for land has very rarely been fulfilled (and where it has, the new lands are invariably of much poorer quality); there are problems making a new home in unfamiliar, and often hostile, surroundings, and so on.⁷ A significant acknowledgment of these failures has been the substitution, in recent years, of the term “displacement” by the euphemistic “resettlement” in public discussions of this process.

Meanwhile, organized opposition to new projects gathered force in the early 1970s, with movements emerging independently in different parts of the country. The most long-standing opposition has been to the Tehri Dam being built on the river Bhageerathi in the Garhwal Himalaya. For more than a decade, the dam’s construction has been opposed by the Tehri Baandh Virodhi Sangharsh Samiti (Committee for the Struggle against the Tehri Dam), a forum founded by the veteran freedom fighter, Virendra Datt Saklani. The respected Chipko leader Sunderlal Bahuguna has also been very active in the movement, undertaking several hunger fasts to pressurize the government to stop construction. The objections to the dam range from the seismic sensitivity of the fragile mountain chain (and hence the possibility of a dam burst), to the submergence of large areas of forest, agricultural land and the historic town of Tehri, to the threat to the life of the reservoir from deforestation in the river catchment (D’Monte 1981). These criticisms have gathered force since the massive earthquake in the upper Bhageerathi valley in October 1991, but the government appears resolved to go through with the dam nonetheless.

At the same time, the other well known Chipko leader, Chandi Prasad Bhatt, has been leading the resistance to the building of a dam at Vishnuprayag, on the Alakananda river in eastern Garhwal. This construction is taking place very close to the famed Valley of Flowers, and fears that the ecology of the valley would be permanently disturbed are

⁷ CSE 1985; Fernandes and Ganguly Thukral 1988; Ganguly Thukral 1992.

compounded by the geological features of the Vishnuprayag area, which is peculiarly prone to landslides (Bhatt 1992). At the time of writing, and due in part to such opposition, the Vishnuprayag project has been indefinitely shelved. The participation of Chipko activists in these protests is hardly accidental. Having largely lost their forests to commercial exploitation, Himalayan peasants now face further suffering owing to external pressures on the other resource in which their hills are abundant—water. As with the forests, the benefits of intensive exploitation have accrued almost exclusively to the inhabitants of the plains.

The water-rich and heavily forested tribal areas of central India have also witnessed a surge of opposition to new hydroelectric projects. Two of the more notable movements have arisen in opposition to the Koel Karo Dam in Bihar, and the Bhopalpatnam-Inchampalli project on the Maharashtra/Madhya Pradesh border. In both cases, threatened tribal groups have put up a spirited defence, organizing demonstrations and work stoppages. The Koel Karo struggle has been coordinated by established Left-wing political groupings such as the Jharkhand Mukti Morcha and the Communist Party of India, while opposition to the Bhopal-Inchampalli project has been initiated by unaffiliated voluntary organizations and inspired by the veteran Gandhian Baba Amte (CSE 1985).

Groups affected by large dams have not always been tribal, however: one successful movement was actually led by prosperous orchard owners. The Bedthi project which was under construction in the Uttara Kannada district of Karnataka had to be abandoned after it was opposed by influential spicegarden farmers, largely Brahmin, whose lands were to be submerged by the project. The Uttara Kannada farmers organized a national seminar in the project's early days, and after hectic lobbying with political leaders, forced the state government to abandon the dam (Sharma and Sharma 1981).

Another, more striking, success was the abandonment of the Silent Valley hydroelectric project in the state of Kerala. No human community was to be displaced by this 120-kilowatt dam, but it did involve submerging one of the last surviving patches of rainforest in peninsular India. Opposition to the project was led by the Kerala Sastra Sahitya Parishad, an organization dedicated to popular science education that has wide reach and influence in Kerala. This *Marxisant* movement of school and college teachers built up an unlikely collaboration with wildlife conservationists. Each group had its own reasons for opposing the project: while the Kerala Sastra Sahitya Parishad (KSSP) rested its case on a technoeconomic appraisal of energy-generating alternatives, its allies invoked the need for plant and animal conservation. Eventually, the desire of the Prime Minister of the day, Indira Gandhi, to enhance her image among the international conservation community appears to have been critical in the government's decision to shelve the project (D'Monte 1985).

There is, then, a considerable prehistory to the movement against the construction of a dam on the Narmada river. The Narmada river valley project—which the writer Claude Alvares (1989) has termed the “world's greatest planned environmental disaster”—is a truly utopian scheme, envisaging the construction of 30 major dams on the Narmada and its tributaries—not to mention an additional 135 medium and 3,000 minor ones (Kalpavriksh 1988). With two of the major dams already built, the focus of popular opposition has been the Sardar Sarovar reservoir, the largest of the project's individual schemes. Sardar Sarovar is unique in the history of dam building in India, in that the command area of major beneficiaries lies in one state, Gujarat, while the major displacement (193 of the 243 villages to be submerged) will affect another state, Madhya

Pradesh. According to official estimates based on the outdated 1981 census, over 100,000 people, of whom approximately 60 per cent are tribal, will be rendered homeless (V. Raina, personal communication).

As early as 1977, villagers in the Nimad region of Madhya Pradesh began protesting against the prospect of eviction due to Sardar Sarovar. Somewhat ironically, social activists like Medha Patkar (now one of the Narmada Bachao Andolan's moving spirits) first began working toward the proper rehabilitation of potential oustees; it was only after realizing that there was no land available in Madhya Pradesh/Maharashtra or Gujarat for the proclaimed "land for land" policy that they turned to opposing the construction of the dam itself. Although more than 10 years old, the movement has really gathered momentum only since 1989. It has used a varied repertoire of protest to put forward its demands: the blockade of roads and traffic (*rasta rokos*), public meetings (including some where oustees have pledged not to leave their homes even if the dam waters rise and drown them), hunger strikes and demonstrations, especially in state capitals. In one dramatic incident, villagers from the neighbourhood of Badwani town uprooted stone markers from the dam's submergence area, transported them several hundred miles to the state capital of Bhopal and flung them outside the Madhya Pradesh legislature (Narmada 1989-1990).

While localized protests have been occurring all along the Narmada valley, wider public attention has been drawn through the more spectacular events. Two of these have already been mentioned—the congregation in New Delhi and the "Sangharsh Yatra" (struggle march) from Rajghat to Ferkuva. However, the most successful of these public events was a huge rally in the town of Harsud, held on 29 September 1989. Upwards of 60,000 volunteers, mostly of tribal and peasant background, gathered in the town, itself destined to be submerged under 50 feet of water; representatives of citizens' groups from all over India came to demonstrate their solidarity with the Narmada movement; a large public meeting, addressed by Amte, Patkar, Bahuguna and others culminated in a collective oath to resist the pattern of "destructive development" exemplified by the Sardar Sarovar Dam (Alvares 1989).

There are several features that help distinguish the Narmada movement from other protests against large dams. Two of the most notable are its spread—it has activist groups working in three states and many supporting organizations elsewhere—and its tenacity in the face of government repression. Although the movement itself has been, in the main, non-violent, its leaders and participants have been repeatedly harassed, and occasionally beaten and jailed. Furthermore, unlike many other movements, the Narmada Bachao Andolan has been widely, and often sympathetically, covered in the print media; it also has well-established links with environmental groups overseas. Thus Japanese environmentalists have persuaded their government not to advance money for the Narmada Valley Project, while US groups sympathetic to the movement have tried hard to convince the World Bank to do likewise.⁸ A final testimony to the movement's vigour is the active counter-movement it has generated in support of the dam. Political leaders and social activists in Gujarat have rallied strongly behind the state's rich farmers, who stand to gain most from the project, organizing demonstrations and press campaigns and mounting an ideological offensive that portrays the Narmada movement's leaders as "anti-

⁸ In March 1993, the Indian government itself decided not to ask for further World Bank support for the project, indicating its inability to meet the Bank's criteria for resettlement and environmental rehabilitation.

development” and “anti-national”. The Narmada activists have even been accused in Gujarat of wanting to deny tribals the fruits of economic growth by keeping them in a perpetual state of nakedness, hunger and illiteracy (Anklesaria 1988; EPW 1991).

Struggles in the sea

The social base of forest and anti-dam movements has been among the tribals and poor peasantry. Our third category of nature-based conflicts involves artisanal fisherfolk whose dependence on a living resource has also been undermined in recent decades. Distinct endogamous groups of fisherfolk, both along the sea coast and on rivers, have long been a feature of the Indian landscape. These communities, which depend more or less exclusively on the catching and sale of fish, have recently been threatened by massive encroachments on their territory.

The problems of ocean-going fisherfolk have been well documented, particularly in the studies of the economist John Kurien. The clash between artisanal fisherfolk and modern trawlers, at its most intense in the southern state of Kerala, provides a chilling illustration of what can happen when one group’s exclusive control over living resources is abruptly challenged by forces more economically and politically powerful. For centuries, the coastal fish economy was controlled by artisanal fisherfolk operating small, unmechanized craft, who supplied fish to inland markets. In the 1960s, big business began to enter the fisheries sector. The advent of large trawlers, catching fish primarily for export, led to major changes in the ecology and economy of fisheries in Kerala. A rapid increase in fish landings in the early years of trawling was followed by stagnation and relative decline. While some artisanal fishermen were able to make the transition to a more capital- and resource-intensive system, the majority faced the brunt of direct competition from the trawlers. This conflict gave rise to a widespread movement involving strikes, processions and violent clashes with trawler owners—in which small fishermen pressed for restrictions on the operations of trawlers. The movement also called for a ban on trawling during the monsoon—the breeding season for several important fish species. A partial ban, which was finally imposed in 1988 and 1989, did in fact result in an increased harvest following the monsoon months (Kurien and Achari 1990).

So far as inland fisheries are concerned, there have been intermittent reports of localized opposition by fisherfolk affected by industrial pollution (see below). In a class of its own, however, is a unique movement to “free the Ganga”, involving fisherfolk in the Bhagalpur district of Bihar. Here, in a bizarre relic of feudalism, two families asserted hereditary rights of control over a 50-mile stretch of the Ganga. Claiming that these *panidari* (water) rights originated in Mughal times, the waterlords levy taxes on some 40,000 fisherfolk living along the river. A protracted court case has so far been unsuccessful in abolishing these rights—which by an anomaly escaped the provisions of the law abolishing landlordism (*zamindari*) enacted after 1947. Since the early 1980s, the fisherfolk have been organized by young socialists into the “Ganga Mukti Andolan” (Free the Ganga) movement. With fish catches also declining due to industrial pollution, the movement has been waging battle on two fronts simultaneously—against effluents and against an anachronistic system of monopoly rights over water (Narain 1983).

Mines and misery

Like forest conflicts, struggles over fish stocks have arisen out of the competing claims of different groups, each coveting the same resource but for different reasons. By contrast,

the conflicts we are highlighting now are a consequence of the negative externalities imposed by one kind of economic activity, open cast mining, upon another, subsistence agriculture.

The most celebrated of mining conflicts took place in the Doon valley in northwest India. Home to the Indian Military Academy as well as to the country's most famous public school, this beautiful valley is a favourite watering hole of the Indian elite. Here, the intensification of limestone mining since 1947 has led to considerable environmental degradation—deforestation, drying up of water sources, and the laying waste through erosion and debris of previously cultivated fields. Opposition to limestone quarrying, which gathered force in the late 1970s and early 1980s, has come from two distinct sources. On the one side, retired officials and executives formed the "Friends of the Doon" and the "Save Mussoorie" committees to safeguard the habitat of the valley. They were joined by hotel owners in Mussoorie, worried about the impact of environmental degradation on the tourist inflow into this well-known hill station. These groups may fairly be characterized as NIMBY (not in my backyard) environmentalists, preoccupied above all with protecting a privileged landscape from overcrowding and defacement. On the other side, villagers more directly affected by mining were organized by local activists, many of whom had cut their teeth in the Chipko movement. While the first group lobbied hard with politicians and senior bureaucrats, the second resorted to sit-ins to stop quarrying. Finally, both wings collaborated in a public interest litigation that resulted in a landmark judgment of the Supreme Court, recommending the closure of all but six limestone mines in the Doon Valley (Bandyopadhyay 1989; Dogra et al. 1983).

At the height of the Dehradun limestone controversy, with characteristic disregard for the inhabitants of those areas, one of the valley's "NIMBY" environmentalists called for mining to be shifted to the interior hills so that Dehradun and Mussoorie would be spared (Dalal 1983). Apparently she was unaware that mining was already proceeding apace in the inner hills—although, as might have been expected, it has met with resistance. In the Almora and Pithoragarh districts of Kumaun, soapstone and magnesite mining has greatly reduced local access to fuel, fodder and water by either using, or by leading to the degradation of, common forest and pasture land. With the onset of the monsoon, the debris accumulated through mining descends onto the fields of adjacent villages. Meanwhile, with mining leasees preferring to bring in outside labour to act as a buffer between management and villagers, any tangible benefits to the village economy are few—and certainly inadequate in offsetting the losses caused by declining agricultural productivity and biomass availability.

Kumaun has a long heritage of social movements (Guha 1989a; Pathak 1987) and this has been invoked in the continuing struggles against unregulated mining. Social activists have worked hard to form village-level *Sangharsh Samitis* (struggle committees) in the affected areas; the Laxmi Ashram in Kausani, started by Gandhi's disciple Sarla Devi, has been quite successful in involving women in these movements. In other instances, villagers have acted independently to protest against the damage done by open cast mining, using such varied forms of struggle as sit-ins, hunger strikes and efforts to persuade mining labourers to stop work. In many of these protests, women—whose own domain is most adversely hit by mining—have played a leading role. Several mines have been forced to close down, whereupon villagers have turned their energies toward land reclamation through afforestation (ISST 1991; Joshi 1983a, 1983b).

Another movement with broadly similar contours has been directed against bauxite mining in the southeastern state of Orissa. In the Gandhamardan hills of the Sambalpur

district of the state, the public sector Bharat Aluminium Company (BALCO) has been granted permission to mine a heavily forested area of about 900 hectares. The foundation stone for the project was laid by the Chief Minister of Orissa in May 1983 and mining commenced two years later. By the end of 1986, however, BALCO operations had been forced to a halt. As in the Himalaya, bauxite extraction in Gandhamardan quickly led to deforestation, erosion and the pollution of water sources. Blasting operations were perceived as a threat to the region's ancient temples, which pilgrims travel long distances to visit. Characteristically, protest originated in a series of petitions being sent to senior officials and politicians. When this had no effect, students and social activists began forming village committees. A three-day strike in front of the Block Development Office in October 1985 was followed two months later by a blockade that prevented BALCO vehicles from proceeding up the Gandhamardan plateau to the mines. Private vehicles carrying materials for BALCO operations were also blocked and unloaded. In the first two months of 1986, the movement shifted to the site of BALCO's proposed railway line, close to the Orissa-Madhya Pradesh border. According to figures collected by a civil liberties group that visited the area, a total of 987 people were jailed in the course of the year-long struggle, including 479 women and 51 children (Concerned Scholars 1986; PUDR 1986).

The polluter does not pay principle

Open cast mining inevitably leads to environmental degradation; it is in trying to pass on the costs of such degradation to surrounding villages that miners have encountered resistance. The textbook case of such negative externalities is, of course, industrial pollution. With air and water being free goods, it makes perfect economic sense for a private entrepreneur to pollute his surroundings instead of investing in technology to properly treat and safely dispose of effluents. As the repository (in theory) of the welfare of the public, the state then emerges as the agency most likely to pass legislation to check pollution and take punitive action against offenders. Indeed, in the industrialized world a major focus of the environmental movement has been on pressurizing the state to pass legislation and create enforcement agencies to check air and water pollution (Hays 1987).

In India, too, pollution control legislation is in the statute books but, with administrative efficiency and honesty of lamentably low standards, industrial pollution has gone largely unchecked. In its executive functions, the Indian state apparatus alternates between being "soft" and "predatory"; in the first incarnation, laws are not enforced, while the second allows offenders to buy official compliance. Yet, in a democratic political system, citizens' actions can act as a partial corrective even when the state abdicates its role.

Among the most notorious of industrial polluters are paper and rayon factories. Three units of the Gwalior Rayons—owned by India's largest industrial house, the Birlas—have been indicted by environmentalists for affecting the economic welfare of villagers downstream through pollution. The Gwalior Rayons factory on the Chaliyar river in Kerala was closed for seven years after a spirited movement, led by the KSSP. In the adjoining state of Karnataka, Harihar Polyfibres (owned by the same parent company) has faced concerted opposition and a long drawn out court case for discharging untreated effluents into the Tungabhadra river. Villagers have complained of new diseases, declining fish yields and the reduced availability of irrigation water (Hiremath 1987). A similar charge has been laid at the door of the massive Gwalior Rayons factory at Nagda in Madhya Pradesh, while, in the same state, in the district of Shahdol, the Birla-owned

Orient Paper Mills has also been criticized by social activists for its pollution of the Sane river.

Two other illustrations of the conflict between private profit and the public good come from Maharashtra, a state with a highly developed industrial sector and a long tradition of social activism. In October 1987, farmers and fisherfolk from the Devananda creek area of the Raigad district protested against the discharge of effluents from 40 units operating in an industrial area owned by the Maharashtra Industrial Development Corporation (MIDC). Accusing the MIDC of not treating effluents before discharging them into a nearby river, peasants jammed a wooden log into the discharge pipeline (*The Times of India* 1987). Some months later, villagers in the Ahmednagar district of the state united to oppose the pollution of land and water by the discharge from South Asia's largest distillery. Despairing of remedial action, the villagers filed a suit in the Bombay High Court, seeking Rs. 10 million in damages from the offending company, the Western Maharashtra Industrial Corporation and the State Pollution Control Board (*Indian Post* 1988a).

One final example of citizen protest against pollution comes from the district of North Arcot in the state of Tamil Nadu. Here, effluents from a cluster of tanneries abruptly raised the chloride content of drinking water and contributed to declining crops by causing soil salinity. On World Environment Day 1984, the town of Ambur, site of several tanneries, observed a total strike or *hartal*. Many women and children from the affected villages went in a procession through the town, breaking pitchers containing contaminated water and demanding that the authorities protect their children's health. A huge effigy of an "effluent monster" was burned on the same day (*The Hindu* 1984).

Conflicts in context

Conflicts over forests, water and other natural resources have been widespread across human history. In pre-modern times they arose typically as a consequence of competing property claims and economic interests (Gadgil and Guha 1992). In the modern world, however, these conflicts have increasingly acquired a sharp ecological edge, being played out against the backdrop of increasing resource scarcities and shortages.

In India too, although nature-based conflict was by no means unknown in the past, the proximate cause of the struggles analysed here has been the pattern of development followed since independence in 1947. The distortions in resource flows, preferential subsidies and short-term horizons of capitalists and the state have all worked to sharply circumscribe the access of the poor to the gifts of nature. The ensuing conflicts have been generated both by ongoing processes, such as the history of forest mismanagement, and by massive new projects such as large dams. The variety and range of nature-based conflicts notwithstanding, two particular movements stand out for their symbolic importance to the Indian environment debate. These are the Chipko movement, which has now passed into history, and the ongoing struggles against the Narmada Valley Project, whose eventual outcome is still uncertain. Both conflicts illustrate the deep inequities in access to resource use in contemporary India. As paradigms of the conflict between the low and the mighty, both have relied—quite remarkably—on non-violent forms of protest. In each case, folk knowledge and anguish have forced ecologists and economists to reconsider the efficacy of dominant forms of resource use widely justified as "scientific". Their contribution to scientific debates apart, both movements are invested with a deeper cultural, almost religious, significance. Chipko originated in the watershed of the holiest river of Hinduism, while for the people of central India the

Narmada is no less sacred than the Ganga (Ganges). Both struggles have attracted a dedicated core of activists who, in their selflessness and courage, exemplify the best in what remains of Gandhism. Finally, the two movements have helped generate a far-reaching debate on the direction of economic development in India, and on the kind of society (and ecology) most appropriate to the needs of its culturally diverse, yet sharply fragmented, population. This debate and the various strands within it are examined more closely in the second part of this chapter.

Interpreting Indian Environmentalism: Tactics and Theories

What is the Indian environmental movement?

In analysing the Indian environmental movement, we may distinguish between its *material*, *political* and *ideological* expressions. The material context is provided by the wide-ranging struggles over natural resources—the theme of the first part of this chapter. Broadly speaking, these conflicts have set in opposition, on one side, social groups that have gained disproportionately from economic development while being insulated from ecological degradation (in particular, industrialists, urban consumers and rich farmers) and, on the other, poorer and relatively powerless groups such as small peasants, pastoral nomads, tribals and fishing communities, whose livelihoods have been seriously undermined through a combination of resource flows biased against them and a growing deterioration of the environment. Our analysis suggests that the origins of these conflicts lie in the process of development itself. While forests, water and other natural resources are diverted to produce energy and commodities for the rich, the poor are made to bear the social and environmental costs of economic development, whether in the form of the declining availability of natural resources, a more polluted environment or, increasingly, physical displacement.⁹

With these struggles as its backdrop, the *political* expression of Indian environmentalism has been the organization by social action groups of the victims of environmental degradation. Action groups have embarked upon three distinct, if interrelated, sets of initiatives. First, through a process of organization and struggle they have tried, with varying degrees of success, to prevent ecologically destructive economic practices. Second, they have promoted the environmental message through the skillful use of the media, and more innovatively, via informal means such as walking tours and ecodevelopment camps. Finally, these groups have also taken up programmes of environmental rehabilitation (afforestation, soil conservation, and so on), restoring degraded village ecosystems and thereby enhancing the quality of life of the inhabitants.

Although these myriad initiatives may be construed, in the broad sense, as being political in nature, they have been almost entirely undertaken by groups falling outside the sphere of formal party politics. Across the ideological spectrum of party politics in India—from the Bharatiya Janata Party on the right to the Communist Party of India (Marxist) on the left—the established parties have turned a blind eye to the continuing impoverishment of India's natural resource base, and the threat this poses to the lives and livelihoods of vulnerable populations. At the same time, all parties have supported

⁹ For a detailed analysis, see Gadgil and Guha 1994.

resource wasteful, ecologically destructive and centralizing technologies such as nuclear power plants and large dams. In the circumstances, it has been left to social action groups not owing allegiance to any political party—what the political scientist Rajni Kothari (1984) has termed “non-party political formations”—to focus public attention on the linkages between ecological degradation and rural poverty.

Through the process of struggle, the spreading of consciousness and constructive work, action groups in the environmental field have come to develop an incisive critique of the development process itself. Responding to the conflicts over natural resources that have become so sharp in recent years, environmental activists and intellectuals sympathetic to their work have raised major questions about the orientation of economic planning in India, its in-built biases in favour of the commercial-industrial sector and its neglect of ecological considerations. More hesitantly, they have tried to outline an alternate framework for development that they argue would be both ecologically sustainable and socially just. Although perspectives within the movement are themselves quite varied, in its totality this fostering of a public debate on development options constitutes the *ideological* expression of the environmental movement.

By highlighting the variety and intensity of conflicts over nature, the first part of this chapter provided the material context for the Indian environment debate. We now present an analysis of the political and ideological contexts of this debate. In conclusion, we briefly contrast the Indian case, as a paradigm of Third World environmentalism, with the more intensively studied phenomenon of First World (that is to say, Western) environmentalism.

Organizing for action

As already noted, struggles over the uses of nature have a long history. Popular upsurges—like the Kumaun forest movement of 1921 and the Mulshi Satyagraha of the same year—may justifiably be claimed as part of the prehistory of modern environmental conflicts in India. In so far as there is a marked continuity in forms of resistance, the contemporary environmental movement is, to a considerable extent, a peasant movement draped in the cloth of environmentalism (Guha 1989a). Thus many of the methods by which communities have resisted environmental degradation and/or external control of natural resources fall under the overall rubric of *satyagraha* (literally “truth force”, but used more generally to denote non-violent resistance). Here there are obvious parallels, and not merely terminological, with peasant protest in the Gandhian mode—although it must not be forgotten (Spodek 1971) that Gandhi himself drew upon long-standing traditions of peasant resistance.

Among the variety of protest forms used by groups resisting environmental degradation, we may single out six. First comes the *pradarshan*, a collective show of strength by communities at the receiving end of environmental degradation—be they peasants opposing commercial forestry or fisherfolk protesting the ravages of trawling. Characteristically, this will take the form of a procession, culminating in a meeting near a locus of official power—perhaps a dam project site or the residence of the District Magistrate—in which leaders make exhortative speeches and a petition may be presented to the authorities.

The *pradarshan* is intended primarily to demonstrate popular disaffection and the strength of numbers. It shades imperceptibly into a second, more militant, form of protest—the *dharna* or sit-down strike. In contrast to an ordinary procession or protest meeting, the *dharna* often aims specifically at stopping economic activities that threaten

the survival options of resource dependent communities. Examples include attempts to stop the work at a dam site or, as was undertaken with some success in the Chipko movement, a large congregation in the forest to stop tree felling.

A more sharply focused variant of the *dharna* is the third form of protest—the *gherao*. Here, a key authority figure—a senior bureaucrat or politician perhaps—is surrounded by protesters and heckled till he accedes to their demands or is rescued by the police. Fourth, and more militant still, is the *rasta roko* (literally, road blockade). Whereas the *dharna* has a narrow target, the *rasta roko*—born out of a more general disgust with state policy—blocks channels of communication that may not even be directly linked to the object of disaffection. Exasperated by the attitude of the Madhya Pradesh and Maharashtra governments, supporters of the Narmada Bachao Andolan sat for days on the National Highway between Delhi and Bombay, blocking passenger and commodity traffic on a vital artery.

Fifth, we have the resurrection of a classic technique of Gandhian Nationalism—the *jail bhara andolan* (literally, movement to fill the jails). Here, protesters deliberately provoke court arrest by violating a law—most frequently Section 144 of the Criminal Procedure Code, used to prohibit large gatherings. At the same time, the inadequacy of Indian jails to handle large numbers of prisoners assures them a relatively swift release. Our sixth and final technique also vividly recalls Gandhi. This is the *bhook hartal* or hunger strike. Whereas the other forms of protest highlighted above are characteristically collective, the *bhook hartal* is most frequently the preserve of one charismatic figure. The fast unto death by a widely respected popular leader is a coercive technique to compel the state to yield, in fear of the consequences of the leader succumbing to the fast.

Environmental action groups in India have thus utilized a varied and flexible repertoire of protest. These distinctive forms of struggle are, of course, both overlapping and complementary. This list is not exhaustive; new forms of protest are being created even as we write. The Narmada movement has already witnessed a major *Sangharsh Yatra* (struggle march), while its participants have frequently threatened a spectacular *jal samadhi* (literally, water burial)—in other words, to immerse themselves in the rising waters of the reservoir rather than be displaced from their ancestral lands. All in all, this repertoire of protest has helped to focus public attention on specific natural resource conflicts. In a democracy—which allows dissent but where the state tilts markedly toward the rich and powerful—these forms of protest collectively constitute the “weapons of the weak” (Scott 1985).

Communication and education

In most such conflicts, collective protest against the agencies of the state, using one or more of the tactics described above, has been closely accompanied by coverage in the print media. Leading environmental activists (Sunderlal Bahuguna and Baba Amte come immediately to mind) sometimes write signed articles in newspapers, drawing attention to the struggle they are engaged in. More often, sympathetic journalists write about these struggles and their wider implications. Since the mid-1970s, there has been a virtual explosion of environmental writing in English- and Indian-language newspapers and magazines. With radio and television controlled by the state, the print media has played an important role in reporting, interpreting and publicizing nature-based conflicts in modern India.

In understanding the spread of environmental consciousness, however, one must not underestimate oral communication. For example, the popular science group, the

KSSP, has performed plays and rendered folk songs in all parts of Kerala in order to increase popular awareness of deforestation and pollution. In the neighbouring state of Karnataka, themes of environmental abuse and renewal have figured in the traditional dance-drama of the west coast, Yakshagana. An activity that combines discussion and practical action is the “ecodevelopment” camp, which is widely used by action groups to promote afforestation and other forms of environmental restoration (Bhaskaran 1990). But in the sphere of communication too, the most innovative technique of the environmental movement recalls its acknowledged patron saint, Mahatma Gandhi. This is the *padayatra* or walking tour. Used by Gandhi to spread the message of communal harmony and by his disciple Vinoha Bhawe to persuade landlords to donate land to the landless, the *padayatra* has been enthusiastically revived by environmental activists. The first environmental *padayatra* was the trans-Himalayan march from Kashmir to Kohima, covering 4,000 kilometres, by Sunderlal Bahuguna (one of Bhawe’s disciples) and a group of his associates in 1982–1983.

The most notable *padayatra* of this ilk was the Save the Western Ghats March of 1987–1988, along the 2,500 kilometre-long mountain chain. After seven months of preparation involving over 150 voluntary organizations (from the states of Goa, Karnataka, Kerala, Maharashtra and Tamil Nadu), on 1 November 1987 the march commenced from the two extremities simultaneously—Kanyakumari in Tamil Nadu and Navapur in the Dhulia district of Maharashtra. Three months later, marchers from the north and south converged at Panda in Goa, for the meeting, which marked the march’s conclusion. By then they had collectively covered 4,000 kilometres of hill terrain, making contact with over 600 villages en route. The marchers themselves came from a variety of backgrounds and age groups. Their aim was threefold: to study first-hand environmental degradation and its consequences for communities living along the Ghats, to try to activate local groups in playing a watchdog role to prevent further ecological deterioration and to canvass public opinion in general (Hiremath 1988; Vijaypurkar 1988).

One of the objectives of the Western Ghats March, in which it largely succeeded, was to draw attention to threatened mountain ecosystems other than the Himalaya, whose plight had hitherto dominated the Indian environment debate. As a haven of biological diversity (nearly 150 endemic species) and the source of many rivers, the Ghats are as crucial to the ecological stability of peninsular India as the Himalayas are to the Indo-Gangetic plain. The Western Ghats March inspired *padayatras* across other vulnerable mountain systems. A Save the Sivaliks march was undertaken across 200 kilometres of the Sivalik range in Jammu and Kashmir the following winter, while in early 1991 a 50-day march was undertaken through the Eastern Ghats of Andhra Pradesh and Orissa. The latter effort, the Vanya Prant Chaitanya Yatra (Tribal Areas Awareness March), focused on the interconnections between environmental degradation and tribal poverty—as exemplified by deforestation, pollution, land alienation and displacement (Saraf 1989; Vinayak 1990).

Our final illustration of an environmental *padayatra* highlights not a region but a threatened resource—water. This was the Kanyakumari march, organized by the National Fisherfolk Forum in April 1989 under the slogan “Protect Waters, Protect Life”. As in the Western Ghats, two teams started independently—one from a fishing village in Bengal on the east coast, the other from a village near Bombay on the west coast—and, making their way on foot and by van, the marchers organized a variety of meetings and seminars in villages along the way. Although initiated by organizations working among fisherfolk, the march had a wider ambit. As well as declining fish yields, the marchers studied the

pollution of coastal waters by industry and urban sewage, and the destruction of key ecosystems like mangrove swamps and estuaries. The objectives of the march, as enumerated by its organizers, were: (i) to widen people's awareness of the link between water and life and to encourage popular initiatives to protect water; (ii) to form a network of all those concerned with these issues; (iii) to pressurize the government into evolving a sustainable water utilization policy, and to democratize and strengthen the existing water management agencies; (iv) to assess the damage already done, identify problem areas for detailed study, and evolve practices for rejuvenating water resources; and (v) to revive and propagate traditional water conservation practices and regenerative fishing technologies (NFF 1989).

The marchers from the two coasts converged in Kanyakumari, on the southernmost tip of India, on May Day 1989 (this culminating date reflecting the trade union locus of the organizers). An exhibition on water pollution and conservation, held at a local high school, was followed by a march to the sea. Here the participants, led by 100 women, took a pledge to "Protect Waters, Protect Life". Finally, a crowd of nearly 10,000, at least half of whom were women, wound their way to the public meeting that was to mark the culmination of the march. Sadly, an incident provoked by a government bus disrupting the marchers led to a police firing in which several people were killed, and the rally was called off. Despite its unhappy ending, the Kanyakumari march had fulfilled its aim of highlighting the threats to a liquid resource that, in the Indian context, must be reckoned to be as important as oil (Dietrich 1989; Kumar 1989).

Ecological restoration

As tactics of struggle and consciousness-raising, the *satyagraha* and *padayatra* have received generous media coverage. Less visible, but equally significant, are the programmes of ecological restoration that various social action groups have undertaken. With the state's manifest inability to restore degraded ecosystems, many voluntary organizations have taken it upon themselves to organize villagers in programmes of afforestation, soil and water conservation, and the adoption of environmentally sound technologies.

In focusing on environmental rehabilitation in preference to struggle or publicity, some groups have been influenced by the Gandhian tradition of constructive work, others by religious reform movements, and yet others by the example of international relief organizations. Often, groups with a background of work in health care, education or women's issues have turned in recent years to promoting sound natural resource management. Three brief case studies are presented below, to illustrate the variety of groups engaged in ecological restoration.

We start with the group that pioneered the Chipko movement, the Dashauli Gram Swarajya Mandal (DGSM). While one wing of Chipko, identified with Sunderlal Bahuguna, has preferred to connect Himalayan deforestation with national and global environmental concerns, the DGSM, under the leadership of Chandi Prasad Bhatt, has turned from struggle to reconstruction work at the grassroots. Over the last decade, the DGSM has concentrated chiefly on afforestation work in the villages of the upper Alakananda valley. Two notable features of this work have been the lead taken by women and the high survival rate of saplings—an average of 75 per cent in contrast to the 14 per cent average rate in Forest Department plantations. In addition, in heavily eroded landscapes, volunteers have taken up appropriate soil conservation measures like the plugging of gullies, construction of small check-dams and the plantation of fast-growing grass species. Finally, the DGSM has enthusiastically promoted energysaving devices such

as fuel-efficient cooking stoves and biogas plants (CSE 1985; S.N. Prasad, personal communication).

A second example of successful eco-restoration work also originated in a process of struggle. In the Sangli district of Maharashtra, where socialist workers have long been active, peasants have been faced with persistent drought. In this context, two villages of Khanapur *taluk*, encouraged by socialist and popular science activists, decided to build on a cooperative basis, a small dam across a river that sporadically contained water. To finance the dam they requested the state government to allow them to sell sand from a nearby river bed. The administration, however, preferred to auction the sand to private merchants: it was even reluctant to sanction the dam. A series of hunger strikes, processions and *gheraos* forced the government to abandon the auction system, although it permitted local sale to a limited extent. Helped by voluntary contributions and under the technical guidance of a Bombay engineer, the villagers finally succeeded in building the Bali Raj Memorial Dam by the end of 1988. The water thus stored is used to provide one irrigated crop to each family of the two villages, and for nursery and forestry work.¹⁰

Our final case study originated not in a movement but in a remarkable individual, Anna Saheb Hazare of the village of Ralegaon Siddhi in the Ahmednagar district of Maharashtra. Ahmednagar too is drought prone—speaking of the scarcity of water, the *Bombay Chronicle* of 2 March 1913 had called it “the most unfortunate and heavily tried district in India”. Thus when Anna Hazare returned to the village on retirement from the army in the mid- 1970s, he found that food production reached barely 30 per cent of its requirements. Quickly locating the problem as insufficient retention of rainwater, he organized villagers into building a series of storage ponds and embankments (*nallah bandhs*) along the low hills surrounding the village. Very quickly, runoff was reduced and aquifers recharged, and the groundwater table rose considerably. There is now sufficient water for household use and irrigation, and crop yields have increased dramatically (the village has begun to export food). Besides this, Hazare has mobilized villagers to plant 400,000 saplings. With his village now acknowledged as a model of eco-restoration through self help, Hazare is training volunteers to work in other villages. He has simultaneously launched a movement against corruption in state forestry and drinking water programmes (Rai et al. 1991).

As these examples show, reconstruction work can proceed hand in hand with struggle. Yet, in other instances, groups temperamentally unsuited to confrontation have done admirable work in promoting environmentally benign technologies and in rehabilitating degraded lands. Reconstruction work constitutes a valuable third front of the environmental movement complementing the activities of consciousness building and popular resistance to state policies.

Individual groups working in the environmental field are typically confined to a small area. In the last decade, various attempts have been made to develop a macro-level organization to coordinate these various groups and activities. This process got a considerable boost with the rally against “destructive development” held in Harsud in September 1989. In a follow-up meeting held in Bhopal in December—to coincide with the fifth anniversary of the gas tragedy in that city—groups that participated in the Harsud rally initiated the formation of the Jan Vikas Andolan (Peoples’ Development

¹⁰ *Indian Post* 1988b; Joy and Rao 1988; Omvedt 1987.

Movement), a loosely knit national-level organization to coordinate local struggles. Over the past three years, the JVA has had meetings in different parts of the country, involving a wide range of groups and individuals. In defining itself as a movement against the existing pattern of development, the JVA's own objectives are fourfold: (i) to coordinate collective action against environmentally destructive policies and practices; (ii) to provide national solidarity to these struggles; (iii) to mobilize wider public opinion on the need for a new development path; and (iv) to work toward an alternative vision, ecologically sustainable and socially just, for India's future (JVA 1990).

Ideological trends in Indian environmentalism

Social action in the three generic modes outlined above (struggle, publicity and restoration) constitutes the bedrock of the Indian environmental movement. While such activism has characteristically been localized—with most groups working within one district—the links between the microsphere and the macrosphere have been made most explicit (recent initiatives like the JVA excepted) through the environmentalists' critique of the ruling ideology of Indian democracy, that of imitative industrialization. For environmentalists have insistently claimed that the intensification of natural resources conflict is a direct consequence of the resource- and capital-intensive pattern of economic development, modelled on the Western experience, followed since independence. The resource illiteracy of development planning, they claim, is directly responsible for the impoverishment of the resource base and of the millions of rural people who depend on it (JVA 1990).

While there is widespread agreement within the environmental movement as regards the failures of the present development model, there is little consensus on plausible alternatives—all responding to the range of conflicts we have analysed above, but advocating widely varying proposals for mitigating these conflicts. It is, however, possible to identify three distinct ideological perspectives within the movement. It is of course entirely possible that none of the ideologies so identified is present in a particular struggle, or indeed that adherents of all three viewpoints might participate in unison in a specific initiative. However, close study and discussions with groups spread all over India do suggest that the three strands analysed below are the dominant ideologies of Indian environmentalism.

The first, which we may call *Crusading Gandhian*, relies heavily on a moral/religious idiom in its rejection of the modern way of life. Here, environmental degradation and social conflict are viewed above all as a *moral* problem—their origins lying in the wider acceptance of the ideology of materialism and consumerism, which draws humans away from nature even as it encourages wasteful lifestyles. Crusading Gandhians argue that the essence of "Eastern" cultures is their indifference, even hostility, to economic gain: thus, if India were to abandon its pursuit of Western models of economic development, it would only be returning to its cultural roots. These environmentalists call, therefore, for a return to pre-colonial (and pre-capitalist) village society, which they uphold as the exemplar of social and ecological harmony. Gandhi's own invocation of Ram Rajya (the mythical but benign rule of King Rama) is here being taken literally, rather than metaphorically. In this regard Crusading Gandhians frequently cite Hindu scriptures as exemplifying a "traditional" reverence for nature and lifeforms.

Crusading Gandhians have worked hard to carry their message of moral regeneration across the country and indeed across the globe. They have sharply attacked the stranglehold of modernist philosophies—particularly those upholding rationalism and

economic growth—on the Indian intelligentsia; through the written and spoken word, they propagate an alternative, non-modern philosophy whose roots lie in Indian tradition.¹¹

The second trend, in many ways the polar opposite of the first, is Marxist in inspiration. Marxists see the problem in political and economic terms, arguing that it is unequal access to resources, rather than the question of values, that better explains the patterns and processes of environmental degradation and social conflict. In this sharply stratified society, the rich destroy nature in the pursuit of profit, while the poor do so simply to survive (the Crusading Gandhians would tend to deny altogether that the poor also contribute to environmental degradation). For *Ecological Marxists*, therefore, the creation of an economically just society is a logical precondition of social and ecological harmony. In their practical emphasis, socialist activists concentrate on organizing the poor for collective action, working toward their larger goal of the redistribution of economic and political power. While including various Naxalite and radical Christian groupings, Ecological Marxists in the Indian context are perhaps most closely identified with People's Science Movements (PSMs)—the best known of which is the Kerala Sastra Sahitya Parishad (Kerala Science Literature Movement)—whose initial concern with taking “science to the people” has been widened to include environmental protection. Ecological Marxists can be distinguished from Gandhians in two significant respects: their unremitting hostility to tradition (and corresponding faith in modernity and modern science) and their relatively greater emphasis on confrontational movements (KSSP 1984).

Crusading Gandhians and Ecological Marxists can be seen as representing the “ideological” and “political” extremes of the Indian environmental movement, respectively. Because of their ideological purity and consistency, their arguments are often compelling, albeit to different sets of people. In between these two extremes, and occupying the vast middle ground, lies a third tendency, which may be termed (less controversially) *Appropriate Technology*. Less strident than the Gandhian in its opposition to industrial society, this strand of the environmental movement strives for a working synthesis of agriculture and industry, big and small units, and Western and Eastern (or modern and traditional) technological traditions. Both in its ambivalence about religion and in its criticism of traditional social hierarchies, it is markedly influenced by Western socialism. Yet, in its practical emphasis on constructive work, it taps another vein in the Gandhian tradition. Thus Appropriate Technologists have done pioneering work in the generation and diffusion of resource conserving, labour intensive and socially liberating technologies. Their emphasis is not so much, *pace* the Marxists, on challenging the “system”—or, *pace* the Gandhians, the system's ideological underpinnings—as in demonstrating in practice a set of sociotechnical alternatives to the centralizing and degrading technologies presently in operation (Bhatt 1992; Reddy 1982).

All three tendencies are represented in that most celebrated of environmental initiatives, the Chipko movement (Guha 1989a). The Gandhian trend, associated above all with the figure of Sunderlal Bahuguna, is best known outside the Himalaya. The Marxist trend within Chipko has been represented by the Uttarakhand Sangharsh Vahini, a youth organization that has organized popular movements against commercial

¹¹ Bahuguna 1983; Nandy 1987, 1989; Shiva 1988.

forestry, unregulated mining and the illegal liquor trade. Finally, the Appropriate Technologists are represented by the organization under whose auspices the movement began, the Dashauli Gram Swarajya Mandal, whose fine work in ecological restoration has already been alluded to.

These contrasting perspectives may be further clarified by examining each strand's attitudes toward equity and science, as well as their style and scale of activism. Most Crusading Gandhians reject socialism as a Western concept: this leads some among them to gloss over inequalities in traditional Indian society, and others even to justify them. Clearly the Marxists have been most forthright in their denunciations of inequality across the triple axes of class, caste and gender. The Appropriate Technologists have been sufficiently influenced by Marxism to acknowledge the presence and pervasiveness of inequality, but have rarely shown the will to challenge social hierarchies in practice. Attitudes toward modern science and technology also vary widely. The Gandhians consider science to be a brick in the edifice of industrial society and responsible for some of its worst excesses. Marxists yield to no one in their admiration of modern science and technology, viewing science and the "scientific temper" as an indispensable ally in the construction of a new social order. Here, the Appropriate Technologists are the most judicious, calling for a pragmatic reconciliation between modern and traditional knowledge and technique, to fulfill the needs of social equity, local self-reliance and environmental sustainability.

On the scale of activism, Appropriate Technologists prefer to work on a microscale—a group of contiguous villages at best—in demonstrating the viability of an alternative model of economic development. The Gandhians have the largest attempted reach, carrying their crusade on worldwide lecture tours: they have often tended to think globally and act globally, even as the Appropriate Technologists have acted locally and occasionally thought locally too. The Marxist groupings work in the intermediate range, at the level of a district perhaps, or (as in the case of the KSSP) the level of a state. Finally, the three strands also differ in their preferred sectors of activism. Their rural romanticism has led the Gandhians to exclusively emphasize agrarian environmental problems, a preference reinforced by their well-known hostility to modern industry. While Appropriate Technologists do recognize that some degree of industrialization (though not of the present resource-intensive kind) is inevitable, in practice they too have worked largely on technologies aimed at relieving the drudgery of work in the village. Here, it is the Ecological Marxists, with their natural constituency among miners and workers, who have been most alert to questions of industrial pollution and workplace safety.

Crusading Gandhians, Ecological Marxists and Appropriate Technologists represent the three most forceful strands in the Indian environmental debate, but we should also take account, however briefly, of two other points of view. First, we have the Indian variant of that vibrant strand in global environmentalism, the *wilderness movement*. Indian naturalists have provided abundant documentation of the decline of natural forests and their plant and animal species, urging the government to take remedial action (Krishnan 1975). Although their earlier efforts were directed almost exclusively toward the protection of large mammals, more recently wildlife preservationists have used the scientific rhetoric of biological diversity and the moral arguments in favour of "species equality" in pursuit of a more extensive system of parks and sanctuaries and a total ban on human activity in protected areas (Guha 1989b).

So we come, finally, to an influential strand of thinking within the state and state agencies that might be termed *scientific conservation*. Pre-eminent here is the work of B.B.

Vohra, a senior bureaucrat who was one of the first to draw public attention to land and water degradation. In a pioneering and impressively thorough paper (Vohra 1973), he documented the extent of erosion, waterlogging and other forms of land degradation. There was, he noted, no countrywide organization or policy to deal with these problems; nor was there coordination between concerned government departments. For Vohra, as for the early scientific conservationists (Hays 1957), the solution lies in the creation of new ministries and departments to deal with problems of environmental degradation. The central government, he has written, “has no option but to obtain a commanding position for itself in the field of land and soil management through financial and administrative measures”.¹²

Neither wilderness protection nor scientific conservation commands a popular following, yet each has had a considerable influence on government policy. Both tendencies look upon the state as the ultimate guarantor of environmental protection, and their energetic lobbying has informed stringent legislation in pursuit of this ideal, such as the Wildlife Protection Act of 1972 (modified in 1991), the Forest Conservation Act of 1980, and the Environment Protection Act of 1986. However, in so far as neither group is cognisant of the social roots of environmental use and abuse, they tend to be dismissed as “elite” conservationists by environmentalists owing allegiance to Gandhian or Marxist traditions.

First World and Third World environmentalism

While there is a vigorous environmental debate and environmental movement in India, it should be noted that its very existence challenges the conventional wisdom of Western (and especially American) social science. Thus, a decade ago, a leading American economist confidently asserted: “If you look at the countries that are interested in environmentalism, or at the individuals who support environmentalism within each country, one is struck by the extent to which environmentalism is an interest of the upper middle class. *Poor countries and poor individuals simply aren't interested*” (Thurow 1980:104–105, emphasis added). As a social phenomenon, the economist went on to explain, environmentalism is “a natural product of a rising real standard of living. We have simply reached the point where, for many Americans, the next item on their acquisitive agenda is a cleaner environment. If they achieve it, it would make all of the other goods and services (boats, summer homes, and so forth) more enjoyable” (Thurow 1980:104–105).

This interpretation of environmentalism is in fact widespread in the West. Historians of American environmentalism are unanimous that environmentalism is a “full stomach” phenomenon, a direct consequence of economic affluence by which wilderness areas and clean air come to be cherished once basic material needs have been fulfilled (Nash 1982). As a leading historian has remarked, the emergence of popular environmentalism in the United States was “not a throwback to the primitive, but an integral part of the modern standard of living as people sought to add new ‘amenity’ and ‘aesthetic’ goals and desires to their earlier preoccupation with necessities and conveniences”.¹³ Or, to quote a leading British journalist, it is “safe to assume that when

¹² Vohra 1973; see also Vohra 1980, 1982.

¹³ Hays 1982:21; see also Hays 1987.

everyone turns environmental, prosperity has truly arrived. Greenness is the ultimate luxury of the consumer society” (Moore 1989:ix).

In this perspective, environmentalism is organically related to the expansion of leisure opportunities in a “post-industrial” society—it is itself an expression of a “postmaterial” world-view (Inglehart 1977). Yet, contrary to what one might expect from this theory, poor countries and, even more strikingly, poor individuals and poor communities within them, have shown a strong interest in environmental issues. India is not an exception in this regard, for Brazil, Kenya and Malaysia all have growing environmental movements with markedly lower class constituencies.

A detailed contrast between First World and Third World environmentalism would take us too far afield, into the realm of comparative and global environmental history; that is not possible here. Given the bias in the literature toward the study of North Atlantic environmentalism—and indeed the equation in many minds of environmental concern with economic prosperity—it will help to locate the Indian environmental movement by contrasting it with what one might call the “ecology of affluence”. Just as we take the Indian case as a paradigm of Third World environmentalism, we use the American movement as a paradigm of First World environmentalism. The histories of environmentalism in these two great and vibrant democracies have, inevitably, been very different. In the one case, environmentalism as a popular movement is, indeed, an unmistakable product of a post-industrial economy and a post-material society. India, however, is still a dominantly agrarian country—here the environmental movement has emerged at a relatively early stage in the industrialization process.

This is, of course, related to the very different trajectories of economic development in the two countries. The countries that pioneered industrial development in Western Europe and North America did face environmental problems relating to the degradation of land and forests. However, with technological substitution and scientific resource management, problems such as timber scarcities and dust bowls, once faced by countries like the United States, have disappeared. In the second phase of Western industrialization (that is, after the Second World War) other forms of environmental degradation—especially air and water pollution and the destruction of wilderness—have come to occupy centre stage. In other words, with the maturing of the industrialization process, public attention has shifted from problems of environmental sustainability—such as the steady supply of forest produce or the protection of soils—to issues of environmental quality like cleanliness of air and water or the protection of pristine habitats.

On the other hand, in India’s industrialization experience—and here it is typical of the Third World more generally—it has simultaneously faced problems of land and resource depletion, pollution and the decimation of biological diversity. The history of colonial exploitation and the process of planned development after Indian independence are both germane here. Moreover, unlike in the West, there is little hope of a large-scale shift in consumption patterns—from fuel wood to oil, for example—to overcome the problems caused by deforestation, soil erosion, and so forth. Consequently, at least in the immediate future, resource depletion and destruction are likely to persist (Gadgil and Guha 1992).

A second major difference, flowing logically from the first, concerns the social origins of the environmental impulse. Clearly, in the Indian case environmental degradation and the ensuing resource shortages directly threaten survival and livelihood options. Here, as we have documented at some length, environmentalism has its origins

in conflicts between competing groups—typically peasants and industry—over productive resources. By contrast, environmental conflicts in the West have characteristically emerged out of threats to health and leisure options. The forces for environmental destruction are, in both cases, overwhelmingly state agencies and private enterprise. In one scenario, intensification of resource use undermines existing but subsistence-oriented economic activities, while in the other it poses a threat to the health or amenities of local communities. In advanced industrial societies, quality of life issues such as environmental protection, have somewhat displaced economic conflicts as the motivating factor behind collective action; while in the “developing” world, environmental conflict is, for the most part, only another form of economic conflict.

These different motivations closely influence the tactics of protest. In India, direct action—tree hugging, demonstrations, attacks on official property—have from the beginning been a vital component of environmental action. Here there is a marked similarity in idiom and action to the archetypal peasant movement. In the United States, environmental groups have relied to a greater degree on litigation, skilful use of the media and lobbying politicians—tactics with a greater chance of success in a more formal and mature democratic political system. The experience of recent years, however, somewhat qualifies this sharp contrast between direct action on the one hand and lobbying and litigation on the other. Environmental groups in India are increasingly turning to the courts as a supplement to popular protest, while in America, militant environmentalists disgusted with the incremental lobbying of mainstream groups have taken to direct action—the spiking of trees, for instance—to protect threatened wilderness.

A fourth important difference concerns the role of science and scientists. In the United States, scientists have played a key role: indeed, the beginnings of modern American environmentalism are conventionally assigned to the writing of and reaction to the book *Silent Spring* by the biologist Rachel Carson (1962). In subsequent decades, the work of scientists such as Barry Commoner, Paul Ehrlich, Garret Hardin and the co-authors of the *Limits to Growth* report have all helped bring ecological concerns to a wide public audience. In India, scientists (and social scientists) have played a severely circumscribed role in the environment debate. Rather, journalists, Gandhians and environmental activists themselves have been in the forefront. Comparative rates of literacy are relevant here, as is the attitude to science: unlike the US situation, science does not enjoy a high public profile in India, nor do scientists command moral authority.

The last difference is the most crucial of all. This is that environmental degradation has been, in terms of its human consequences, a far more serious issue in India, as in most of the Third World generally. For in the Western world, the destruction of the environment has had an adverse impact primarily on health and on natural habitats valued for reasons of science, aesthetics or leisure, whereas in the poorer countries it has in addition gravely undermined the life chances of millions of rural (and urban) households. This key distinction has meant that in the United States, for example, the environmental movement has by and large run parallel to the consumer society without questioning its socioecological basis (cf. Guha 1989b). The sharper edge to environmental conflict in the Third World—and its close connections to questions of subsistence and survival—have prompted a more thoroughgoing critique both of consumerism and of uncontrolled economic development. This has been a critique primarily directed at the iniquitous and unsustainable patterns of economic growth that characterize most Third World countries; yet it is also a critique with much relevance to Western lifestyles and

economic preferences, themselves the cause of massive environmental degradation worldwide.

It is thus that the environmentalism of the poor has a very different agenda from the environmentalism of the rich. The conflict between these two agendas came briefly to the fore at the Earth Summit in Rio in June 1992. It was brushed aside then, but will assuredly resurface at regular intervals. With the environment becoming a major theme in global politics, there is more need than ever for a fuller understanding of the social roots of environmental concern: of its origins, motivations and forms of expression in different countries and social systems.

References

- Alvares, C. 1989. "No!" *The Illustrated Weekly of India*, 15 October.
- Anklesaria, S.A. 1988. "Narmada Project: Government-opposition alliance against Amte." *Indian Express*, 30 October.
- Anonymous. 1991. "The Sangharsh Yatra: A first hand account." *Narmada: A Campaign Newsletter*, Nos. 7 and 8, April.
- Bahuguna, S. 1983. *Walking with the Chipko Message*. Navjivan Ashram, Silyara (Tchri Garhwal district).
- Bandyopadhyay, J. 1989. *Natural Resource Management in the Mountain Environment: Experiences from the Doon Valley, India*. ICIMOD, Kathmandu.
- Bhaskaran, S.T. 1990. "The rise of the environmental movement in India." *Media Journal* Vol. 37, No. 2.
- Bhatt, C.P. 1992. *The Future of Large Projects in the Himalaya*. Peoples Association for Himalaya Area Research, Nainital.
- Bhuskute, V.M. 1968. *Mulshi Satyagraha*. Dastane (in Marathi), Pune.
- Bombay Chronicle. 1913. 2 March.
- Caiman, L. 1985. *Protest in Democratic India*. Westview Press, Boulder CO.
- Carson, R. 1962. *Silent Spring*. Fawcett Publications Inc., Greenwich CT.
- Concerned Scholars. 1986. *Bharat Aluminium Company: Gandhamardan Hills and Peoples Agitation*. Concerned Scholars, Sambalpur.
- CSE. 1985. *The State of India's Environment 1984-1985: The Second Citizens' Report*. Centre for Science and Environment, New Delhi.
- . 1982. *The State of India's Environment 1982: A Citizens' Report*. Centre for Science and Environment, New Delhi.
- Dalal, N. 1983. "Bring back my valley." *The Times of India*, 10 July.
- Dietrich, G. 1989. "Kanyakumari march: Breakthrough despite breakup." *Economic and Political Weekly*, Vol. 24, No. 20, pp. 1087-1088.
- D'Monte, D. 1985. *Temples or Tombs? Industry versus Environment: Three Controversies*. Centre for Science and Environment, New Delhi.
- . 1981. "Time up for Tehri." *Indian Express*, 30 May.
- Dogra, B., N. Nautiyal and K. Prasun. 1983. *Victims of Ecological Ruin*. Dehra Dun (from the authors).
- Elwin, V. 1964. *The Tribal World of Verrier Elwin: An Autobiography*. Oxford University Press, Bombay.
- EPW (Economic and Political Weekly). 1991. "Gujarat: An advertiser's supplement." *Economic and Political Weekly*, Vol. 26, Nos. 1/2, pp. AS 1-27 (5-12 January).
- Fernandes, W. and E. Ganguly Thukral (eds.). 1988. *Development, Displacement and Rehabilitation*. Indian Social Institute, New Delhi.
- Fernandes, W. and S. Kulkarni (eds.). 1983. *Towards a New Forest Policy*. Indian Social Institute, New Delhi.
- Gadgil, M. and R. Guha. 1994. *Ecology and Equity: Steps towards an Economy of Permanence*. UNRISD, Geneva.
- . 1992. *This Fissured Land: An Ecological History of India*. Oxford University Press, New Delhi.
- Ganguly Thukral, E. (ed.). 1992. *Big Dams, Displaced People: Rivers of Sorrow, Rivers of Change*. Sage Publications, New Delhi.
- Goldsmith, E. and N. Hildyard. 1984. *The Social and Environmental Effects of Large Dams*. Wadebridge Ecological Centre, Camelford.
- Guha, R. 1989a. *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*. Oxford University Press, New Delhi.

- . 1989b. "Radical American environmentalism and wilderness preservation: A Third World Critique." *Environmental Ethics*, Vol. 11, No. 1, pp. 71–76.
- Hart, H.C. 1956. *New India's Rivers*. Orient Longman, Bombay.
- Hays, S.P. 1987. *Beauty, Health and Permanence: Environmental Politics in the United States, 1955–1985*. Cambridge University Press, New York.
- . 1982. "From conservation to environment: Environmental politics in the United States since World War Two." *Environmental Review*, Vol. 6, No. 2, pp. 14–41.
- . 1957. *Conservation as the Gospel of Efficiency: The Progressive Conservation Movement 1880-1920*. Harvard University Press, Cambridge MA.
- The Hindu. 1984. 7 June.
- Hiremath, S.R. 1988. "Western Ghats march was an education." *Deccan Herald*, 14 February.
- . 1987. "On fighting a corporate giant." In A. Agarwal, D. D'Monte and U. Samant (eds.). *The Fight for Survival*. Centre for Science and Environment, New Delhi.
- Indian Post. 1988a. 8 August.
- Indian Post. 1988b. 21 September.
- Inglehart, R. 1977. *The Silent Revolution: Hanging Values and Political Styles among Western Publics*. Princeton University Press, Princeton NJ.
- ISST (Institute of Social Studies Trust). 1991. *Mining in the Himalayas: Report on a Field Study in the Almora and Pithoragarh Districts*. Institute of Social Studies Trust, New Delhi.
- Joshi, D. 1983a. "Magnesite Udyog: Vinash ki ankahi kahani." (Magnesite mining: Destruction's untold story). *Parvatiya Times*, New Delhi, 30 November.
- . 1983b. "Magnesite kanan se Himalaya ko bhaari kshati." (Grievous injuries to the Himalaya caused by magnesite mining). *Parvatiya Times*, 31 November.
- Joy, K.J. and Nagmani Rao. 1988. "The great sand robbery and impending ecological disaster." *Economic and Political Weekly*, Vol. 23, No. 33, 13 August, pp. 1169–1171.
- JVA (1990) *Jan Vikas Andolan: A Working Perspective*. Mimeo.
- Kalpavriksh. 1988. *The Narmada Valley Project: A Critique*. Kalpavriksh, New Delhi.
- Kanvalli, S. 1991. *Quest for Justice*. Samaj Parivartan Samudaya, Dharwad.
- Kothari, R. 1984. "The non party political process." *Economic and Political Weekly*, Vol. 19, No. 5, 4 February, pp. 216–224.
- Krishnan, M. 1975. *India's Wildlife in 1959-70: An Ecological Survey of the Larger Mammals of Peninsular India*. Bombay Natural History Society, Bombay.
- KSSP (Kerala Sastra Sahitya Parishad). 1984. *Science as Social Activism: Reports and Papers on the People's Science Movement in India*. KSSP, Trivandrum.
- Kumar, K.G. 1989. "Police brutality besieges ecology: National fishermen's march." *Economic and Political Weekly*, Vol. 24, No. 21, 27 May, p. 1155.
- Kurien, J. and T. Achari. 1990. "Overfishing along Kerala Coast: Causes and consequences." *Economic and Political Weekly*, Vol. 25, Nos. 35–36, pp. 2011–2018.
- Modi, L.N. 1988. "Whose forests are they anyway?" *Blitz*, 10 December.
- Moore, C. 1989. "Foreword." In P. Marsden-Smedley (ed.), *Britain in the Eighties: The Spectator View of the Thatcher Decade*. Grafton Books, London.
- Nandy, A. (ed.). 1989. *Science, Hegemony and Violence: A Requiem for Modernity*. Oxford University Press, New Delhi.
- . 1987. *Traditions, Tyrannies and Utopias: Essays in the Politics of Awareness*. Oxford University Press, New Delhi.
- Narain, Sunita. 1983. "Brutal oppression of fisherfolk." *The Times of India*, 11 October.
- Narmada. 1989–1990. *Narmada: A Campaign Newsletter* (various issues). Narmada Bachao Andolan, New Delhi.
- Nash, R.F. 1982. *Wilderness and the American Mind*. Yale University Press, New Haven CT.
- NFF (National Fisherworkers Forum). 1989. *Kanyakumari March: Breakthrough despite Breakup*. National Fisherworkers Forum, Cochin.
- Omvedt, G. 1987. "Of sand and King Bali." *Economic and Political Weekly*. Vol. 22, No. 9, February, pp. 365–356.
- Paranjpye, V. 1989. *Evaluating the Tehri Dam: An Extended Cost-Benefit Appraisal*. Indian National Trust for Art and Cultural Heritage, New Delhi.
- Pathak, S. 1987. *Uttarakhand mein Kuli Begar Pratha (The Forced Labour System in Uttarakhand)*. Radhakrishnan Prakashan, New Delhi.
- PUCL (People's Union for Civil Liberties). 1985. *Bastar: Ek Muthhed ki Jaanch (Bastar: An Enquiry Report)*. PUCL, Bhopal.
- PUDR (Peoples Union for Democratic Rights). 1986. *Gandhamardan Mines: A Report on Environment and People*, New Delhi.

- . 1982. *Undeclared Civil War: A Critique of Forest Policy*. PUDR, New Delhi.
- Rai, U.M., S. Bana and D. Kumar. 1991. *Call of the Commons: People versus Corruption*. Centre for Science and Environment, New Delhi.
- Rangarajan, M. 1992. *Forest Policy in the Central Provinces, 1860–1914*. University of Oxford. Unpublished D.Phil thesis.
- Reddy, A.K.N. 1982. "An alternative pattern of Indian industrialization." In A.K. Bagchee and Nirmala Bannerjee (eds.), *Change and Choice in Indian Industry*. K.P. Bagchee, Calcutta.
- Saraf, S. 1989. "An odyssey to save the Sivaliks." *The Hindu*, 26 February.
- Scott, J.C. 1985. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Yale University Press, New Haven CT.
- Sengupta, N. (ed.). 1982. *Jharkhand: Fourth World Dynamics*. Authors' Guild, New Delhi.
- Sharma, L.T. and R. Sharma (eds.). 1981. *Major Dams: A Second Look*. Gandhi Peace Foundation, New Delhi.
- Shiva, V. 1988. *Staying Alive: Women, Ecology and Survival in India*. Kali for Women, New Delhi; Zed Press, London.
- Spodek, H. 1971. "On the origins of Gandhi's political methodology: The heritage of Kathiawad and Gujarat." *Journal of Asian Studies*, Vol. 30, No. 2, pp. 361–372.
- The Statesman. 1991. 17 March.
- Thurow, L. 1980. *The Zero Sum Society: Distribution and the Possibilities for Economic Change*. Basic Books, New York.
- The Times of India. 1987. 8 October.
- . 1921. 2 May.
- Vijaypurkar, M. 1988. "Lessons from a march." *Frontline*, 20 February/4 March.
- Vinayak, A. 1990. "Tribals try to save eastern Ghats." *Free Press Journal*, 19 December.
- Vohra, B.B. 1982. "Proper land management." *Indian Express*, 27 December.
- . 1980. *A Land and Water Policy for India* (Sardar Patel Memorial Lectures). Publications Division, New Delhi.
- . 1973. "A charter for the land." *Economic and Political Weekly*, Vol. 7, No. 13, March, pp. A2–16.

Chapter 12

Gender, Environment and Poverty Interlinks in Rural India: Regional Variations and Temporal Shifts, 1971–1991¹

*Bina Agarwal*²

(1995)

Introduction

This chapter examines the links between gender, poverty and environmental change in rural India, focusing in particular on regional variations and temporal shifts over the past two decades. It is divided into three main sections. The first of these gives an overview of the kinds of links that can be established between gender, poverty and environmental change, focusing in particular on the factors underlying the declining availability of natural resources and on the implications of this decline for women in poor rural households. The second section takes a brief look at grassroots and governmental responses to environmental degradation, and the third and final section offers some concluding comments.

An Overview of Interlinks³

Environmental degradation and forms of appropriation

The discussion below focuses briefly on the nature and causes of natural resource depletion before examining its gender implications for poor rural households.

In India the availability of natural resources to a large section of the rural population—and especially to the poor—has been severely eroded over the past two

¹ Abridged from the UNRISD Discussion Paper of the same title (UNRISD, 1995).

² At the time of writing, Bina Agarwal was Visiting Scholar, Institute for Advanced Study, Princeton, United States.

³ This section draws substantially from Agarwal 1991 and 1992, as well as from new material (including data from a primary survey undertaken by the author).

decades by two parallel, and interrelated, processes: first, their growing degradation both in quantity and quality; and, second, their increasing statization (appropriation by the State) and privatization (appropriation by a minority of individuals), with an associated decline in what was earlier communal. These two processes, both independently and interactively, underlie many of the differential class-gender effects (that is, gender effects mediated by class) of environmental degradation outlined further below. Independently, the former process is reducing overall availability, and the latter is increasing inequalities in the distribution of what is available. Interactively, an altered distribution in favour of the State and some individuals, and away from community control, can contribute to environmental degradation in so far as community resource management systems have often proven more effective in environmental protection and regeneration than systems managed solely by the State or by individuals. These two processes I term the primary factors underlying the class-gender effects of environmental change. Impinging on these primary factors are several intermediary ones, of which those especially important are the following: the erosion of community resource management systems resulting from the shift in “control rights” over natural resources away from community hands,⁴ population growth, consumption patterns and technological choices in agriculture. Most of these are discussed in detail in Agarwal (1991) and summarized briefly below.

(a) Forms of environmental degradation

Although there is as yet only an inadequate database to indicate the *exact* extent of environmental degradation in India and its cross-regional variations, available macroinformation provides sufficient pointers to warrant serious concern. Degradation in India’s natural resource base is manifest in disappearing forests, deteriorating soil conditions, and depleting water resources. Data obtained through remote sensing methods reveal that in 1985–1987 only 19.5 per cent of India’s geo-area was forested (Government of India 1991a). By official estimates, in 1980, 56.6 per cent of India’s land was suffering from environmental problems, especially water and wind erosion (Government of India 1980–1985:343). Unofficial estimates are even higher. In some canal projects, *half* the potentially irrigable and cultivable area has been lost due to water-logging (Joshi and Agnihotri 1984). The area under periodic floods is estimated to have doubled between 1971 and 1981, and soil fertility is declining due to excessive use of chemical fertilizers. Likewise, the availability of both ground and surface water is falling. Groundwater levels have fallen permanently not only in the Deccan plateau but also in parts of the Indo-Gangetic plains, due to indiscriminate sinking of tubewells—the leading input in the green revolution technology (Dhawan 1982). As a result, many drinking water wells have dried up or otherwise been rendered unusable (CSE 1986:30). In addition, fertilizer and pesticide run-offs into natural water sources have destroyed fish life and polluted water for human use in several areas (CSE 1986:30).

Such degradation of natural resources has gone on alongside their increasing concentration in the hands of a few, as discussed below.

⁴ For a brief but useful discussion on property rights in relation to environmental resources see Dasgupta and Maler 1990. I prefer to use the term “control rights” here, since what appears critical in this context is less who owns the resources and more who has control over them. Hence, for instance, the control of State-owned resources could effectively rest with the village community.

(b) The process of statization

Both under colonial rule and continuing in the post-colonial period, State control over forests and village commons has grown, with selective access being granted to a favoured few. To begin with, several aspects of British colonial policy have had long-lasting effects (Guha 1983). The British established State monopoly over forests, reserving large tracts for timber extraction. Associated with this was a severe curtailment in the customary rights of local populations to these resources; rights of access were granted only under highly restricted conditions, with a total prohibition on the barter or sale of forest produce by such rights-holders. At the same time, the forest settlement officer could give concessions to those he chose to so privilege. The colonial State also promoted the notion of “scientific” forest management, which often cloaked the encouragement of commercially profitable species at the cost of species used by the local population. Alongside, there was virtually indiscriminate forest exploitation by private contractors, especially for building railways, ships and bridges; and tree clearing was also encouraged for establishing tea and coffee plantations, and expanding the area under agriculture to increase the government’s land revenue base.

Effectively, these policies: (i) severely eroded local systems of forest management; (ii) legally cut off an important source of sustenance for people, even though illegal entries continued; (iii) created a continuing source of tension between the forestry officials and the local people; and (iv) oriented forest management to commercial ends.

Post-colonial policies, at least up to the early 1980s, showed little shift from the colonial view of forests as primarily a resource for commercial use and gain. State monopoly over forests persisted, with all the attendant tensions, as did the practice of forestry in the interests of profit. Restrictions on local people’s access to non-timber forest produce actually increased and the harassment and exploitation of forest dwellers by the government’s forest guards was widespread (Chand and Bezboruah 1980). The decade of the 1980s, however, saw some shift toward State recognition of the positive role that local communities could play in the regeneration of wastelands and the launching of joint forest management schemes—although the long-term positive effects on the ground of this shift in policy still remain to be seen.

(c) The process of privatization

Especially over the past four decades, a growing privatization of community resources in *individual* (essentially male) hands has paralleled the process of statization. Customarily, large parts of village common lands, especially in northwest India, were what could be termed “community-private”—they were private in so far as use rights to them were usually limited to members of the community and were therefore exclusionary; at the same time they were communal in that such rights were often administered by a group rather than by an individual.⁵

Table 12.1 reveals a decline in village commons (VCs) ranging between 26 and 63 percentage points across seven states, between 1950 and 1984. This is attributable mainly to State policy acting to benefit selected groups over others, including illegal encroachments by farmers, made legal over time; the auctioning of parts of VCs by the

⁵ See, for example, Baden-Powell 1957 and Bromley and Cernea 1989. However, the degree to which the village community acted as a cohesive group and the extent of control it exercised over communal lands varied across undivided India: it was much greater in the northwest than elsewhere (Baden-Powell 1957).

government to private contractors for commercial exploitation; and government distribution of common land to individuals under various schemes that were, in theory, initiated to benefit the poor, but in practice benefited mainly the well-off farmers (Jodha 1986). For 16 of the 19 districts in the seven states studied by Jodha, the share of the poor was less than that of the non-poor. *Hence the poor (who depend on these resources more than the better-off) lost out collectively while gaining little individually.*

Similarly, in the tapping of groundwater through tubewells, there are dramatic inequalities in the distribution of what is effectively an underground commons. Tubewells are concentrated in the hands of better-off farmers and the noted associated fall in water tables has, in many areas, dried up many shallow irrigation wells and drinking water wells used by the poor. In some regions, they have also depleted soil moisture from land used by poor households (Bandhyopadhyay 1986).

(d) The erosion of community resource management systems

The statization and privatization of communal resources have, in turn, systematically undermined traditional institutional arrangements of resource use and management. The documentation on this is still growing, but existing research reveals systems of water management, methods of gathering firewood and fodder, and practices of shifting agriculture that were typically not destructive of nature.⁶ Some traditional religious and folk beliefs also contributed to the preservation of nature, especially trees or orchards deemed sacred, as in the sacred groves still found in parts of India.

Of course, much more empirical documentation is needed on how regionally widespread these traditional systems of management were, and the contexts in which they were successful in ensuring community cooperation. However, the basic point is that where traditional community management existed, as it did in many areas, *responsibility for resource management was linked to resource use* via local community institutions. Where control over these resources passed from the hands of the community to those of the State or of individuals, this link was effectively broken.

In turn, the shift from community control and management of common property to State or individual ownership and control appears to have increased environmental degradation (Dasgupta and Maler 1990; and Bromley and Cernea 1989). Property rights vested in individuals are also no guarantee for environmental regeneration. Indeed individual farmers attempting tree planting for short-term profits in the 1980s tended to plant quick-growing commercial trees such as eucalyptus, which many argued to be environmentally costly.

⁶ On traditional systems of community water management, see Sengupta 1985 and Seklar 1981. On communal management of forests and village commons see Guha 1985, Gadgil 1985 and Moench 1988. On firewood gathering practices, see Agarwal 1986a: firewood for domestic use in rural households was customarily collected in the form of twigs and fallen branches, which did not destroy the trees. Even today, 75 per cent of firewood used as domestic fuel in northern India (and 100 per cent in some areas) is in this form.

Table 12.1: Distribution of village common land to individual households in different regions

States and districts	VCs as per-centage of village area 1982-1984		Percentage decline in VC area, 1950-1984		Percentage of land distributed to			Percentage of recipients distributed among the			Per household area owned (hectares)			
	VCs	as per-centage of village area	1982-1984	Percentage decline in VC area, 1950-1984	Poor	Others	Poor	Others	Poor	Others	Before	After	Before	After
<i>Andhra Pradesh</i>														
Mahabubnagar	9	43	50	50	50	50	76	24	0.3	0.9	3.0	5.1		
Medak	11	45	51	49	51	49	59	41	1.0	2.2	3.1	4.6		
<i>Gujarat</i>														
Banaskantha	9	49	18	82	18	82	38	62	0.8	2.0	5.4	8.8		
Mehsana	11	37	20	80	20	80	36	64	1.0	1.7	8.0	9.8		
Sabarkantha	12	46	28	72	28	72	55	45	0.5	1.1	7.0	9.8		
<i>Karnataka</i>														
Bidar	12	41	39	61	39	61	64	36	1.0	2.0	6.4	9.2		
Gulbarga	9	43	43	57	43	57	60	40	0.8	2.4	4.5	7.7		
Mysore	18	32	44	56	44	56	67	33	0.9	1.9	4.1	11.6		
<i>Madhya Pradesh</i>														
Mandsaur	22	34	45	55	45	55	75	25	1.2	2.5	7.7	12.4		
Raisen	23	47	42	58	42	58	68	32	1.3	2.2	6.2	9.0		
Vidisha	28	32	38	62	38	62	48	52	1.3	2.5	4.9	6.8		
<i>Maharashtra</i>														
Akola	11	42	39	61	39	61	58	42	1.0	1.6	3.1	4.6		
Aurangabad	15	30	30	70	30	70	42	58	1.1	2.2	6.4	6.3		
Sholapur	19	26	42	58	42	58	53	47	0.7	2.2	3.4	5.6		
<i>Rajasthan</i>														
Jalore	18	37	14	86	14	86	37	63	0.3	1.7	7.2	12.5		
Jodhpur	16	58	24	76	24	76	35	65	0.4	1.3	2.3	3.8		
Nagaur	15	63	21	79	21	79	41	59	1.3	2.5	2.4	5.2		
<i>Tamil Nadu</i>														
Coimbatore	9	47	50	50	50	50	75	25	0.8	2.5	3.8	5.8		
Dharmapuri	12	52	49	51	49	51	55	45	1.0	1.9	4.6	7.5		

Notes: * Before the distribution of VC land; * After the distribution of VC land. Source: Jodha (1986).

(e) Population growth

Excessive population growth is often identified as the primary culprit in environmental degradation. However, the evidence on this does not justify such a simple conclusion. It is far from clear what threshold of population density would lead to environmentally detrimental effects in particular contexts. In parts of Africa, in fact, significant increases in population have been associated with a shift from highly degrading agricultural practices to more sustainable ones.⁷ At the same time, in India, with much higher population densities than found in most parts of Africa, a rapidly growing population impinging on a limited land/water/forest base may be expected to degrade the environment over time.

However, political economy dimensions clearly underlie the *pace* at which such a process may occur and *how the costs of it are distributed*. The continuing (legal and illegal) exploitation of forests, and the increasing appropriation of village commons and groundwater resources by a few, leave the vast majority to subsist on a shrinking natural resource base. Added to this is the noted erosion of community resource management systems, which had enforced limitations on what people could and did take from communal resources, and which could perhaps have ensured their protection, despite population pressure, for some time.⁸ The almost unidimensional focus on population in many national and international forums has detracted attention from these and other basic causes of environmental deterioration. And it is questionable whether interventions to control population growth can, *in themselves*, stem environmental degradation. What they can do, as Shaw (1988:7) argues, is “buy crucial time until we figure out how to dismantle more ultimate causes”.

Any policy for reducing population growth must also contend with the complexity of the relationship between environmental degradation and people’s desired family size. On the one hand, environmental degradation could induce a variety of fertility-increasing responses over time. Young girls could be kept away from school to help with fuel and fodder collection and, given the negative correlation between female education and fertility, this could constrain fertility reduction in the long term. Again, if environmental degradation leads to higher infant mortality rates, parents may seek to have more children to ensure a desired completed family size. Families may also want more children to diversify incomes as a risk-reducing mechanism, in environmentally high-risk areas (Rosenzweig and Wolpin 1985).

On the other hand, environmental degradation could lead people to want smaller families because of the difficulties of maintaining large ones on a limited resource base. Preliminary results from a primary survey I undertook in 1993–1994 in Gujarat, Rajasthan and the Kumaun region of the Uttar Pradesh (UP) hills, point in this direction. Some of the replies by women respondents (mostly in the 40–45 age group) to the question: “Is it better to have many or few children to cope with the fuel/fodder/water problem?” are reproduced below:

- “Large families mean more hands, but where is the land?”
- “Large families need more land and food. If the family is large we will need to collect more [fuel and fodder], so that does not solve the problem. Smaller families are more caring.”

⁷ I understand from Paul Streeten (personal communication, 1995) that this was found in a study of the Machakos district of Kenya.

⁸ See, for example, the discussion on this in Bromley and Cernea 1989.

- “Small families are better. More children won’t solve the problem in the long run because there will be less land to till.”
- “More children will help the mother for a while, but the problem will return when the children leave home. A smaller family is better because then all the children can be cared for.”
- “Small families are better in every respect, each member gets more attention. Big families have to spend more money. Joint families are best if the members cooperate.”
- “One or two children are enough; more children means fragmentation and small plots.”
- “Fewer children means good food, good education. Two sons and one daughter is ideal.”

In other words, there appears to be an emerging recognition of the need to limit family size, given the resource crunch. But there is still a wide gap to be bridged in the supply of better health and contraceptive services that would enable women to make informed and safe choices.

These aspects highlight yet another facet of the complex link between women’s status, population growth, and the state of the environment.

(f) Consumption patterns

The effect of a given population size on the natural resource base also cannot be delinked from income distribution, people’s lifestyles, and associated consumption patterns. These issues are too wide ranging and complex to be detailed here, but it needs mention that the question is not just one of quantity consumed but also of the nature of product demanded. This, in turn, has implications for choice of production technologies and potential for environmental degradation, including pollution, the creation of non-biodegradable waste, and so on. The costs of this are, however, borne by many whose own lifestyles have not contributed to the degradation, and who have had no say in the decisions regarding the products produced or the technologies used.

It is also important to recognize that the question of consumption and lifestyles has not only a well-recognized class dimension, but a gender dimension as well, stemming for instance from gender differences in control over decisions about household purchases. To cite one example, it is noteworthy that, even in middle peasant homes, investment in a tractor, for example (a technology that men use), tends to have priority over the replacement of a smoky kitchen stove (a technology that women use).⁹

(g) Choice of agricultural technology and erosion of local knowledge systems

Several forms of environmental degradation are associated with the green revolution technology adopted to increase crop output. While dramatically successful in the latter objective in the short run, it has had high environmental costs: falling water tables due to the overuse of tubewells, waterlogged and saline soils from many large irrigation schemes, declining soil fertility with excessive chemical fertilizer use, water pollution with pesticides, and so on. This is likely to affect the long-term sustainability of the output increases achieved so far. Deteriorating soil and water conditions are already being

⁹ Personal observation in Haryana, Punjab and Rajasthan.

reflected in declining crop yields.¹⁰ Genetic variety has also shrunk, and many of the indigenously developed crop varieties (long-tested and adapted to local conditions) have been replaced by “improved” seeds that are more susceptible to pest attacks. The long-term annual growth rate of agricultural production in India over 1968–1985 was 2.6 per cent, that is, slightly lower than the pre-green revolution, 1950–1965, rate of 3.08 per cent. Crop yields are now also more unstable (Rao et al. 1988). All this raises doubts about the long-term sustainability of agricultural growth, and of rural production systems more generally, under present forms of technology and resource management in India. Indeed, indiscriminate agricultural expansion—with little attempt to maintain a balance between forests, fields and grazing lands—assumes that the relationship between agriculture, forests and village commons is an antagonistic one, rather than one of complementarity.

The choice of agricultural technology and production systems also reflects the dominant view of what constitutes scientific agriculture. The green revolution embodies a technological mix, which gives primacy to laboratory-based research and manufactured inputs, and treats agriculture as an isolated production system. Over the years there has been a systematic devaluation and marginalization of indigenous knowledge about species-varieties and sustainable forms of interaction between people and the natural environment. And the people who use this knowledge in their daily lives—farmers and forest dwellers and especially the women of these communities—have tended to be excluded from the institutions that create what is seen as scientific knowledge.

All these factors have widespread implications for rural livelihoods, poverty and gender equity.

Implications: Class-gender effects

(a) The specificity of class and gender

The effects of natural resource degradation, statization and privatization (and of their underlying causes) have a location, class and gender specificity. Households located in environmentally vulnerable zones are likely to be most at risk and, within these zones, the effects would be especially negative for poor households because of their particular dependence on communal resources.

For instance, a wide variety of essential items are gathered by rural households from the village commons (VCs) and forests, for personal use and sale: food, fuel, fodder, fibre, small timber, manure, bamboo, medicinal herbs, oils, materials for house building and handicrafts, resin, gum, honey, spices, and so on (KFRI 1980; Fernandes and Menon 1987). Although all rural households use the VCs to some degree, for the poor they are critically important given the unequal distribution of private land in the country (Government of India 1986, 1987). Data for the early 1980s, from 12 semi-arid districts in seven Indian states, indicate that for poor rural households (the landless and those with less than 2 hectares dryland equivalent) VCs account for at least 9 per cent of total income and in most cases 20 per cent or more, but contribute only 1–4 per cent of the incomes of the non-poor (see table 12.2). The dependence of the poor is especially high for fuel and fodder: across the regions studied by Jodha (1986), VCs were found to supply

¹⁰ Under some large-scale irrigation works, crop yields are lower than in the period immediately prior to the project (Joshi and Agnihotri 1984).

91–100 per cent of the firewood and 69–89 per cent of their grazing needs, compared to the relative self-sufficiency of the larger landed households. Access to VCs reduces income inequalities in the village between poor and non-poor households. Also, there is a close link between the viability of small farmers' private property resources and their access to VCs for grazing or collecting fodder for their draft animals or milk cattle (Jodha 1986; Blaikie 1985).

Forests, likewise, have always been significant sources of livelihood, especially for tribal populations, and provided the basis of swidden cultivation, hunting and the gathering of non-timber forest produce (NTFP). In India, an estimated 30 million or more people depend wholly or substantially on NTFP for a livelihood (Kulkarni 1983). These sources are especially critical during lean agricultural seasons, and during acute food shortage contexts such as drought and famine (Agarwal 1990).

The health of forests, in turn, can affect the health of soils (especially in the hills), and the availability of ground and surface water. For a large percentage of rural households, the water for irrigation, drinking and various domestic uses comes directly from rivers and streams in the hills and plains. Again, there are class differences in the nature of their dependency and access: the richer households are more able to tap the (relatively cleaner) groundwater for drinking and irrigation by sinking more and deeper wells and tubewells, while the poor are mainly dependent on surface sources.

Table 12.2: Average annual income derived from village commons by poor and non-poor households in different regions (1982–1985)

States and districts	Per household average annual income from village commons			
	Poor households ^a		Other households ^b	
	Value (Rs)	Percentage of total household income	Value (Rs)	Percentage of total household income
<i>Andhra Pradesh</i>				
Mahbubnagar	534	17	171	1
<i>Gujarat</i>				
Mehsana	730	16	162	1
Sabarkantha	818	21	208	1
<i>Karnataka</i>				
Mysore	649	20	170	3
<i>Madhya Pradesh</i>				
Mandsaur	685	18	303	1
Raisen	780	26	468	4
<i>Maharashtra</i>				
Akola	447	9	134	1
Aurangabad	584	13	163	1
Sholapur	641	20	235	2
<i>Rajasthan</i>				
Jalore	709	21	387	2
Nagaur	831	23	438	3
<i>Tamil Nadu</i>				
Dharmapuri	738	22	164	2

Notes: ^a Landless households and those owning < 2 hectares dryland equivalent; ^b those owning >2 hectares dryland equivalent. **Source:** Jodha (1986).

However, focusing on the *class* significance of communal resources provides only a partial picture; there is also a critical *gender* dimension—women and female children being the ones most adversely affected by environmental degradation. There are four main reasons for this.

First, there is a pre-existing gender division of labour. It is women in poor peasant and tribal households who do much of the gathering and fetching from the forests, village commons, rivers and wells. Women of such households also carry a significant responsibility for family subsistence and are not uncommonly the primary, or (in most female-headed households) the sole, economic providers. But women's ability to fulfil this responsibility is more constrained than men's because of gender inequalities in access to productive and subsistence resources.

Second, there is a systematic anti-female bias in the intrahousehold distribution of subsistence resources within rural households in many parts of India—as revealed by a range of indicators such as anthropometric indices, morbidity and mortality rates, hospital admissions data and, especially, the sex ratio (which in 1991 was 929 females per 1,000 males for the whole country).¹¹ These differences are especially acute in northwest India, but are found to some degree in most parts of the country.¹²

Third, there are significant inequalities in men's and women's access to productive resources, other assets and income-earning opportunities. For instance, there is a notable concentration in male hands of the most critical productive resource in rural economies, namely, agricultural land and associated production technology (Agarwal 1994). Again, women have a systematically disadvantaged position in the labour market compared with men, with fewer employment opportunities, less occupational mobility, lower levels of training and lower payments for the same or similar work.¹³ Due to the greater task-specificity of their work, they also face much greater seasonal fluctuations in employment and earnings than do men, with sharper peaks and longer slack periods in many regions, and have less chance of finding employment in the slack seasons (Agarwal 1984; Ryan and Ghodake 1980).

Given their limited rights in private property resources such as agricultural land, rights to communal resources such as the village commons have always provided rural women and children (especially those of tribal, landless or marginal peasant households) an independent source of subsistence. For instance, access to village commons is usually linked to membership in the village community and therefore women are not excluded in the way they may be in a system of individualized private land rights. This acquires additional importance in regions with strong norms of female seclusion (as in northwest India) where women's access to the cash economy, to markets and to the market-place itself is constrained and dependent on the mediation of male relatives (Agarwal 1994; Sharma 1980).

Fourth, there is a considerable gender gap in access to decision-making authority at all levels, including decisions about resource use.

It is against this analytical backdrop that we need to examine what I term the class-gender effects of the processes of environmental degradation, statization and privatization.

¹¹ For a review of issues and literature on this question see Agarwal 1986b and Harriss 1990.

¹² Sex ratios are particularly female-adverse in the agriculturally prosperous northwestern states of Haryana and Punjab. For a discussion on the causes of this regional variation see section II of the unabridged version of this chapter (Agarwal 1995). See also Agarwal 1986b and Miller 1981.

¹³ See discussions in Agarwal 1984, 1986b and Bardhan 1977.

(b) *The effects*

The class-gender effects relate to at least six critical aspects: time, income, nutrition, health, social support networks and knowledge systems. Each of these effects is important. However, their intensity and interlinkages vary regionally, with variations in ecology, agricultural technology, land distribution and social structures, and associated variations in the gender division of labour, livelihood possibilities and kinship systems.¹⁴ Although a systematic regional decomposition of effects is not attempted in this section, all the illustrative examples are regionally contextualized.

On time

As the main gatherers of fuel, fodder and water, it is primarily women's working day (already averaging 10–12 hours) that is lengthened with the depletion of and reduced access to forests, waters and soils. Firewood, for instance, is the single most important source of domestic fuel in India (providing over 65 per cent of domestic energy in the hills and deserts of the north). Much of this is gathered and not purchased, especially by the poor. In recent years, there has been a notable increase in firewood collection time—to a small degree in some regions, dramatically in others (see table 12.3). In the 1980s, in parts of Gujarat (western India), even a four- to five-hour search was found to yield little apart from shrubs, weeds and tree roots, which do not provide adequate heat (Nagbrahman and Sambrani 1983).

Fodder shortages are being felt even more acutely, and across large parts of India. The above-mentioned primary survey (undertaken by me in Rajasthan, Gujarat and the Kumaun region of the Uttar Pradesh hills) indicates not only an increase in the time spent on fodder collection (done primarily by women and children), but also a growing dependence on market purchase. In the Kumaun village, for instance, 84 per cent of the sample households now purchase some proportion of their fodder needs, compared with only 8 per cent two decades ago. The number of large animals that rural households can afford to keep has also fallen in all of the regions surveyed, due to the decline in grazing lands and the increase in fodder prices. Moreover, in regions where grazing is still possible, while 20 years ago boys and/or men usually took the animals out, now (as in the Kumaun village) girls are often sent to do grazing while their brothers attend school. Over time this could widen the gender gap in literacy in such areas.

Similarly, any exacerbation of the problem of drinking water if wells dry up or go saline (say, near irrigation works) places an additional burden of time and energy on women and young girls (Agarwal 1981).

As a woman in the Garhwal region of the UP hills, quoted in Bahuguna (1984:132), puts it:

When we were young, we used to go to the forest early in the morning without eating anything. There we would eat plenty of berries and wild fruits...drink the cold sweet [water] of the *Banj* [oak] roots...In a short while we would gather all the fodder and firewood we needed, rest under the shade of some huge tree and then go home. Now, with the going of the trees, everything else has gone too.

¹⁴ For a detailed regional mapping of some of these variables in the context of women's land rights in South Asia, see Agarwal 1994.

Table 12.3: Time taken and distance travelled for firewood collection in different regions

State/region	Year of data	Firewood collection ^a		Data source
		Time taken	Distance travelled	
Bihar (plains)	c.1972	NA	1–2 km/day	}Bhaduri and Surin (1980)
	1980	NA	8–10 km/day	
Gujarat (plains)				
(a) Forested	}	Once every 4 days	NA	}
(b) Depleted	}1980	Once every 2 days	4–5 km	}Nagbrahman and Sambrani (1983)
(c) Severely depleted	}	4–5 hr/day	NA	}
Karnataka (plains)	NA	1 hr/day	5.4 km/trip	Batliwala (1983)
Madhya Pradesh (plains)	1980	1–2 times/week	5 km	Chand and Bezboruah (1980)
Rajasthan				
Alwar plains	1986	5 hr/day (winter)	4 km	Author's observation in 1988
Ajmer plains	1970s	2 hr/journey	1.9 km	}Survey by author in 1993
(average all seasons)	1990s	2 hr/journey	2.1 km	}
Uttar Pradesh				
Chamoli (hills)				
(a) Dwing	}1982	5 hr/day ^b	over 5 km	}Swaminathan (1984)
(b) Pakhi	}	4 hr/day		}
Garhwal (hills)	NA	5 hr/day	10 km	Agarwal (1983)
Kumaun (hills)	1982	3 days/week	5–7 km	Folger and Dewan (1983)
Kumaun (hills)	1970s	1.6 hrs/journey	1.6 km	}Survey by author in 1993
(average all seasons)	1990s	3–4 hrs/journey	4.5 km	}

Notes: ^a Firewood collected mainly by women and children. ^b Average computed from information given in the study. NA: information not available.

In this region of UP, according to a woman grassroots activist, the growing hardship of young women's lives due to ecological degradation has led to an increasing number of suicides among them in recent years. Their inability to obtain adequate quantities of water, fodder and fuel is reported to have increased tensions with mothers-in-law (in whose youth forests were plentiful), and soil erosion has compounded the difficulty of producing enough grain for subsistence in a region of high male out-migration (Bahuguna 1984).

On income

To begin with, the decline in gathered items from forests and VCs has reduced incomes directly. In addition, the extra time needed for gathering reduces that available to women for crop production and can adversely affect crop incomes, especially in hill communities where, due to high male out-migration, women are the primary cultivators. A study in Nepal (Kumar and Hotchkiss 1988) is indicative of this; it found that the substantial increase in firewood collection time due to deforestation has significantly reduced women's crop cultivation time, leading to an associated fall in the production of maize, wheat and mustard—the cultivation of which is primarily dependent on female labour in the region surveyed. These are all crops grown in the dry season when there is increased competition from fuel and other collection activities. The same is likely to be happening in the hills of India.

Similar implications for women's income arise with the decline in village grazing land and associated fodder shortage. Many landless widows I spoke to in Rajasthan (northwest India) in 1987 said they could not take advantage of the government's poverty alleviation scheme of providing subsidized credit to the poor for purchasing a buffalo, as they had nowhere to graze the animal and no cash to buy fodder.

With the erosion of other sources of livelihood, for many years now selling firewood has been common in some regions, especially in eastern and central India. Most "headloaders", as they are called, are women, barely eking out a living (Bhaduri and Surin 1980). With thinning forests, however, such sources of livelihood are becoming increasingly difficult to sustain, even as this activity itself exacerbates the problem of deforestation.

On nutrition

As the area and productivity of village commons and forests fall, so too does the contribution of gathered food in the diets of poor households. Fuelwood shortages can have additional nutritional effects: efforts to economize can induce shifts to less nutritious foods that need less fuel to cook or that can be eaten raw, or can force people to eat partially cooked food, which could be toxic, or to eat leftovers, which could rot in a tropical climate, or to miss meals altogether. While, as yet, there are no systematic studies on this for India, those for rural Bangladesh are indicative and show that the total number of meals as well as the number of cooked meals eaten daily in poor households has been declining (Howes and Jabbar 1986). A trade-off between the time spent in fuel gathering and in cooking can also adversely affect the meal's nutritional quality.

Although these adverse nutritional consequences impinge to some degree on all household members, women and female children bear an additional burden because of the noted gender biases in intrafamily distribution of food and health care. There is also little likelihood of poor women being able to afford the extra calories for the additional energy expended in fuel collection.

On health

Apart from the health consequences of nutritional inadequacies, poor rural women are also more directly exposed than are men to waterborne diseases, and to the pollution of rivers and ponds with fertilizer and pesticide run-offs, because of the nature of the tasks they perform—fetching water for various domestic uses and animal care, washing clothes near ponds, canals and streams, and so on (Agarwal 1981). The burden of family ill-health associated with water pollution likewise falls largely on women who take care of the sick.

An additional source of vulnerability is the agricultural tasks women perform. For instance, rice transplanting, which is usually a woman's task in most parts of Asia, is associated with a range of diseases, including arthritis and gynaecological infections (Mencher and Saradmoni 1982; UNDP 1980). Chemically polluted irrigation water could compound the risk of such illnesses. Similarly, cotton picking, also done mainly by women, exposes them to pesticides which are widely used for cotton cultivation. In China several times the acceptable levels of DDT and BHC residues have been found in the milk of nursing mothers, among women agricultural workers (Wagner 1987). It is not unlikely that the same would be true for India.

On social support networks

Population displacements arising from the submersion of villages in the building of large irrigation and hydroelectric works, or from large-scale deforestation in itself, have another (little recognized) class and gender implication—the disruption of social support networks. Social relationships with kin and with other villagers provide economic and social support that is important to all rural households, but especially to poor households and to women. These can include reciprocal labour-sharing arrangements during peak agricultural seasons, loans taken in cash or kind during severe crises such as droughts, the borrowing of small amounts of foodstuffs, fuel, fodder, etc., even in normal times, and so on. Women typically depend a great deal on such informal support networks, which they also help to build through daily social interaction, marriage alliances that they are frequently instrumental in arranging and complex gift-exchanges (Sharma 1980). Also the social and economic support this represents for women in terms of strengthening their bargaining power within families needs to be recognized—even if it is not easy to quantify (Agarwal 1990). These networks, spread over a range of nearby villages, cannot be reconstituted easily—an aspect ignored by rehabilitation planners.

Indeed large-scale deforestation, whether or not due to irrigation schemes, erodes a whole way of living and thinking. Two close observers of life among the Orissa tribals in eastern India note that: “the earlier sense of sharing has disappeared...Earlier women could rely on their neighbours in times of need. Today this has been replaced with a sense of alienation and helplessness...the trend is to leave each family to its own fate” (Fernandes and Menon 1987:115). Widows and the aged are the most neglected.

On indigenous knowledge systems

The gathering of food and medicinal items demands an elaborate knowledge of the nutritional and medicinal properties of plants, roots and trees—including a wide reserve knowledge of edible plants not normally used but critical for tiding over prolonged shortages during climatic disasters. An examination of household coping mechanisms during drought and famine reveals a significant dependence on famine foods gathered mainly by women and children for survival (Agarwal 1990). Also, among hill communities it is usually women who do the seed selection work and have the most detailed knowledge about crop varieties.¹⁵ This knowledge about nature and agriculture, acquired by poor rural women in the process of their everyday contact with and dependence on nature’s resources, has a class and gender specificity, and is linked to the class specificity and gendering of the division of labour.

The impact of existing forms of development on this knowledge has been twofold. First, the process of devaluation and marginalization of indigenous knowledge and skills, discussed earlier, has impinged especially on the knowledge that many poor peasant and tribal women traditionally possessed. Indeed, it is not unusual for village women to deny possessing any to outsiders. In my above-mentioned field survey, women both in Kumaun and in Rajasthan initially denied any knowledge of local medicinal herbs, roots, etc., before finally admitting they knew of several traditional remedies based on local plants. Existing development strategies have made little attempt to tap or enhance indigenous

¹⁵ Among the Garo tribals of northeast India in the early 1960s, Burling (1963) found that the men always deferred on this count to the women, who knew of some 300 indigenously cultivated rice varieties. In Nepal, even today, it is women who do the seed selection work in virtually all communities (Acharya and Bennett 1981).

knowledge and understanding. At the same time, women have been excluded from the institutions through which modern scientific knowledge is created and transmitted. Second, the degradation of natural resources and their appropriation by a minority are destroying the material basis on which indigenous knowledge of natural resources and processes is founded and kept alive, leading to its gradual eclipse. This, in turn, will further undermine the ability of poor households to cope with subsistence crises.

Responses

The noted negative effects of gender inequality and environmental degradation, however, have not gone unchallenged by those affected. The last two decades have seen the emergence both of women's groups and of environmental groups—the former protesting the gender bias in existing patterns of development, the latter their high environmental costs. In some cases gender and environmental challenges have overlapped. Certainly women have been significant actors in major environmental movements (as elaborated on below).

These movements embody an increasing resistance to ecological destruction in India—whether caused by the direct logging of trees or by the submersion of forest and village land with large irrigation and hydroelectric works. Non-violent movements such as Chipko in the Himalayas and Appiko in Karnataka are among examples of forest-related environmental resistance. Movements resisting large dams include those associated with the Narmada valley project in central India, the Koel Karo in Bihar, the Silent Valley Project in Kerala (which was shelved due to local protests and central government intervention in 1983), the Inchampalli and Bhopalpatnam dams in Andhra Pradesh (against which 5,000 tribals, with women in the vanguard, protested in 1984), and the controversial Tehri Dam in Garhwal.

Women's participation in such movements has some notable features; the Chipko movement is the most illustrative. Chipko women have protested against the commercial exploitation of the Himalayan forests not only jointly with the men of their community but also on occasion in opposition to the village men, due to different priorities in resource use. On one occasion, women successfully resisted the axing of a tract of the Dongri Paintoli oak forest for establishing a potato seed farm that the men supported. Cutting the forest would have added five miles to women's fuelwood journeys, while the cash earned from the project would have stayed mainly in the men's hands. Also in tree-planting schemes, Chipko women have typically favoured trees that provide fuel and fodder, rather than the commercially profitable varieties often favoured by men.¹⁶ In some Chipko areas women have formed vigilance teams against illegal felling and are monitoring the use of the local forest by the village community. They have also protested against male alcoholism and domestic violence, and in some villages women are demanding representation in the village councils. Although the movement is rooted in the region's Gandhian tradition, which predates Chipko, women's responses go beyond the framework of that tradition in their affirmation of gender concerns.¹⁷

¹⁶ This gender divergence in the choice of trees in tree-planting schemes was also noted in Rajasthan by Brara 1989.

¹⁷ See Agarwal 1991 for a more detailed discussion of this.

Similarly, in some parts of the Uttar Pradesh hills, village women have begun to play an active role in the management of village forests through *Mahila Mandal Dals* (women's groups). They have devised rules for the collection of forest produce, and either guard the forest themselves, or employ a guard (Sharma and Sinha 1993; and personal observation in 1993). Elsewhere too, as noted, women have been active in demonstrations against deforestation, large dams and mining activities.

At the same time, women's involvement in such movements, including Chipko, needs to be contextualized. These movements have emerged primarily in hill or tribal communities among which women's roles in agricultural production have always been visibly substantial and often primary—a context more conducive to their public participation than found in communities practising female seclusion.

In other words, it is difficult to support the argument (made by some¹⁸) that women, *qua* women, are closer to nature or more conservationist than men. Rather, poor peasant and tribal women's responses to environmental degradation can be located in their everyday material reality—in their dependence on natural resources for survival and the knowledge of nature gained in that process. By extension, women who are no longer dependent on or in contact with the natural environment in the same way would be neither so affected nor so knowledgeable about species varieties. And their reactions would differ accordingly.

The government's response to these grassroots movements, and more generally the recognition that environmental degradation may be acquiring crisis proportions in some regions, dates back to the early 1980s. Also, the approach to finding solutions has been piecemeal rather than comprehensive. For instance, the problems of deforestation and fuelwood shortage were initially addressed mainly through tree planting schemes, some undertaken under direct government management, others promoted by encouraging village communities and individual farmers to plant. However, many of the government's direct planting ventures had poor tree survival rates and typically did little to alleviate the local fuel/fodder problem.¹⁹ There was, for instance, a preoccupation with monocultural plantations of tree species for commercial use—which at times even replaced mixed forests and provided no fodder and poor fuel (such as eucalyptus). Also the takeover of village land used by the local population for various other purposes—including holding fairs—the top-down implementation, and the failure to elicit the approval and support of the villagers when the schemes were initiated, led to widespread local hostility and resistance. And, far from benefiting the poor, these schemes took away even their existing rights to local resources. Furthermore, women typically did not feature at all in such schemes—or at best tended to be allotted the role of caretakers in tree nurseries, with little say in the choice of species or in any other aspect of the project (Agarwal 1986a).

Community forestry schemes also had a high failure rate in the 1980s, in the absence of effective institutional mechanisms to ensure village participation in decision making and the equitable distribution of costs and benefits.

The real “success” stories of the 1980s, with plantings far exceeding targets, came from the better-off farmers who, in many regions, sought to reap quick profits by allotting

¹⁸ See, for example, Shiva 1988 and also the Western literature on ecofeminism discussed in Agarwal 1992. The latter provides a critique of the ecofeminist approach and outlines an alternative formulation, termed “feminist environmentalism”.

¹⁹ For a detailed discussion on these schemes and their shortcomings, see Agarwal 1986a.

fertile crop land to commercial tree species—eucalyptus again being a great favourite. As a result, employment, crop output and crop residues (that could be used for fuel) declined, often dramatically (Chandrashekar et al. 1987; Agarwal 1986a).

Over the years, however, environmental movements—and reporting on the state of the country's environment by journalists, grassroots activists and academics—have had a noticeable impact on developmental thinking in India and improved environmental awareness in policy formulation. Resistance to the destruction of nature and nature-dependent livelihoods, the demand for environmentally sustainable policies and egalitarian access to natural resources, the lack of success with top-down schemes, and so on, have also led to a shift toward a more participative approach in scheme implementation. And international agencies, too, now routinely build an assessment of the environmental and social impact of projects into their feasibility reports.

In concrete terms, the effect of all this can be seen in some recent government programmes and initiatives. To begin with, in direct tree planting in and around villages, the species selected in many cases have augmented fuelwood availability. In parts of Rajasthan, for instance, the planting of *prosopis juliflora*—which grows rapidly and whose thorns protect it from animals—has largely solved the problem of fuelwood.²⁰ But of more far-reaching effect are recent attempts to involve local communities in natural resource protection, regeneration and monitoring—including leasing out degraded forest land to villagers under various *joint forest management* schemes. How well these schemes will work in different socioeconomic contexts remains to be seen, but they hold more promise than did most previous ones of some significant benefits reaching the villagers.²¹ Similar initiatives taken independently by tribal village communities or catalysed by non-governmental organizations (NGOs) in some states of India hold the same promise.

However, the issues of women's participation in the decision-making forums of these schemes and initiatives—and of ensuring equitable sharing of benefits by gender—have as yet received only marginal attention (Sarin 1994; personal observation in Gujarat).

In Conclusion

The experience of the past two decades offers several insights and lessons on the links between gender, poverty and environmental change in rural India.

The processes of environmental degradation and appropriation of natural resources by the State, and by a minority of individuals, have specific class-gender implications—it is women and female children of poor rural households who are affected most adversely. These effects take various forms (although there are regional variations in their extent): an increase in women's and female children's time and energy spent in fuel, fodder and water collection; a decrease in women's incomes from NTFP collection and agricultural production; an adverse effect on the health and nutrition of household members in general, and female members in particular; an erosion of social support networks built by women to tide the household over economic crises; and a marginalization and decline in

²⁰ Personal observation in Ajmer district in 1993.

²¹ See various discussion papers brought out over the past two to three years by the Society for the Promotion of Wastelands Development, New Delhi.

peasant women's traditional knowledge of plants and species. In other words, the adverse class-gender effects of these processes are manifest in the erosion of both livelihood systems and knowledge systems on which poor rural women, in particular, depend.

The gender specificity of the above effects arise from pre-existing gender inequalities, especially in: (i) the division of labour; (ii) the intra-household distribution of subsistence resources; (iii) the access to productive resources, other assets and income-earning opportunities; and (iv) the access to decision-making authority in public bodies at all levels.

However, the noted effects are not experienced uniformly across all regions of India, since there are geographic differences in gender bias, environmental risk, and poverty incidence. Rural women are likely to be worst off in regions where all three forms of disadvantage are strong and reinforce each other, and best off where all three are weak.

If we were to concentrate on the areas where poor rural women are likely to be affected most adversely by further environmental degradation, then the state needing the highest priority is Bihar, followed by several others in northern India—namely Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal. These warrant special attention in terms of wasteland and forest development schemes focused on poor rural women that could give the women greater control over common property resources; programmes for increasing female literacy; health and other support services that would help women make informed decisions concerning their fertility; and general support structures (possibly through NGOs) for improving women's effective property rights in the region. (On this last count, as noted earlier, the adverse effects on women of the statization and privatization of communal resources are closely linked not only to the gender division of labour, but also to private property differentials between women and men.)

In so far as the major success stories of reforestation today relate to communities taking charge of their local natural resource base, a viable solution will need decentralized planning and control, and institutional arrangements that ensure the involvement of the rural poor, and especially women, in decisions about what trees are planted, who holds control over the land on which the planting is done, and how the associated benefits are shared.

Poor rural women's active participation in forest protection and wasteland development schemes is imperative for several reasons. First, resources in women's hands are more likely to be used for the family's well-being than resources in men's hands, given the noted evidence that in poor rural households where both spouses are employed, women tend to spend almost all their earnings on the family's basic needs, and men often a significant part on their personal needs.

Second, without women's cooperation, either rules instituted for protecting communal lands and forests will not work—given women's primary responsibility for fuel and fodder collection—or women may be left worse off than before. It is significant that in some recent joint forest management initiatives, a ban on firewood collection from the local forests, imposed by the all-male village forest management committees without consulting the women, has made it necessary for women to walk several additional miles for this basic household need (Sarin 1994). Involving women in the decision-making process could have ensured a fairer solution. In the long term, of course, the challenge lies in ensuring that rural men also share equally in this and other household tasks.

Third, in schemes involving tree planting, women and men are often noted to have different priorities in species selection. Women typically prefer species that fulfil everyday

household needs, such as for fuel and fodder, over species that fulfil only sporadic needs, such as for small timber, or that mainly bring occasional cash returns. Involving women in species selection is therefore critical. In particular, not only can trees that provide fuel and fodder (in regions where these have become scarce) decrease poor women's work burden, but the advantage of greater availability can also be reaped by all household members. Moreover, girl children who may otherwise be kept back from school for collection purposes can then go to school.

Fourth, improving women's access to communal land resources would help redress, in some small degree, existing severe gender inequalities in access to private land resources. Also, as noted, the privatization of communal resources over the past several decades has affected poor rural women the most adversely—given the noted widespread class and male bias in the privatization process. Initiatives that protect the communal character of village commons, or that create new collective forms of resource control in women's hands, therefore appear vital.

Fifth, involving women could encourage the enhanced use and development of local knowledge about plants and species.

The past two decades of India's experience with development projects that seek to reach the poor and disadvantaged also indicates that schemes that follow a group approach are more likely to be effective than those that follow an individual-oriented approach. This is borne out, too, in the range of recent initiatives by NGOs, state governments and village communities to regenerate forests and village wastelands. Among the success stories of NGO initiatives involving women in wasteland development that provide pointers on this count is that of the Bankura wasteland development project in West Bengal. Initiated in 1980, it had by 1988 spread to 36 villages involving about 1,500 (mostly poor tribal) women as members of groups that collectively planted trees for sericulture on wasteland donated by the villagers (Singh 1988). Many of these plantations are today yielding a fair profit (personal visit in 1993). The above-mentioned cases of forest management by village communities, under a variety of institutional arrangements, in some of which women are playing a significant role (including through Mahila Mandal Dals), also point to the importance of a group approach.

Indeed, taken together, environment, poverty and gender concerns highlight both the need for re-examining—and the possibility of finding new resolutions for—many long-standing issues relating to development, redistribution and institutional change.

References

- Acharya, M. and L. Bennett. 1981. *Women and the Subsistence Sector in Nepal*. Staff Working Paper No. 526. World Bank, Washington DC.
- Agarwal, A. 1983. "The cooking energy systems: Problems and opportunities." Discussion Paper. Center for Science and Environment, Delhi.
- Agarwal, A., and P. Desingkar. 1983. "Headloaders: Hunger for firewood — I." Report No. 118. Center for Science and Environment, Delhi.
- . 1994. *A Field of One's Own: Gender and Land Rights in South Asia*. Cambridge University Press, Cambridge.
- . 1992. "The gender and environment debate: Lessons from India." *Feminist Studies*, Vol. 18, No. 1, pp. 119–158.
- . 1991. *Engendering the Environment Debate: Lessons from the Indian Subcontinent*. CASID Distinguished Speaker Series Discussion Paper No. 8, Center for Advanced Study of International Development, Michigan State University, East Lansing MI.
- . 1990. "Social security and the family: Coping with seasonality and calamity in rural India." *The Journal of Peasant Studies*, Vol. 17, No. 3, pp. 341–412.
- . 1988. "Who sows? Who reaps? Women and land rights in India." *The Journal of Peasant Studies*, Vol. 15, No. 4, July.

- . 1986a. *Cold Hearths and Barren Slopes: The Woodfuel Crisis in the Third World*. Zed Books, London; Allied Publishers, Delhi.
- . 1986b. "Women, poverty and agricultural growth in India." *The Journal of Peasant Studies*, Vol. 13, No. 4, pp. 165–220.
- . 1984. "Rural women and the high yielding variety-rice technology in India." *Economic and Political Weekly*, Review of Agriculture, Vol. 19, No. 13, pp. 39–52.
- . 1981. *Water Resource Development and Rural Women*. Institute of Economic Growth, Delhi. Mimeo.
- Baden-Powell, B.H. 1957. *The Indian Village Community*. HRAF Press, New Haven, CT.
- Bahuguna, S. 1984. "Women's non-violent power in the Chipko movement." In M. Kishwar and R. Vanita (eds.) *In Search of Answers: Indian Women's Voices in Manushi*. Zed Books, London.
- Bandhyopadhyay, J. 1986. *A Case Study of Environmental Degradation in Karnataka*. Paper presented at the Workshop on Drought and Desertification, India International Center, New Delhi, India, 17–18 May.
- Bardhan, K. 1977. "Rural employment, wages and labour markets in India: A survey of research." *Economic and Political Weekly*, Vol. 12, No. 26, July, pp. A34–A48.
- Batliwala, S. 1983. "Women and cooking energy." *Economic and Political Weekly*, Vol. 18, Nos. 52–53, December.
- Bhaduri, T. and V. Surin. 1980. "Community forestry and women headloaders." *Community Forestry and People's Participation Seminar Report*, Ranchi Consortium for Community Forestry, Ranchi, Bihar, 20–22 November.
- Blaikie, P. 1985. *The Political Economy of Soil Erosion in Developing Countries*. Longman, London.
- Brara, R. 1989. "'Commons' policy as process: The case of Rajasthan, 1955-1985." *Economic and Political Weekly*, Vol. 24, No. 40, pp. 2247-2254.
- Bromley, D.W. and M.M. Cernea. 1989. *The Management of Common Property Natural Resources*. Discussion Paper No 57. World Bank, Washington DC.
- Burling, R. 1963. *Rengsanggr: Family and Kinship in a Garo Village*. University of Pennsylvania Press, Philadelphia PA.
- Caldwell, C.J., P.H. Reddy and P. Caldwell. 1988. "Periodic high risk as a cause of fertility decline in a changing rural environment: Survival strategies in the 1980-83 south Indian drought." In C.J. Caldwell, P.H. Reddy and P. Caldwell (eds.), *The Causes of Demographic Change: Experimental Research in South India*. University of Wisconsin Press, Madison WI.
- Chand, M. and R. Bezboruah. 1980. "Employment opportunities for women in forestry." *Community Forestry and People's Participation Seminar Report*, Ranchi Consortium for Community Forestry, Ranchi, Bihar, 20–22 November.
- Chandrashekar, D.M., B.V. Krishna Murti and S.R. Ramaswami. 1987. "Social forestry in Karnataka: An impact analysis." *Economic and Political Weekly*, Vol. 22, No. 24, pp. 935–941.
- CSE (Centre for Science and Environment). 1986. *The State of India's Environment: Citizen's Report*. CSE, Delhi.
- Dasgupta, P. and K. Maler. 1990. *The Environment and Emerging Development Issues*. Paper presented at the Conference on the Environment and Emerging Development Issues." Helsinki, 3–7 September 1990.
- Dhawan, B.D. 1982. *Development of Tubewell Irrigation in India*. Agricole Publishing Academy, Delhi.
- Dreze, J. and A.K. Sen. 1989. *Hunger and Public Action*. Clarendon Press, Oxford.
- Fernandes, W. and G. Menon. 1987. *Tribal Women and Forest Economy: Deforestation, Exploitation and Status Change*. Indian Social Institute, Delhi.
- Folger, B. and M. Dewan. 1983. *Kumaun Hills Reclamation: End of Year Site Visit*. OXFAM America, New Delhi.
- Gadgil, M. 1985. "Towards An Ecological History of India." *Economic and Political Weekly*, Vol. 20, No. 45–47, pp. 1909–1913.
- GOI (Government of India). 1982. *Report of Committee on Forests and Tribals in India*. Ministry of Home Affairs, Delhi.
- . 1981. *Family Welfare Programme in India, 1979–80 Year Book*, Delhi.
- . 1980–1985. *Sixth Five-Year Plan*. Planning Commission, Delhi.
- . 1976. *Statistical Abstract 1974*, Delhi.
- . 1974. *Census of India 1971, Primary Census Abstract, General Series – 1, India, Part II-A (ii)*. Registrar General, Delhi.
- Government of India. ———1992. *Statistical Abstract 1990*. Delhi.
- . 1991a. *The State of Forest Report 1991*, Ministry of Forest and Environment, Delhi.
- . 1991b. *Census of India 1991, Provisional Population Total: Rural-Urban Distribution*, Registrar General and Census Commissioner, Delhi.
- . 1991c. *Sample Registration System*, Registrar General, Ministry of Home Affairs, Delhi.
- . 1987a. *37th Round Report on Land Holdings – I: Some Aspects of Household Ownership Holdings*. National Sample Survey Organization, Department of Statistics, Delhi.
- . 1987b. *General Population Tables, Census of India 1981, Series I*. Registrar General and Census Commissioner, Delhi.

- . 1986. *37th Round Report of Land Holdings — I, Some Aspects of Operational Holdings*, Report No. 331. National Sample Survey Organization, Department of Statistics, Delhi.
- Gold, A. 1993. *Animals Speak in Children's Voices*, draft note prepared for presentation at the Children and Environment conference, Norwegian Center for Child Research, Trondheim, Norway, May.
- Guha, R. 1985. "Scientific forestry and social change in Uttarakhand." *Economic and Political Weekly*, Vol. 20, Nos. 45–47, pp. 1939–1952.
- . 1983. "Forestry in British and post-British India: A historical analysis." *Economic and Political Weekly*, Vol. 18, No. 44, pp. 1882–1896.
- Gulati L. 1978. "Profile of a female agricultural labourer." *Economic and Political Weekly, Review of Agriculture*, Vol. 13, No. 12, March.
- Harriss, B. 1990. "The intra-family distribution of hunger in South Asia." In J. Drèze and A.K. Sen (eds.), *The Political Economy of Hunger—Vol. I*. Clarendon Press, Oxford.
- Howes, M. and M.A. Jabbar. 1986. *Rural Fuel Shortages in Bangladesh: The Evidence from Four Villages*. Discussion Paper No. 213. Institute of Development Studies, Sussex.
- Jodha, N.S. 1986. "Common property resources and rural poor." *Economic and Political Weekly*, Vol. 21, No. 27, pp. 1169–1182.
- Joshi, P.K. and A.K. Agnihotri. 1984. "An assessment of the adverse effects of canal irrigation in India." *Indian Journal of Agricultural Economics*, Vol. 39, No. 3, pp. 528–236.
- KFRI (Kerala Forest Research Institute). 1980. *Studies on the Changing Pattern of Man-Forest Interactions and its Implications for Ecology and Management*. KFRI, Trivandrum.
- Kulkarni, S. 1983. "Towards a Social Forestry Policy." *Economic and Political Weekly*, Vol. 8, No. 6, pp. 191–196.
- Kumar S.K. and D. Hotchkiss. 1988. *Consequences of Deforestation for Women's Time Allocation, Agricultural Production and Nutrition in Hill Areas of Nepal*. Research Report No. 69. International Food Policy Research Institute, Washington DC.
- Mencher, J. and K. Saradmoni. 1982. "Muddy feet and dirty hands: Rice production and female agricultural labour." *Economic and Political Weekly*, Vol. 17, No. 52, pp. 323–343.
- Mencher, J. 1989. "Women's work and poverty: Women's contribution to household maintenance in two regions of south India." In D. Dwyer and J. Bruce (eds.), *A Home Divided: Women and Income Control in the Third World*. Stanford University Press, Stanford CA.
- Miller, B. 1981. *The Endangered Sex: Neglect of Female Children in Rural India*. Cornell University Press, Ithaca NY.
- Minhas, B.R., L.R. Jain and S.D. Tendulkar. 1991. "Declining incidence of rural poverty in the 1980s: Evidence vs. artefacts." *Economic and Political Weekly*, Vol. 26, No. 27–28, July.
- Moench, M. 1988. "'Turf' and forest management in a Garhwal Hill Village." In L. Fortmann and J.W. Bruce (eds.), *Whose Trees? Proprietary Dimensions of Forests*. Westview Press, London.
- Mohan, D. 1987. "Food vs. limbs: Pesticides and physical disability in India." *Economic and Political Weekly*, Vol. 22, No. 13, March.
- Nagbrahman D. and S. Sambrani. 1983. "Women's drudgery in firewood collection." *Economic and Political Weekly*, Vol. 18, No. 1–2, pp. 191–196.
- Nayar, P.K.B. 1989. "Kerala women in historical and contemporary perspective." In K. Mahadevan (ed.), *Women in Population Dynamics: Perspectives from Asian Countries*. Sage Publications, Delhi.
- Rao, C.H.H., S. Ray and K. Subbarao. 1988. *Unstable Agriculture and Droughts: Implications for Policy*. Vikas Publishing House, Delhi.
- Rosenzweig, M.R. 1988. "Risk, implicit contracts and the family in rural areas of low-income countries." *The Economic Journal*, Vol. 98, No. 393, December.
- Rosenzweig, M.R. and K.I. Wolpin. 1985. "Specific experience, household structure and intergenerational transfers: Farm family land and labour arrangements in developing countries." *Quarterly Journal of Economics*, Vol. 100, pp. 961–987.
- Ryan, J.G. and R.D. Ghodake. 1980. *Labour Market Behaviour in Rural Villages of South India: Effects of Season, Sex and Socio-Economic Status*. Progress Report of the Economic Program No. 14. International Crop Research Institute for Semi-Arid Tropics, Patancheru, Andhra Pradesh.
- Ryan, J.G. and T.D. Wallace. 1985. *Determinants of Labour Market Wages, Participation and Supply in Rural South India*. Progress Report 73, Economics Group, Resource Management Program. ICRISAT, Hyderabad.
- Sarin, M. 1994. *Regenerating India's Forests: Reconciling Gender Equity with Joint Forest Management*. Paper prepared for the International Workshop on India's Forest Management and Ecological Revival, New Delhi, 10-12 February. University of Florida and Tata Energy Research Institute, Delhi.
- Seklar, D. 1981. *The New Era of Irrigation Management in India*. The Ford Foundation, Delhi. Mimeo.
- Sen, A.K. 1990. "More than 100 million women are missing." *New York Review of Books*, 20 December.
- Sengupta, N. 1985. "Irrigation: Traditional vs. modern." *Economic and Political Weekly*, Vol. 20, Nos. 45–47, pp. 1919–1938.

REVISITING SUSTAINABLE DEVELOPMENT

- Sharma, A. and A. Sinha. 1993. *A Study of the Common Property Resources in the Project Area of the Central Himalaya Rural Action Group*. Indian Institute of Forest Management, Bhopal, Madhya Pradesh.
- Sharma, U. 1980. *Women, Work and Property in North-West India*. Tavistock Publications, London.
- Shaw, P. 1988. *Population, Environment and Women: An Analytical Framework*. Paper prepared for the UNFPA Inter-Agency Consultative Meeting, New York, 6 March 1989.
- Singh, N. 1988. *The Bankura Story: Rural Women Organize for Change*. International Labour Organization, New Delhi.
- Shiva, V. 1988. *Staying Alive: Women, Ecology and Survival*. Kali for Women, Delhi.
- Swaminathan, M. 1984. "Eight hours a day for fuel collection." *Manushi*, March–April.
- Swaminathan, S. 1982. "Environment: Tree versus man." *India International Center Quarterly*, Vol. 9, 3–4.
- UNDP (United Nations Development Programme). 1980. *Rural Women's Participation in Development*. Evaluation Study No. 3. UNDP, New York.
- . 1992. *Human Development Report 1992*. Oxford University Press, New York.
- Vatuk, S. 1981. *Sharing, Giving and Exchanging of Foods in South Asian Societies*. University of Illinois at Chicago Circle, October, Mimeo.
- Wagner, R.G. 1987. "Agriculture and environmental protection in China." In B. Glaeser (ed.), *Learning from China? Development and Environment in Third World Countries*. Allen and Unwin, London.

Chapter 13

Parks, People and Professionals: Putting “Participation” into Protected-Area Management¹

Michel P. Pimbert² and Jules N. Pretty³

(1997)

Coercion and Control in Nature Conservation

The pursuit of environmental conservation has been a significant theme in rural development in the twentieth century. Conservationist beliefs have generally held that there is an inverse relationship between human actions and the well-being of the environment. Professionals have widely agreed that problems such as soil erosion, degradation of rangelands, desertification, loss of forests and the destruction of wildlife require intervention to prevent further deterioration. At the same time, official policies have consistently defined local misuse of resources as the principal cause of destruction (Pimbert and Pretty 1995).

Many protected-area schemes have overlooked the importance of locally specific ways of providing for food, health, shelter, energy and other fundamental human needs. Outside professionals and institutions have all too often failed to acknowledge differences in the ways and means of satisfying fundamental human needs. While fundamental human needs are universal, their “satisfiers” vary according to culture, region and historical conditions (Max-Neef et al. 1989).⁴

¹ Abridged from the UNRISD Discussion Paper of the same title (UNRISD, 1997).

² At the time of writing, Michel P. Pimbert was Director of the World Wide Fund for Nature.

³ At the time of writing, Jules N. Pretty was Director of the Sustainable Agriculture Programme, International Institute for Environment and Development.

⁴ A definition of the “good life” implies different ways of satisfying fundamental human needs. Max-Neef et al. (1989) have identified nine fundamental human needs, namely: subsistence (for example, health, food, shelter, clothing); protection (care, solidarity, work, and so on); affection (self-esteem, love, care, solidarity, and so on); understanding (among others: study, learning, analysis); participation (responsibilities, sharing of rights and duties); leisure/idleness (curiosity, imagination, games, relaxation, fun); creation (including intuition, imagination, work, curiosity); identity (sense of belonging, differentiation, self-esteem, and so on), and freedom (autonomy, self-esteem, self-determination, equality).

Many rural communities value and utilize wild resources, and there is good evidence from many different environments of effective and sustainable local management.⁵ Individually and cumulatively, wild species can contribute to the food and financial security of rural households as dietary supplements, hedges against crop failure, income generators, medicinal plants, construction materials, fodder and fuelwood. Despite this widespread use of wild products, protected-area management plans and resettlement schemes pay very little, if any, attention to the importance of wild resources for local livelihood security.

Some remarkable exceptions apart, resettlement housing for displaced people, health care and agricultural developments in park buffer zones, changes in tenure laws and other externally driven activities have, implicitly or explicitly, adopted the dominant cultural model of industrial society. In industrial societies fundamental human needs are almost exclusively catered by satisfiers that must be bought in the market and/or produced industrially.

People in and around many protected areas are thus perceived as poor if they wear home-made garments of natural rather than synthetic fibre or if they live in houses constructed from natural materials like bamboo, thatch and mud rather than concrete. The ideology of development declares them to be so because they neither fully participate in the market economy nor consume commodities produced for and distributed by the market, even though they may be satisfying their fundamental needs through self-provisioning mechanisms. This neglect of human ingenuity and diversity ultimately reinforces the dominant model of development based on uniformity, centralization and control.

Tribal peoples, poor farmers, fishermen and pastoralists displaced by such coercive conservation have seen their needs and rights poorly met in their new, more risk-prone, environments. Lack of livelihood security ultimately undermines conservation objectives as poverty, rates of environmental degradation and conflicts intensify in areas surrounding parks and natural reserves. Indeed, it is when local resident people are excluded that degradation is more likely to occur. This reasoning represents a complete reversal for conservation policy and professional practice.

The Narrowness of Conservation Science and Normal Professionalism

The norms and practice of conservation science itself have been major reasons for these failures of parks and other protected areas. Since the early seventeenth century, scientific investigation has come to be dominated by the Cartesian paradigm, usually termed positivism or rationalism. This posits that there exists a reality driven by immutable laws. Science seeks to discover the true nature of this reality, the ultimate aim being to discover, predict and control natural phenomena. Investigators proceed in the belief that they are detached from the world. Reductionism involves breaking down components of a complex world into discrete parts, analysing them, and then making predictions about the world based on interpretations of these parts. Knowledge about the world is then summarized in the form of universal, or time- and context-free, generalizations or laws.

⁵ Scoones et al. 1992; Gómez-Pompa and Kaus 1992; Nabhan et al. 1991; Oldfield and Alcorn 1991.

The consequence is that investigation with a high degree of control over the system being studied has become equated with good science. And such science is equated with "true" knowledge.

But no scientific method will ever be able to ask all the right questions about how we should manage resources for sustainable protected-area management—let alone find the answers. The results are always open to interpretation. All actors—and particularly those stakeholders with a direct social or economic involvement and interest—have a uniquely different perspective on what is a problem and what constitutes improvement in a livelihood system. As Wynne has put it, "the conventional view is that scientific knowledge and method enthusiastically embrace uncertainties and exhaustively pursue them. This is seriously misleading" (Wynne 1992:115). The trouble with normal science is that it gives credibility to opinion only when it is defined in "scientific" language, which may be inadequate for describing the complex and changing experiences of rural people and other actors in conservation and development. As a result, it has alienated many of them.

Reductionist science and disciplinary specialization

Conservation scientists and field officers tend to perceive ecosystems through the narrow window of their own professional discipline. Their training has taught them to look at just that aspect of the ecosystem in which they specialize—which may be medicinal plants, rare orchids, trees, birds, elephants, tigers or ecosystem attributes like species diversity. This then becomes the main focus of their attention when they visit an area rich in biological diversity.

All too often, however, the disciplinary specialization of conservation professionals militates against understanding the factors behind the success of indigenous systems of natural resource management. As a result, opportunities to design culturally appropriate biodiversity conservation schemes are missed. What Nabhan and his colleagues say about plant conservation illustrates the more general problem of Western, positivist, disciplinary science and its inherent ethnocentric bias:

Regardless of the potential for building on indigenous peoples' plant traditions to further the conservation of rare species, certain ethnocentric attitudes remain among Western-trained conservation biologists which keep this potential from being fully realised. Because many biologists are intent on analysing so-called natural systems, they often ignore that they are really observing relationships between organisms and environments that have been influenced by humankind over thousands of years...Even when they do not ignore human influences, such 'natural systems' biologists typically treat human presence as a purely negative phenomenon, a nuisance or intrusion. (Nabhan et al. 1991:130)

Another problem is that specialists commonly adopt just one or two criteria for deciding on priorities and measuring the performance of conservation projects. This might be the number of species saved or the number of migrating birds wintering at a wetland site. But indigenous and rural people, as managers of complex systems, have many different criteria that they weigh up and combine in the choice of management activities that influence the fate of biological diversity, at a genetic, species and ecosystem level. This raises some important questions. Whose knowledge should count in the design of national parks and protected areas? Whose priorities and preferences should count for successful conservation of biodiversity? Those of the scientists or those of rural people?

Preservationist ideology

Over the last century or so, some Western ideologies have exalted the values associated with both the preservation of unspoilt wilderness and the restoration of “degraded” areas to a more pristine condition. During this time, a range of beliefs have been propagated. These include the assumptions that:

- wildlife conservation can only work by adopting a total position against killing and use of wildlife;
- biodiversity conservation can be achieved by not buying wildlife goods, regardless of whether they were produced through approved management schemes;
- wildlife conservation in the developing world can succeed without generating economic returns to landowners and to the traditional custodians of biological diversity;
- all wildlife populations are fragile entities driven closer to extinction by any human use.

More recently, this preservationist ideology has been radically extended by a North American version of the “deep ecology” movement (Devall and Sessions 1985; Foreman 1987). For deep ecologists, preserving nature has an intrinsic worth quite apart from any benefits preservation may provide to future human generations. Truly radical policy proposals have been put forward by deep ecologists on the basis of this argument. Interventions in nature, they claim, should be guided primarily by the need to preserve biological diversity and integrity rather than by the needs of humans. Some of the more militant deep ecologists have argued that a large proportion of the globe must be immediately cordoned off from human beings (Foreman 1987). The radical conclusions of deep ecology have been criticized both in North America⁶ and by Third World scholars worried about the consequences of this obsession with wilderness (Guha 1993).

However, while the tenets of deep ecology are no doubt valuable in challenging humankind’s arrogance and ecological hubris, their growing influence on conservation planning is disturbing. For example, the international conservation elite is increasingly using the philosophical, moral and scientific arguments used by deep ecologists in advancing their wilderness crusade. Writing in the prestigious *Annual Review of Ecology and Systematics*, Daniel Janzen (1986) says that only biologists have the competence to decide how the tropical landscape should be used. As “the representatives of the natural world”, biologists are “in charge of the future of tropical ecology”, and only they have the expertise and mandate to “determine whether the tropical agroscape is to be populated only by humans, their mutualists, commensals and parasites, or whether it will also contain some islands of the greater nature—the nature that spawned humans, yet has been vanquished by them” (Janzen 1986:305).

While clearly extreme, Janzen’s views are by no means atypical. Five years after the Earth Summit in Rio, it is not uncommon to hear Western-trained conservation biologists argue in favour of taking over large portions of the world to expand the network of protected areas. They argue that the best way to establish priorities is to gather various key experts, who are invariably international and national scientists. In the words of two senior staff members of an influential international conservation organization, “[t]he best example of the short term approach to priority setting at the local level is to

⁶ Bookchin 1990; Chase 1991; Merchant 1992.

deploy the RAP team [for Rapid Assessment Programme], which uses a small group of world class field biologists with cumulative tropical experience in excess of 100 years" (Mittermeier and Bowles 1993:647).

However, in this context "interdisciplinarity" is confined to well-known tribes of botanists, zoologists and other natural scientists—the emphasis is on getting the "science" right. Although it is recognized that priority-setting exercises should also integrate socioeconomic data, land-use patterns and the like, advocates argue that:

it is best to avoid 'mixing apples and oranges' and instead focus on getting the biological priorities right in the first step of the process. Other kinds of data can then be superimposed on the biological foundation using a Geographic Information System (GIS) and thus develop meaningful and scientifically-based conservation agendas. (Mittermeier and Bowles 1993:647)

As Guha points out:

This frankly imperialist manifesto highlights the multiple dangers of the preoccupation with wilderness preservation that is characteristic of deep ecology...it seriously compounds the neglect by the American movement of far more pressing environmental problems within the Third World (1989:76)

— environmental problems that impinge far more directly on the lives of the poor; such as food, fuel, fodder and water shortages. Guha adds:

But perhaps more importantly, and in a more insidious fashion, it also provides an impetus to the imperialist yearning of Western biologists and their financial sponsors...The wholesale transfer of a movement culturally rooted in American conservation history can only result in the social uprooting of human populations in other parts of the globe. (1989:76)

The blueprint approach of normal conservation professionalism

The methods and means deployed to preserve areas of pristine wilderness largely originated in the affluent West where money and trained personnel ensure that technologies work and that laws are enforced to secure conservation objectives. During and after the colonial period, these conservation technologies, and the values associated with them, were extended from the North to the South—often in a classical top-down manner. Positivist conservation science and the wilderness preservation ethic hang together with this top-down, transfer-of-technology model of conservation. They are mutually constitutive elements of the blueprint paradigm that still informs much of today's design and management of protected areas in developing countries (table 13.1).

The main actors in this approach are "normal professionals" who are concerned not just with research, but also with action. Normal professionals are found in research institutes and universities as well as in international and national organizations, where most of them work in specialized departments of government (forestry, fisheries, agriculture, health, wildlife conservation, administration, etc.). The thinking, values, methods and behaviour dominant in their profession or discipline tend to be stable and conservative. Lastly, normal professionalism generally "values and rewards 'first' biases which are urban, industrial, high technology, male, quantifying, and concerned with things and with the needs and interests of the rich" (Chambers 1993:1).

Table 13.1: Biodiversity conservation and natural resource management paradigms: Contrasting blueprint and learning-process approaches

	Blueprint	Process
Point of departure	Nature's diversity and its potential commercial values	The diversity of both people and nature's values
Keyword	Strategic planning	Participation
Locus of decision making	Centralized, ideas originate in capital city	Decentralized, ideas originate in village
First steps	Data collection and planning	Awareness and action
Design	Static, by experts	Evolving, people involved
Main resources	Central funds and technicians	Local people and their assets
Methods, rules	Standardized, universal fixed packages	Diverse, local, varied basket of choices
Analytical assumptions	Reductionist (natural science bias)	Systemic, holistic
Management focus	Spending budgets, completing projects on time	Sustained improvement and performance
Communication	Vertical: orders down, reports up	Lateral: mutual learning and sharing experience
Evaluation	External, intermittent	Internal, continuous
Error	Buried	Embraced
Relationship with people	Controlling, policing, inducing, motivating, dependency-creating, people seen as "beneficiaries"	Enabling, supporting, empowering; people seen as actors
Associated with	"Normal" professionalism	New professionalism
Outputs	i. Diversity in conservation, and uniformity in production (agriculture, forest, etc.) ii. The empowerment of professionals	i. Diversity as a principle of production and conservation ii. The empowerment of rural people

Source: Adapted from Korten 1984.

The blueprint approach to conservation is also selectively promoted by wider economic forces that can appropriate the commercial values of biological resources in and around protected areas. For example, both the World Bank's private-sector lending arm, the International Finance Corporation (IFC), and the World Bank-controlled Global Environment Facility (GEF) have begun talks with potential investors about the possibilities of selling biological diversity for a profit (Chatterjee 1994). This biodiversity venture capital fund would work on a planetary scale. Three possible areas have been identified for funding so far, including ecotourism (the marketing of tourism in protected areas and natural habitats to wealthy tourists); screening of genetic materials (the study of species in protected areas and tropical ecosystems for medical and other properties useful for new natural product development—oils, perfumes, waxes, biopesticides); and the commercialization of existing knowledge of traditional medicines. More generally, the proposed biodiversity venture capital fund could help sell the rights to "charismatic" ecosystems and protected areas to large corporations for public relations value (Chatterjee 1994).

Increasingly powerful economic and political forces shape conservation science and technology: the practitioners, the conceptual frameworks, the research questions, the funding institutions that promote certain directions, and the official histories of their progress. The blueprint approach of normal conservation is thus much more than a collection of true or false facts. It is best understood as a set of definite choices of world-views and power relations. Choices are not between pristine wilderness and human use but between different kinds of use and between different forms of political control.

Moreover, the "objectivity" claimed by this conservation paradigm is, in and by itself, a way of selecting from and shaping nature, or protected areas in this context.

At a time when many other aspects of knowledge and culture are being seen as expressions of contending social forces, science—conservation science in particular—still claims to be above the battle.⁷ The official view that conservation science is in itself neutral, though open to use and abuse, has been reinforced in the post-UNCED (United Nations Conference on Environment and Development) period. Conservation experts and their products are, after all, being asked to play a dramatically increased role in the formulation of global environmental management strategies in the 1990s (Sachs 1993).

However, conservation science still operates on a narrow intellectual base emphasizing categories, criteria, knowledge and procedures that serve the interests of professional control over the management of protected areas. Conservation priorities often turn out to be inappropriate, conservation packages are rejected, some conservation technologies do not fit, or are non-sustainable or inequitable because of an emphasis on purchased inputs in resource-poor contexts. The broader implications of recommended conservation technologies are largely ignored. Similarly, the ideologies that inform and legitimate dominant conservation practices are assumed to be valid for all people, all places and all times. These are features of the positivist paradigm. If conservation efforts are to become more effective, efficient and just, then they will have to move away from this paradigm to seek alternative values, methods and approaches.

Alternatives to the Dominant Paradigm

The positivist paradigm is so pervasive that, by definition, those inside it cannot see that alternatives exist. The absolutist position of positivism excludes other possibilities. Yet positivism is just one of many ways of describing the world. What are needed are pluralistic ways of thinking about the world and acting to change it.⁸

New paradigms are now emerging from advances in a wide range of disciplines and fields of investigation—such as mathematics, non-linear science and chaos theory, quantum physics, post-positivism, critical theory, constructivist inquiry, soft-systems and contextual science, the philosophy of symbiosis, post-modernism and stakeholder analysis. There are many others not listed here.

The advances in alternative paradigms have important implications for how we go about finding out about the world, generating information and taking action. All hold that "the truth is ultimately a mirage that cannot be attained because the worlds we know are made by us" (Eisner 1990:89). All suggest that we need to reform the way we think about methodologies for finding out about the world. This should not be surprising, as "the language of reductionism and positivism does not entertain the very complex and dynamic phenomena associated with the quest for sustainable practices" (Bawden 1991:263).

In parallel with these developments in other fields, there have also been recent advances in ecological theory and knowledge. It has become increasingly clear that existing ecological systems of plants and animals are a function of their unique pasts.

⁷ Rose and Rose 1976; Levidow 1986; Dickson 1984; Merchant 1980; Levins and Lewontin 1985.

⁸ Kuhn 1962; Feyerabend 1975; Habermas 1987; Giddens 1987; Rorty 1989; Pretty 1994; Uphoff 1992.

Understanding the particular history of a modern community or ecosystem is critical to its current management. Ecosystems are dynamic and continuously changing, and this has very significant implications for management principles and practices.

A paradigm shift is occurring in ecological thinking with the realization that past management of animal populations and vegetation has been based on far too static a concept of ecosystems. For example, there is “growing empirical evidence [to suggest] that moderate frequencies or intensities of disturbance foster maximum species richness...To preserve biotic diversity and functioning natural ecosystems, then, conservation efforts must include explicit consideration of disturbance processes” (Hobbs and Huenneke 1992:324). It has also been suggested that:

Ecologists are becoming progressively sensitized to the importance of the effect of history on the structure and function of modern communities and ecosystems...The conclusion is that it is inevitable that ecologists will simplify greatly the history of inferred human impacts on the forest. However, a consideration of the extensive and variable nature of human use of the landscape suggests that we bear in mind some understanding of this complexity. (Foster et al. 1992:785)

Recent studies indicate that some of the biodiversity loss observed in protected areas stems from the restrictions placed on the activities of local communities. For example, with the expulsion of the Maasai from their lands in Tanzania, the Serengeti is increasingly being taken over by scrub and woodland, meaning less grazing for antelopes (Adams and McShane 1992). The rich Serengeti grassland ecosystem was in part maintained by the presence of the Maasai and their cattle. Similarly, resource management policies to protect and control elephant populations in Tsavo National Park in East Africa have led to severe deterioration of the land within the park boundaries (Botkin 1990). The inhabited area around the park remained forested. The sharp demarcation of the park boundaries in the Landsat images and aerial photos appeared “as a photographic negative of one’s expectation of a park. Rather than an island of green in a wasted landscape, Tsavo appeared as a wasted island amid a green land” (Botkin 1990:36).

These insights contrast with the conventional view, which has too long held that systems are largely a function of current operating mechanisms, and that any human interference will cause a depletion of biological diversity (Wood 1993, 1995).

Five principles set out the crucial differences between these emerging paradigms and positivist science (Pretty 1994). First, any belief that sustainability can be precisely defined is flawed. It is a contested concept, and so represents neither a fixed set of practices or technologies, nor a model to describe or impose on the world. Defining what we are trying to achieve is part of the problem, as each individual has different values. For us to prescribe a concrete set of technologies, practices or policies would be to exclude future options, undermining the notion of sustainability itself. Sustainable protected-area management is, therefore, not so much a specific strategy as it is an approach to understanding complex ecological and social relationships in rural areas.

Second, problems are always open to interpretation. All actors have unique perspectives on what a problem is, and on what constitutes improvement. As knowledge and understanding are socially constructed, they are functions of each individual’s unique context and past. There is, therefore, no single “correct” understanding. What we take to be true depends on the framework of knowledge and assumptions we bring with us. It is thus essential to seek multiple perspectives on a problem situation by ensuring the involvement of a variety of actors and groups.

Third, the resolution of one problem inevitably leads to the production of another "problem-situation", as problems are endemic. The reflex of positivist science is to seek to collect large amounts of data before declaring certainty about an issue or problem. As this position is believed to reflect the "real world", courses of action can become standardized and actors no longer seek information that might lead to another interpretation. Yet in a changing world, there will always be uncertainties.

Fourth, the key feature now becomes the capacity of all actors continually to learn about these changing conditions, so that they can act quickly to transform existing activities. They should make uncertainties explicit and encourage rather than obstruct wider public debates about pursuing new paths for conservation and development. The world is open to multiple interpretations, each valid in its limited context but not necessarily true in absolute terms.

Fifth, systems of learning and interaction are needed to gain an understanding of the multiple perspectives of the various interested parties and encourage their greater involvement. The view that there is only one epistemology (that is, the scientific one) has to be rejected. Participation and collaboration are essential components of any system of learning, as change cannot be effected without the full involvement of all stakeholders and the adequate representation of their views and perspectives. As Sriskandarajah et al. write, "ways of researching need to be developed that combine 'finding out' about complex and dynamic situations with 'taking action' to improve them, in such a way that the actors and beneficiaries of the 'action research' are intimately involved as participants in the whole process" (1991:4).

People in Conservation

These fundamental differences suggest that conserving biological diversity requires a far more subtle appreciation of both human and natural influences. They call into question the separation of people from nature and support the view that people are part of nature. In most terrestrial and coastal environments, both the form and the degree of biological diversity result from a combination of cyclical ecological and climatic processes and past human action. What Denevan (1992) says of forests also applies to wetlands, grasslands and other humanized ecosystems: human impacts may enhance or reduce biodiversity, but change has been continual at variable rates and in different directions. This implies that efforts to conserve biodiversity may need to give greater attention to ecosystem processes rather than to ecosystem products (McNeely 1994). And, perhaps more importantly, conservation efforts may need to identify and promote those social processes that enable local communities to conserve and enhance biodiversity as part of their livelihood system.

There is, of course, a long history of discussion on community participation in development activities. Indeed, the terms "people's participation" and "popular participation" are now part of the normal language of many development agencies, including non-governmental organizations (NGOs), government departments and banks (Adnan et al. 1992; Pretty 1994). They are to be found in the public statements and stances of even those agencies that have nothing to do with people or participation. The problem is that the term means different things to different people.

In conventional rural development, participation has often centred on encouraging local people to sell their labour in return for food, cash or materials. Yet these material

incentives distort perceptions, create dependencies and give the misleading impression that local people are supportive of externally driven initiatives. This paternalism then undermines sustainability goals and produces results that do not persist once the project ceases. As little effort is made to build local skills, interests and capacity, local people have no stake in maintaining or supporting new practices once the incentives cease.

Like many other areas of rural development, conservation has been characterized by very different interpretations of participation. During the colonial period, management was characterized by coercion and control, with people seen as an impediment to conservation. Until the 1970s, participation was increasingly seen as a tool to achieve the voluntary submission of people to protected-area schemes. Here, participation was no more than a public relations exercise, in which local people were passive actors. During the 1980s, participation became increasingly defined as taking an interest in natural resource protection. And now, in the 1990s, participation is being seen by some as a means to involve people in protected-area management. There has been growing recognition that, without local involvement, there is little chance of protecting wildlife. Moreover, the costs of park management are very high if local communities are not involved in caring for the environment.

It is thus essential for professionals to focus on the appropriate process of participation if sustainability and biodiversity conservation goals are to be met. Drawing on the range of ways that development organizations interpret and use the term participation, it is helpful to disaggregate participation into at least seven different types (listed in table 13.2).

The implication of this typology is that the term “participation” should not be accepted without appropriate qualification. The problem with participation as used in types 1–4 (see table 13.2) is that the “superficial and fragmented achievements have no lasting impact on people’s lives” (Rahnema 1992:128). Such forms of participation can be employed, knowing they will not lead to action. If the objective is to achieve sustainable conservation, then nothing less than functional participation will suffice. All the evidence points toward long-term economic and environmental success coming about when people’s ideas and knowledge are valued, and power is given to them to make decisions independently of external agencies.

Those using the term “participation” must both clarify their specific application and define better ways of shifting from the more common passive, consultative and incentive-driven participation toward the interactive end of the spectrum.

Table 13.2: A typology of participation

Typology	Components of each type
1. Passive participation	People participate by being told what is going to happen or what has already happened. It is unilateral announcement by an administration or by project management; people's responses are not taken into account. The information being shared belongs only to external professionals.
2. Participation in information giving	People participate by answering questions posed by extractive researchers and project managers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research or project design are neither shared nor checked for accuracy.
3. Participation by consultation	People participate by being consulted, and external agents listen to views. These external agents define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision making and professionals are under no obligation to take on board people's views.
4. Participation for material incentives	People participate by providing resources—for example, labour—in return for food, cash or other material incentives. Much in situ research and bioprospecting falls in this category, as rural people provide the resources but are not involved in the experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.
5. Functional participation	People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organization. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
6. Interactive participation	People participate in joint analysis, which leads to action plans and the formation of new local groups or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures or practices.
7. Self-mobilization	People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

Source: Modified from Pretty 1994.

In recent years there has been a rapid expansion of new participatory methods and approaches. These have drawn on many long-established traditions that put participation, action research and adult education at the forefront of attempts to emancipate disempowered people. These systems of learning emphasize the interactive participation of all actors (Chambers 1992a, 1992b). There are many different alternative systems of learning and interaction, some more widely used than others.⁹ Despite the different ways in which these approaches are used, they have important principles in common (Pretty 1994). These are:

⁹ These systems of inquiry include, for example, Agroecosystems Analysis (AE), Beneficiary Assessment, Diagnosis and Design (D&D), Diagnóstico Rural Rápido (DRR), Farmer Participatory Research, Groupe de Recherche et d'Appui pour l'Auto-Promotion Paysanne (GRAAP), Méthode Accélérée de Recherche Participative (MARP), Naturalistic Inquiry, Participatory Analysis and Learning Methods (PALM), Participatory Action Research (PAR), Participatory Research Methodology (PRM), Participatory Rural Appraisal (PRA), Participatory Rural Appraisal and Planning (PRAP), Participatory Technology Development (PTD), Participatory Urban Appraisal (PUA), Planning for Real, Process Documentation, Rapid Appraisal (RA), Rapid Appraisal of Agricultural Knowledge Systems (RAAKS), Rapid Assessment Programme (RAP), Rapid Assessment Techniques (RAT), Rapid Catchment Analysis (RCA), Rapid Ethnographic Assessment (REA), Rapid Food Security Assessment (RFSA), Rapid Multi-perspective Appraisal (RMA), Rapid Organizational Assessment (ROA), Rapid Rural Appraisal (RRA), Samuhik Brahman (Joint trek), Soft Systems Methodology (SSM), Theatre for Development, Training for Transformation, and Visualisation in Participatory Programmes (VIPP).

- A defined methodology and systemic learning process—the focus is on cumulative learning by all the participants and, given the nature of these approaches as systems of learning and action, their use has to be participative. The methods are structured into those for group and team dynamics, sampling, interviewing and dialogue, and visualization and diagramming.
- Multiple perspectives—a central objective is to seek diversity, rather than characterize complexity in terms of average values. Different individuals and groups are assumed to make different evaluations of situations, which leads to different actions. All views of activity or purpose are laden with interpretation, bias and prejudice, and this implies that there are multiple possible descriptions of any real-world activity.
- Group learning process—all involve the recognition that the complexity of the world will only be revealed through group learning. This implies three possible mixes of investigators—namely those from different disciplines, from different sectors, and from outsiders (professionals) and insiders (local people).
- Context specific—the approaches are flexible enough to be adapted to suit each new set of conditions and actors, and so there are multiple variants.
- Facilitating experts and stakeholders—the methodology is concerned with the transformation of existing activities to try to bring about changes that people in the situation regard as improvements. The role of the “expert” is best thought of as helping people carry out their own analysis and thus achieve something for and by themselves. These facilitating experts may be stakeholders themselves.
- Leading to sustained action—the learning process leads to debate about change, including confronting the constructions of others. This debate, in turn, changes the perceptions of the actors and their readiness to contemplate action. This leads to more sophisticated and informed constructions about the world. The debate and/or analysis both defines changes that would bring about improvement and seeks to motivate people to take action to implement the defined changes. Action is agreed, and implementable changes will therefore represent an accommodation between conflicting views. This action includes local institution building or strengthening, thereby increasing the capacity of people to initiate action on their own.

A more sustainable conservation, with all its uncertainties and complexities, cannot be envisaged without all actors being involved in the continuing processes of learning.

Toward a New Professionalism for Conservation

Empirical evidence from other areas of natural-resource management (forestry, agriculture, soil and water conservation) has highlighted the misfits between what normal professionals and bureaucrats perceive and do, and what poor rural people need for sustainable livelihoods. A new paradigm is clearly needed. The professional challenge for protected-area management is to replace the top-down, standardized, simplified, rigid and short-term practices with local-level diversified, complicating, flexible, unregulated and long-term natural resource management practices.

The reversals for diversity, democracy and decentralization that characterize this process-oriented approach to biodiversity conservation are shown in table 13.1. Chambers (1991:8) has best captured the essence of this paradigm shift:

Solutions can be sought through reversals, through turning the normal on its head. Professionally, this means putting people before things...It means permitting and promoting the complexity that poor people often want, presenting them with a basket of choices rather than a package of practices. ...Bureaucratically, it means decentralising power, destandardising and removing restrictions. In learning, it means gaining insight less from ‘our’ often out of date knowledge in books and lectures, and more from ‘their’ knowledge of their livelihoods and conditions which is always up-to-date...In behaviour,

it means the most important reversal of all, not standing, lecturing and motivating, but sitting, listening and learning. And, with all these reversals, the argument is not for an absolute or 'slot rattling' change, from one extreme to another; rather it is that only with a big shift of weight can an optimal balance be achieved.

The devolution of planning, implementation, management, monitoring and evaluation of protected areas to villagers and low-income groups is a frontier that needs to be explored by modern conservation organizations and governments. People in and around protected areas should no longer be seen simply as informants, but as teachers, activists, extensionists and evaluators. These local specialists include village game wardens, beekeepers, village veterinarians, herbalists, wild food collectors, fisherfolk, farmers, pastoralists, and so on. An emphasis on village specialists and different resource user groups allows their skills and knowledge to shape protected-area management priorities.

Clearly conservation professionals and rural people have both strengths and limitations. Conservation and other professionals have advantages at two levels. At the macrolevel, computer-assisted geographic information systems can allow landscape ecologists to integrate temporal and spatial variation in ecological factors. Professionals can also rely on worldwide electronic communications networks and data banks to access and exchange scientific information. At a micro-level, conservation scientists have accurate identification techniques and taxonomic skills. But the collective knowledge that rural people have of their watersheds, forests, rangelands, coastal strips and wetlands gives them distinct advantages at the meso-level—where the protected-area management schemes are ultimately aimed. This is, after all, the ecological and social context in which rural people experiment, adapt and innovate.

Thus the advantages and skills of professionals (at the micro-level and at the macro-level) need to be effectively combined with the strengths of indigenous knowledge and experimentation by empowering people through a modification of conventional roles and activities. This participatory approach would permit the generation of diverse, locally negotiated conservation programmes that may be more sustainable in the long term than current projects. Design and management of protected areas thus rely on processes that seek to give more power to local communities. Empowerment includes forms of interactive and spontaneous participation as well as "organized efforts to increase control over resources and regulative institutions in given social situations, on the part of groups and movements of those hitherto excluded from such control" (Pearse and Stiefel 1979:7-8).

In this context, the central concept for conservation and protected-area management is that it must enshrine new ways of learning about the world. Learning should not be confused with teaching. Teaching implies the transfer of knowledge from someone who knows to someone who does not know. Teaching is the normal mode of educational curricula, and is also central to many organizational structures.¹⁰ Universities and other professional institutions reinforce the teaching paradigm by giving the impression that they are custodians of knowledge that can be dispensed or given (usually by lecture) to a recipient (a student).

A move from a teaching to a learning style has profound implications for conservation institutions. The focus is less on what we learn, and more on how we learn and with whom. The pedagogic goals become self-strengthening for people and groups

¹⁰ Ison 1990; Russell and Ison 1991; Bawden 1992; Pretty and Chambers 1993.

through self-learning and self-teaching, and “the role and action of the researcher is very much a part of the interactions being studied” (Russell and Ison 1991:1). Systems of participatory learning and interaction therefore imply new roles for conservation professionals, and these all require a new professionalism with new concepts, values, methods and behaviour. The challenge is to make the shift from the old professionalism to the new (Pretty and Chambers 1993).

It should be emphasized that the success of community-based conservation projects depends on the behaviour and attitudes of outsiders. The notion that educated professionals may have something to learn from the uneducated and illiterate is still sheer heresy for some. As many have not been trained to put the views of local communities before considering their own potential contributions, training and reorientation is essential.

To date, there have been few systematic attempts by conservation organizations (public-sector and non-governmental) to adopt participatory planning methods. Moreover, among those in favour of a transfer of park management activities to local communities, insufficient attention has been given to methodological research and development that promotes genuine people’s participation in the conservation and sustainable use of biodiversity. And yet, recent experience shows that when outsiders behave differently and use new participatory methods, rural people show an unexpected creativity and capacity to present and analyse information, and to diagnose, plan, manage and evaluate. They know the complexity and diversity of their livelihoods and environment. They are experts on their own immediate realities (Pimbert et al. 1996).

This new vision for conservation implies new roles for project staff and local people in protected-area management, which calls for a greater emphasis on training in communication rather than technical skills. Outside professionals must learn to work closely with colleagues from different disciplines or sectors, as well as with rural people themselves, including women and children. Judgement and interpersonal skills should be cultivated through the adoption and use of participatory methods. This may imply a significant shift in technique for conventional trainers, since training for participation must itself be participatory and action-based (Chambers 1992a).

The challenge for top and middle management is to design appropriate institutional mechanisms and rewards to encourage the spread of participatory methods within their organization. Without this support from the top, it is unlikely that participatory approaches that enhance local capacities and innovation will become core professional activities; they will remain isolated and marginalized within NGOs and government departments responsible for conservation programmes.

But for the pioneers who embrace the new professionalism, this will be an extraordinary challenge. As Richard Bawden (1991) put it, “this is profoundly difficult...I am quite aware that I risk fierce controversies, international name calling, and dissolutions of old friendships”.

Operational components of an alternative conservation practice¹¹

Sustainable and effective protected-area management requires reversals in normal conservation professionalism, and an emphasis on community-based natural-resource management and enabling policy frameworks. These are not easy options. Contemporary patterns of economic growth, modernization and nation-building all have strong anti-participatory traits. The integration of rural communities and local institutions into larger, more complex and urban-centred systems often stifles whatever capacity for decision making the local community might have had and renders its traditional institutions obsolete. So the challenges of adapting the ingredients of these community-based successes to the design and management of national parks and protected areas are enormous. To achieve this, considerable attention will have to be given to the following six operational features.

Local systems of knowledge and management

Local management systems are generally tuned to the needs of local people and often enhance their capacity to adapt to dynamic social and ecological circumstances. Although many of these systems have been abandoned after long periods of success, there remains a great diversity of local systems of knowledge and management that actively maintain biological diversity in areas earmarked for the expanding protected-area network (Kemf 1993; West and Brechin 1992).

Local systems of knowledge and management are sometimes rooted in religion and belief systems. Sacred groves, for example, are clusters of forest vegetation that are preserved for religious reasons. They may honour a deity, provide a sanctuary for spirits or protect a sanctified place from exploitation; some derive their sacred character from the springs of water they protect, from the medicinal and ritual properties of their plants or from the wild animals they support (Chandrakanth and Romm 1991). Such sacred groves are common throughout South and South-East Asia, Africa, the Pacific islands and Latin America (Shengji 1991; Ntiamo-Baidu et al. 1992). The network of sacred groves in countries such as India has, since time immemorial, been the locus and symbol of a way of life in which the highest biological diversity occurs where humans interact with nature. A sacred grove is preserved by villagers, "not because it represents the antithesis of their productive activities but because it safeguards their livelihoods and their continued existence. ... When the commons of local communities are still protected by the Goddess, nature's diversity is preserved" (Apffel Marglin and Mishra 1993). Clearly these pockets of biological diversity could be the focus for the conservation and regeneration of forest cover, so perhaps forming the basis of more "culturally appropriate" protected areas.

Despite the pressures that increasingly undermine local systems of knowledge and management, protected-area management plans should start with what people know and do well already, so as to secure their livelihoods and sustain the diversity of natural resources on which they depend.

¹¹ This section draws on analyses of case studies on sustainable development at the community or neighbourhood level (Borrini 1990; Conroy and Litvinoff 1988; Farrington et al. 1993; Bebbington et al. 1993; Wellard and Copestake 1993; Pretty and Sandbrook 1991; Pretty 1994; Ghai and Vivian 1992). While the concepts presented here have not penetrated the harder conservation literature and everyday field conservation practices, they may provide useful pointers for protected-area management in the near future.

Local institutions and social organization

Local organizations are crucial for the conservation and sustainable use of biodiversity. As Michael Cernea (1993:19) has put it, “resource degradation in the developing countries, while incorrectly attributed to ‘common property systems’ intrinsically, actually originates in the dissolution of local level institutional arrangements whose very purpose was to give rise to resource use patterns that were sustainable”. Local groups enforce rules, incentives and penalties for eliciting behaviour conducive to rational and effective resource conservation and use. In developing protected-area management schemes, increased attention will need to be given to community-based action through local institutions and user groups. They include, for example, natural-resource management groups, women’s associations and credit management groups. Successful group initiatives include investing in protecting watersheds and reforestation; organizing community-run wildlife management schemes; and establishing small processing plants for natural products derived from the wild. Available evidence from multilateral projects evaluated five to ten years after completion shows that where institutional development has been important the flow of benefits has risen or remained constant (Cernea 1987). Past experience therefore suggests that if this type of institutional development is ignored in protected-area management policies, economic rates of return will decline markedly and conservation objectives may not be met.

Local rights to resources

Conservationists have begun to realize that effective resource protection is possible only if local communities are fully involved in protected-area planning and gain direct benefits from the project. One notable success is the Arfak Mountains Nature Reserve in west Papua. This recognizes both the ancestral land rights of the Hatam people, and the fact that Indonesian law does not secure them. Although the legal definition of the area as a strict nature reserve makes indigenous resource use theoretically illegal, the project, which has local government approval, allows local people to continue to use the area until the law is changed in their favour. Aware of the benefits, the local people have begun to act as effective guardians in the forest reserve (Craven 1990; Colchester 1992). But it is not all plain sailing once local rights have been granted. In Papua New Guinea, for example, where collective land rights are strongly protected by law, communities have frequently negotiated away rights over their lands by leasing them to logging and mining companies. Only lately have they come to regret the damage that their environments have sustained from such activities (Colchester 1992). One of the critical issues is that the law does not make clear who at local level has the right to negotiate land deals, and this can lead to collective ownership being undermined.

Locally available resources and technologies to meet fundamental human needs

Protected-area projects seeking to provide benefits to local and national economies should give preference to informal innovation systems, reliance on local resources and local satisfiers of human needs. Preference should be given to local technologies emphasizing the opportunities for intensification in the use of available resources. Sustainable and cheaper solutions can often be found when groups or communities are involved in identification of technology requirements, the design and testing of technologies, their adaptation to local conditions and, finally, their extension to others. The potential for intensification of internal resource use without reliance on external inputs is enormous. Greater self-reliance and reduced dependency on outside supplies of pesticides, fertilizers,

water and seeds can be achieved within and around protected areas, by complicating and diversifying farming systems with locally available resources. Similarly, if local communities fully participate in the design, implementation and maintenance phases of projects designed to meet health, housing, sanitation, water needs and revenue-generating activities (such as tourism), then the results are likely to be more sustainable and effective than those imposed by outside professionals.

Local participation in planning, management and evaluation

Table 13.2 schematically presents seven different types of participation. The implication of this typology is that the meaning of participation should be clearly spelled out in all programmes. If the objective of conservation is to achieve sustainable and effective protected-area management, then nothing less than functional participation will suffice. Support is needed for learning approaches in which the main goals are qualitative shifts in the ways people and institutions interact and work together.

Process-oriented flexible projects

In this new approach to protected-area management, the initial focus is on what people articulate as most important to them. This may mean embarking on tasks not central to the project's remit. Community-based conservation projects may remain small, or be combined into larger protected-area programmes once the participatory procedures and processes have been fully worked out. Error is treated as a source of information and flexibility permits continuous adaptation of procedures. Indicators are developed from those most important to local communities. These are seen as milestones rather than absolute, eternally fixed and illusory targets. Innovative extension methods promote group demonstrations, visits, village-level workshops, and community-to-community extension to achieve effective multiplication of conservation technologies, both in and around protected areas. Protected-area management schemes based on this participatory, open-ended approach must be of realistic lengths of time for real social development and natural resource conservation. Projects of short duration probably have a much greater chance of failure than long-term projects (five to ten years or more). Donors and conservation organizations must be prepared for low initial levels of disbursement and for changes in priorities.

Action in these six areas must also be supported by appropriate national and international policy frameworks.

Enabling policies for conservation

Although existing national and international policies may be trying to encourage conservation, they tend to do so in a way that excludes local people and leads to greater degradation.¹² Governments apply a wide range of policy instruments to their agricultural, forestry and fishery sectors. To date, these have not been used with a view to directing practices toward greater sustainability.

Throughout the world, conservation policy has been based on the predominant view that rural people are mismanagers of natural resources. There are great dangers in

¹² Conway and Pretty 1991; Utting 1993; Pretty 1995.

this conservation ideology. When local people reject new practices or technologies that are prescribed for them, policies have tended to shift to seeking success through the manipulation of social, economic and ecological environments. Eventually this leads to coercion. This is not the basis for sustainable management of natural resources.

Policies for vernacular conservation

National protected-area policies must be based on an understanding that modern local environmental attitudes are in part a legacy of past people-nature interactions. This demands that policy makers and other professionals pay serious attention to ecological and social history.

This policy imperative is particularly well highlighted in the case of Guinea's Zياما Biosphere Reserve (Fairhead and Leach 1994). The Zياما forest in Guinea is considered by conservationists to be a relic of the disappearing Upper Guinean forest. It was designated a forest reserve in 1932, and became a biosphere reserve in 1981. Rare animals and birds of Zياما—including the forest elephant, pygmy hippopotamus, zebra duiker, bongo, golden cat, yellow-throated olive greenbul and the bald-headed rock fowl—have been publicized to attract international concern and funding. However, in valuing the apparently “pristine” characteristics of the forest, modern conservationists overlook its long history of influence by people. While often portrayed as being at risk of clearance for the first time under modern demographic pressures, the Zياما forest biosphere was, in fact, one of the most populous and agriculturally prosperous parts of the Upper Guinean region in the mid-nineteenth century. Like many other African forests, Zياما is not an ancient relic of a forgotten past.

Fairhead and Leach (1994:30) argue that “the mismatch between the locally lived history that has shaped local priorities and conservationists’ representations of it is extraordinary. The local antagonism toward the reserve that has built since its establishment cannot be understood or addressed outside this historical context”. As the most senior elder of the region says:

This forest problem is complicated. If you see that we no longer have control over the forest, it is because of the forest agents who come with their papers and delimit the forest. If we are given responsibility for the forest, we are ready to act in the interests of conservation...If we had full responsibility for the management of the forest, we could give you the assurance of protecting it. But as long as control is left in the hands of the State, we can do nothing. (Quoted in Fairhead and Leach 1994:30)

“Participatory” protected-area management will not prove possible unless such historical claims to land and political authority are high up on the agenda. Following the recommendations of the village elders, policy makers will need to consider conservation agreements that cede tenurial control to local landholders, within the context of management agreements that fully recognize the value their lands now have for others.

Without secure rights of access to protected-area resources, rural communities will always consider parks and other protected areas as lost village resources that are not worth caring for in the long term. Protected-area policies will therefore need to be reformed to allow indigenous peoples and other rural communities to play a more central role in determining what is conserved, how and for whom. This requires that ancestral land claims be legally recognized and that indigenous communities be provided with effective control over the natural resources contained in national parks and all other protected-area categories recognized by the Commission on National Parks and Protected Areas (CNPPA).

Some indigenous peoples and rural communities have established protected areas that resemble the parks and reserves codified in the CNPPA's system and in national protected-area policies. In Ecuador, for example, the Awa have spontaneously decided to establish conservation areas; they have secured rights over a traditional area, which has been designated the Awa Ethnic and Forest Reserve (Poole 1993). Sacred places such as the Loita Maasai's Forest of the Lost Child in Kenya (Loita Naimina Enkiyio Conservation Trust 1994) are also widespread forms of vernacular conservation. Vernacular conservation is based on site-specific traditions and economies; it refers to ways of life and resource utilization that have evolved in place and, like vernacular architecture, is a direct expression of the relationship between communities and their habitats (Poole 1993).

However, the similarities between vernacular and scientific models of conservation obscure the fact that motivations for setting up such areas are quite distinct from those leading to national parks—even though the ultimate contribution to biodiversity conservation may be identical. The crucial distinction is that such areas are established to protect land for rather than from use—more specifically for local use rather than appropriation and exploitation by outside interests. To support vernacular conservation, the CNPPA's categories will need to be reformed to acknowledge people's own definitions of what constitutes a protected area and how it should be managed.

Enabling policies for local action

The success of people-oriented conservation will hinge on promoting socially differentiated goals in which the varying perspectives and priorities of community members, and local communities and conservationists, must be negotiated. Signed agreements between conservation professionals and local community organizations could promote responsible and accountable interaction. In the case of indigenous peoples, national protected-area policies need to be brought in line with internationally recognized human rights: they should allow indigenous peoples to represent their own interests through their own organizations and not through consultative processes controlled by conservation organizations. International law and other agreements already provide clear principles that professionals working for conservation should observe in dealing with indigenous peoples. These include ILO Convention 169, Chapter 26 of Agenda 21 of the UNCED agreements, and parts of the Biodiversity Convention (Colchester 1994).

However, in many instances, meaningful changes may only come about as a result of strong popular mobilization at the local level in favour of greater access to resources within protected areas. These struggles may include many continually changing forms of interaction, including mutual accommodation between power holders and the disadvantaged; bargaining, persistent friction and informal political skirmishing; and armed confrontation and violent repression of the weaker groups by the local or national power-holders. The establishment of a nature reserve by the Kuna Indians in Panama, during the early 1980s, highlighted the crucial role of grassroots mobilization and organization in ensuring that conservation initiatives served the interests of local people (Utting 1994). A proposal for local participation has also recently come about following action of Gujjar inhabitants over the proposed Rajaji National Park in Uttar Pradesh, India (Cherail 1993). In seeking a new deal, excluded groups like the Kuna Indians and the Gujjars confront social arrangements that determine patterns of access to resources.

The goal of these grassroots initiatives is:

not to conquer or vanquish the state but to forge selective alliances with parts of the state and its bureaucracy while avoiding new clientelistic constraints. Such successful political action would gradually lead to what the excluded would view as a 'better state, one where their claims and interests are taken more seriously and where the authorities may be willing to tip the balance of power in their favour...In the last analysis, there may be no alternative to the joint efforts of a reformist state and a reinvigorated and organized civil society in which the excluded can make their voices heard. (Stiefel and Wolfe 1994:204-205)

A national or local government that wants to include people in the management of protected areas will need to review the legal basis for such involvement. There are a variety of legal arrangements that can be introduced by government to assure local control over resources. The range of choices is not limited to private ownership of land: communal ownership of land and/or resources is often a more culturally appropriate option in much of the developing world (Bromley and Cernea 1989). Where local communities have been granted secure usufruct rights over neighbouring forests, governments have witnessed clear reversals in forest degradation and its associated biodiversity (Fortmann and Bruce 1988). As V.K. Bahuguna recently put it, "The only solution to the present day crisis of depletion of forest resources, and the circumstantial alienation of people, is to opt for people's forests by involving local people in forest protection and development" (1992:10).

The key activity at the local level is the establishment of local rules for the protection and conservation of natural resources. These rules, with the necessary local institutions, are the foundation for sustainable development. In India, for example, forest protection committees have developed different types of local rules as indicated by the following remarks of villagers:

It was resolved by the committees that all those areas where the trees are marked with red paints along the boundary are closed for grazing and hence all of us unanimously resolve not to take our cattle for grazing in these areas, nor allow the villagers of other villages to do so. We shall keep our cattle at home and all cases of violation would be reported to the forest officer. (Bahuguna 1992)

For the protection of trees, "it was unanimously resolved that we shall not girdle any tree nor allow others to do so. We shall have some strict watch over illegal cutting of trees". For goats "it is resolved that all those villagers who are having goats with them must sell them within a period of 3 days, otherwise action will be taken". As for firewood, "no villager would carry the fuelwood head load for sale outside the village. The defaulters would be charged Rs 51 per head load" (cited in Bahuguna 1992:12).

In some cases, social fines have been imposed not only on villagers but also on forest guards and, in others, communities have taken action on social issues, including punishment for anti-social drinking and abuse. In Madhya Pradesh, the benefits have included improvements in fuelwood, grass and crop yields; reduced poaching of elephants and other animals; changed relations between forest officials and local people; and the creation of democratic local organizations (Bahuguna 1992).

Conditions for joint and co-management partnerships

Enabling legal arrangements for communal access to biological resources is an essential starting point for co-management between governments and local communities. The concept of joint or co-management grew out of a recognition that centralized forms of

control over resources have failed to halt resource degradation in many countries, and that local (village or user-group) level control may be more effective where there is local vested interest in exercising management control. Joint management means the management of resources by the sharing of products, responsibilities, control and decision-making authority between the local users and the government agencies. At the heart of co-management is some form of negotiated contract that specifies the distribution of authority and responsibility among the major parties to the contract. Joint management recognizes the capacity of local resource users to be active partners (usually with government) in a power-sharing arrangement. In this way, both the government's policy objectives and local people's use requirements have better chances of being met (Pye-Smith and Borrini-Feyerabend 1994).

By combining formal ownership by the government with people's security of access through time, co-management schemes are well suited for the effective and sustainable management of protected areas—in forests, wetlands, coastal areas, mountains, grasslands and other biodiversity-rich ecosystems. One example comes from Uganda: two years after the National Park Service granted rights of access to beekeepers in one of the country's parks, local involvement in resource management and stewardship has already begun to benefit both people and wildlife. Joint forest management, participatory rural appraisal and visual communication techniques are used with communities to set up multiple-use areas and the sustainable harvesting, utilization and monitoring of species in Bwindi Impenetrable National Park, in southwest Uganda (Wilde 1994).

Governments have much to gain by decentralizing control and responsibility for protected-area management. Such protection is likely to be more cost-effective and sustainable when national regulatory frameworks are left flexible enough to accommodate local peculiarities. However, local control and secure access to protected-area resources will not, in and of themselves, enable local communities to benefit fully from, and care for, biodiversity-rich sites. Governments will also need to pay attention to other requirements for effective and sustainable protected-area management at the local level.

In addition to security of tenure and access, local communities must have the right to retain their knowledge about biological and genetic resources in and around protected areas. They should be able to access all the information about the medicinal plants and other biological material they manage in protected areas. They will also need funds, if they are to develop their biological resources in and around protected areas. Local communities must also be free to develop their own technologies and to take advantage of other technologies they find useful. Lastly, recognizing that biological resources, information, funds and technologies function within cultural and marketing systems, a further requirement is for local communities to exercise their right to choose and retain those systems that best meet their needs.

The devolution of protected-area management to local communities does not mean that state agencies have no role. A central challenge will be to find ways of allocating limited government resources so as to obtain widespread replication of community initiatives in protected-area management. Honouring local intellectual property rights, promoting wider access to biological information and funds, designing technologies, markets and other systems on the basis of local needs and aspirations all require new partnerships between the state and rural people, and the organizations representing them.

Building appropriate partnerships between states and rural communities demands new legislation, policies, institutional linkages and processes. It requires the creation of communication networks and participatory research linkages between the public sector,

NGOs and rural people involved in protected-area management. Legal frameworks should focus on the granting of rights, access and security of tenure to farmers, fisherfolk, pastoralists and forest dwellers. This is essential for the poor to take the long-term view. Similarly, the application of appropriate regulations to prevent pollution and resource-degrading activities is essential to control the activities of the rich and powerful—timber and mining companies, for example. Economic policies should include the removal of distorting subsidies that encourage the waste of resources, the targeting of subsidies to the poor instead of the wealthy, who are much better at capturing them, and the encouragement of resource-enhancing rather than degrading activities through appropriate pricing policies.

Such changes will not come about simply through the increased awareness of policy makers and professionals. They will require shifts in the balance of social forces and power relations. How far governments can be encouraged to create this enabling context for protected-area management depends on circumstances. This is clearly a problem where governance is not democratic and where reliance on strongly coercive conservation is the norm. Moreover:

governments are not neutral administrative bodies but political expressions of dominant social forces, and the poor and excluded are not part of these ruling forces and alliances unless, briefly, in revolutionary political conjunctures. Quite naturally, governments tend thus to resist any policy that entails dilution of power and above all participatory approaches that aim to empower the hitherto excluded. (Stiefel and Wolfe 1994:212)

Nonetheless, when empowerment of local communities has been a political priority, then the successes that have followed have been significant. These include:

- reduced environmental degradation;
- more efficient use of resources;
- reduced dependency on external resources;
- reversal of migration patterns;
- enhanced livelihood security, particularly in resource-poor areas; and
- increased human capacity for conservation.

In practical terms, local empowerment and popular participation can generate more productive means of livelihood and, through local control and co-management agreements, maintain “protected areas” that the state currently manages inefficiently or can no longer afford.

Emerging Constraints and Opportunities

Sustainable and effective protected-area management calls for reversals from the “normal” toward greater diversity, democracy and decentralization. The vision for conservation presented here would establish and develop parks and protected areas with a view to strengthening local livelihood opportunities, and then integrate these measures with nature conservation objectives. This new paradigm asserts that the multiple livelihood activities of rural communities are not necessarily incompatible with the conservation of biological diversity. Indeed, under certain conditions, community participation in natural resource management can help maintain and actually enhance the diversity of nature in and around protected areas.

Popular participation in defining what constitutes a "protected area", how it should be managed, and in whose interests, implies a shift from the more common passive, consultative and material-driven participation to more interactive and genuinely empowering forms of participation. Genuine people's participation in the conception, design, management and evaluation of protected areas implies new roles for conservation professionals and other outsiders. These new roles all require a new professionalism with new concepts, values, methods and behaviour. Enabling policies are also needed to provide favourable conditions and appropriate forms of support for local initiatives in protected-area management.

In this context, participation involves far more than the active and willing involvement of local people in the management of protected areas. It is primarily about empowerment—the organized efforts of marginalized groups within civil society to transform patterns of resource allocation and increase their control over material resources and decision-making processes. Empowerment often necessitates the creation of new forms of socioeconomic or sociopolitical organizations that are more representative and accountable than the traditional ones. Strong community organization and mobilization are also features of a participatory process that seeks to ensure that conservation initiatives serve the interests of local people.

The challenges of adapting the ingredients of participatory, community-based successes to the design and management of national parks and protected areas are therefore enormous. But it would be socially irresponsible not to pursue this approach actively in contexts where rural people directly depend on biological diversity and natural resources for their food, health, fuel, shelter and cultural needs. Without participatory, learning-centred approaches that support local livelihood interests in protected-area management, it is likely that conservation will further aggravate resource degradation, economic deprivation, social tension and loss of biological diversity.

Naturally, governments will tend to shy away from approaches that seek to empower the hitherto excluded. International and national conservation organizations have a unique responsibility in this context. Through their political and financial influence they can encourage policy changes by openly supporting indigenous and rural peoples' rights to their lands, instead of supporting the actions of elites.

This is particularly important at a time when the role and importance of protected areas in national economies are changing as genetic resources increasingly acquire market value. Governments of biodiversity-rich countries are now making bilateral agreements with foreign research institutes and multinational corporations to organize the collection, identification and exploitation of useful genes in the fauna and flora of protected areas. Such bioprospecting agreements have already been signed between Glaxo and Ghana, UK research institutes and Cameroon, and Novo Industry and the government of Nigeria. The pharmaceutical company Mercks has recently signed a five-year contract with Costa Rica's National Biodiversity Institute (INBio). Mercks pays for its prospection rights (over US\$ 1 million) and has agreed to share royalties on sales of products derived from useful genes and biochemical substances identified in Costa Rica's protected areas. Many more bilateral agreements of this type are reported by Reid et al. (1993).

The subsistence values of protected areas may be further marginalized by the potential commercial values of biological resources that government and local elites can more readily benefit from, with or without international help. Patenting regimes and other intellectual property rights enable industrial users to protect and profit from technological innovation based on the use of these genetic resources. Conversely, the

knowledge and informal innovations of local people in conserving and extending the genetic diversity of species with medicinal or agricultural values may not be compensated for, as has been the case until now (Crucible Group 1994).

As the capacities of developing-country governments become increasingly undermined by structural adjustment programmes, diminishing aid and worsening terms of trade, the tendency is to continue to use the existing conservation paradigm. This emphasizes the ecological and commercial values of biodiversity and only secondarily, if at all, the subsistence values on which local livelihood security depends. As a result, coercive conservation strategies, backed by outside private interests and careless ideologies, may be further extended to preserve wildlife for tourism and “scientific research”. These trends may serve both the economic and political interests of developing-country governments but the long-term effectiveness of this conservation strategy is as questionable as the ethics of its militaristic approach (Peluso 1993).

The inherent contradictions between state control and autonomous participation will best be resolved through jointly negotiated agreements between governments and local communities. National parks and other protected areas, including their vernacular definitions, could be managed under agreements between governments and rural communities. The jointly negotiated co-management schemes would establish mutually agreed processes to achieve both long-term conservation goals and livelihood security. Elements of these agreements could include government assistance for strong defence against powerful outside interests, such as cattle ranchers, mining and timber companies, and bioprospecting agents. The co-management agreements could also cover technical assistance from conservation biologists for monitoring and advice, and perhaps trust funds and local credit systems set up to improve access to health care, education and other locally defined community improvements.

It is this new vision for protected areas, in which conservation professionals and local people “participate” together in joint or co-management, that will lead to greater conservation. It will require great changes in professionals, policies and institutions. Local people, biodiversity and natural resources depend on these changes.

References

- Adams, J.S. and T.O. McShane. 1992. *The Myth of Wild Africa: Conservation without Illusion*. W.W. Norton and Co., New York.
- Adnan, S., A. Barrett, S.M. Nurul Alam and A. Brustinow. 1992. *People's Participation: NGOs and the Flood Action Plan*. Research and Advisory Services, Dhaka.
- Apffel Marglin, F. and P.C. Mishra. 1993. “Sacred groves: Regenerating the body, the land, the community.” In W. Sachs (ed.), *Global Ecology: A New Arena of Political Conflict*. Zed Books, London.
- Bahuguna, V.K. 1992. *Collective Resource Management: An Experience in Harda Forest Division*. Regional Centre for Wastelands Development, Bhopal.
- Bawden, R. 1992. *Creating Learning Systems: A Metaphor for Institutional Reform for Development*. Paper prepared for joint IIED/IDS Conference on Beyond Farmer First: Rural People's Knowledge, Agricultural Research and Extension Practice, London, 27–29 October.
- . 1991. “Systems thinking and practice in agriculture.” *Journal of Dairy Science*, Vol. 74, No. 7, pp. 2362–2373.
- Bebbington, A. and G. Thiele with P. Davies, P.M. Prager and H. Riveros. 1993. *Rethinking Roles in Sustainable Agricultural Development. Non-governmental Organizations and the State in Latin America*. Routledge, London.
- Bookchin, M. 1990. *Remaking Society: Pathways to a Green Future*. South End Press, Boston MA.
- Borrini, G. (ed.) 1990. *Lessons Learned in Community-Based Environmental Management*. Proceedings of the Primary Environmental Care workshop, Siena, Italy, 29 January – 2 February 1990. Italian Ministry of Foreign Affairs and the Istituto Superiore di Sanità, Rome.
- Botkin, D.B. 1990. *Discordant Harmonies: A New Ecology for the Twenty-first Century*. Oxford University Press, New York.

- Bromley, D.W. and M.M. Cernea. 1989. *The Management of Common Property Natural Resources: Some Conceptual and Operational Fallacies*. Discussion Paper No 57. World Bank, Washington DC.
- Cernea, M.M. 1993. "Culture and organisation: The social sustainability of induced development." *Sustainable Development*, Vol. 1, No. 2, pp. 18-29.
- . 1987. "Farmer organisations and institution building for sustainable development." *Regional Development Dialogue*, Vol. 8, No. 2, pp. 1-24.
- Chambers, R. 1993. *Challenging the Professions: Frontiers for Rural Development*. Intermediate Technology Publications, London.
- . 1992a. "The self-deceiving state: psychosis and therapy." *IDS Bulletin*, Vol. 23, No. 4, pp. 31-42.
- . 1992b. *Rural Appraisal: Rapid, Relaxed and Participatory*. Discussion Paper 311. IDS, Brighton.
- . 1991. "In search of professionalism, bureaucracy and sustainable livelihood for the 21st century." *IDS Bulletin*, Vol. 22, No. 4, pp. 5-12.
- Chandrakanth, M.G. and J. Romm. 1991. "Sacred forests, secular forest policies and people's actions." *Natural Resources Journal*, Vol. 31, No. 4, pp. 741-756.
- Chase, S. (ed.) 1991. *Defending the Earth: A Dialogue between Murray Bookchin and Dave Foreman*. South End Press, Boston MA.
- Chatterjee, P. 1994. "Biodiversity for sale." *Bankcheck*, January, pp. 3-23.
- Cherail, K. 1993. "Time to change: Wildlife conservation strategy." *Down to Earth*, Vol. 2, No. 13, pp. 5-9.
- Colchester, M. 1994. *Salvaging Nature: Indigenous Peoples, Protected Areas and Biodiversity Conservation*, UNRISD/World Rainforest Movement/WWF-International, Discussion Paper No 55. UNRISD, Geneva.
- . 1992. *Sustaining the Forests: The Community-Based Approach in South and South-East Asia*. Discussion Paper No. 35. UNRISD, Geneva.
- Conroy, C. and M. Litvinoff. 1988. *The Greening of Aid: Sustainable Livelihoods in Practice*. Earthscan, London.
- Conway, G.R. and J.N. Pretty. 1991. *Unwelcome Harvest: Agriculture and Pollution*. Earthscan, London.
- Craven, I. 1990. *Community Involvement in Management of the Arfak Mountains Nature Reserve*. WWF (Indonesia), Jakarta.
- Crucible Group. 1994. *People, Plants and Patents: The Impact of Intellectual Property on Trade, Plant Biodiversity and Rural Society*. IDRC, Ottawa.
- Denevan, W.M. 1992. "The pristine myth: The landscape of the Americas in 1942." *Annals of the Association of American Geographers*, Vol. 86, No. 3, pp. 369-385.
- Devall, B. and G. Sessions. 1985. *Deep Ecology: Living as if Nature Mattered*. Peregrine Smith, Salt Lake City UT.
- Dickson, D. 1984. *The New Politics of Science*. Pantheon Books, New York.
- Eisner, E.W. 1990. "The meaning of alternative paradigms for practice." In E.G. Guba (ed.), *The Paradigm Dialogue*. Sage Publications, Newbury Park CA.
- Fairhead, J. and M. Leach. 1994. "Contested forests: Modern conservation and historical land use in Guinea's Ziarna reserve." *African Affairs*, Vol. 93, No. 373, pp. 481-512.
- Farrington, J., A. Bebbington, K. Wellard and D.J. Lewis. 1993. *Reluctant Partners? Non-governmental Organisations, the State and Sustainable Agricultural Development*. Routledge, London.
- Feyerabend, P. 1975. *Against Method: Outline of an Anarchistic Theory of Knowledge*. New Left Books, London.
- Foreman, D. 1987. "A modest proposal for a wilderness system." *The Whole Earth Review*, No. 53, pp. 42-45.
- Fortmann, L. and J.W. Bruce (eds.). 1988. *Whose Trees? Proprietary Dimensions of Forestry*. Westview Press, Boulder CO.
- Foster, D.R., Z. Zebryk, P. Schoonmaker and A. Lezberg. 1992. "Post-settlement history of human land use and vegetation dynamics of a Tsuga Canadensis (hemlock) woodlot in central New England." *Journal of Ecology*, Vol. 80, No. 4, pp. 773-786.
- Ghai, D. and J.M. Vivian (eds.). 1992. *Grassroots Environmental Action: People's Participation in Sustainable Development*. Routledge, London.
- Giddens, A. 1987. *Social Theory and Modern Sociology*. Blackwell, Oxford.
- Gómez-Pompa, A. and A. Kaus. 1992. "Taming the wilderness myth." *Bioscience*, Vol. 42, No. 4, pp. 271-279.
- Guha, R. 1993. "Two phases of American environmentalism: A critical history." In F. Appfel Marglin and S.A. Marglin (eds.), *Decolonising Knowledge: From Development to Dialogue*. Clarendon Press, Oxford.
- . 1989. "Radical American environmentalism and wilderness preservation: A Third World critique." *Environmental Ethics*, Vol. 11, No. 1, pp. 71-83.
- Habermas, J. 1987. *The Theory of Communicative Action, Volume II—Lifeworld and System: A Critique of Functionalist Reason*. Heinemann, London.
- Hobbs, R.J. and L.F. Huenneke. 1992. "Disturbance, diversity and invasion: Implications for conservation." *Conservation Biology*, Vol. 6, No. 3, pp. 324-337.

- Ison, R.L. 1990. *Teaching Threatens Sustainable Agriculture*. Gatekeeper Series No. SA21. IIED, London.
- Janzen, D.H. 1986. "The future of tropical ecology." *Annual Review of Ecology and Systematics*, Vol. 17, pp. 305–324.
- Kemf, E. (ed.) 1993. *Indigenous Peoples and Protected Areas: The Law of Mother Earth*. Earthscan, London.
- Korten, D.C. 1984. "People centered development: Towards a framework." In D.C. Korten and R. Klaus (eds.), *People-Centered Development: Contributions toward Theory and Planning Frameworks*. Kumarian Press, West Hartford CT.
- Kuhn, T.S. 1962. *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago.
- Levidow, L. (ed.) 1986. *Radical Science Essays*. Free Association Books, London.
- Levins, R. and R. Lewontin. 1985. *The Dialectical Biologist*. Harvard University Press, Cambridge MA.
- Loita Naimina Enkiyo Conservation Trust. 1994. *Forest of the Lost Child: A Maasai Conservation Success Threatened by Greed*. Narok, Kenya.
- Max-Neef, M., A. Elizalde, M. Hopenhayn, with F. Herrera, H. Zemelman, J. Jatobá and L. Weinstein. 1989. "Human scale development: An option for the future." *Development Dialogue*, Vol. 1, pp. 5–80.
- McNeely, J.A. 1994. "Lessons from the past: Forests and biodiversity." *Biodiversity and Conservation*, Vol. 3, No. 1, pp. 3–20.
- Merchant, C. 1992. *Radical Ecology: The Search for a Livable World*. Routledge, London.
- . 1980. *The Death of Nature: Women, Ecology and the Scientific Revolution*. Harper and Row, San Francisco.
- Mittermeier, R.A. and I.A. Bowles. 1993. "The global environment facility and biodiversity conservation: Lessons to date and suggestions for future action." *Biodiversity and Conservation*, Vol. 2, No. 6, pp. 637–655.
- Nabhan, G.P., D. House, S.A. Humberto, W. Hodgson, H.S. Luis and M. Guadalupe. 1991. "Conservation and use of rare plants by traditional cultures of the US/Mexico borderlands." In M.L. Oldfield and J.B. Alcorn (eds.), *Biodiversity: Culture, Conservation and Ecodevelopment*. Westview Press, Boulder CO.
- Ntiamo-Baidu, Y., L.J. Gyamfi-Fenteng and W. Abbiw. 1992. *Management Strategies for Sacred Groves in Ghana*. A report prepared for the World Bank and the Environmental Protection Committee (Ghana), Washington DC.
- Oldfield, M.L. and J.B. Alcorn. 1991. *Biodiversity: Culture, Conservation and Ecodevelopment*. Westview Press, Boulder CO.
- Pearse, A. and M. Stiefel. 1979. *Inquiry into Participation: A Research Approach*. UNRISD, Geneva.
- Peluso, N.L. 1993. "Coercing conservation? The politics of state resource control." *Global Environmental Change*, Vol.3, pp. 199–217.
- Pimbert, M.P. and J.N. Pretty. 1995. *Parks, People and Professionals: Putting "Participation" into Protected Area Management*. UNRISD/IIED/WWF Discussion Paper No 57. UNRISD, Geneva.
- Pimbert, M., B. Guja and M. Shah. 1996. "Village voices challenging wetland management policies: PRA experiences from Pakistan and India." *PLA Notes* No. 27, pp. 37–41.
- Poole, P.J. 1993. "Indigenous peoples and biodiversity protection." In S.H. Davis, *The Social Challenge of Biodiversity Conservation*. Global Environment Facility Working Paper No. 1. World Bank/UNEP/UNDP, Washington DC.
- Pretty, J.N. 1995. *Regenerating Agriculture: Policies and Practice for Sustainability and Self-Reliance*. Earthscan, London.
- . 1994. "Alternative systems of inquiry for sustainable agriculture." *IDS Bulletin*, Vol. 25, No. 2, pp. 37–48.
- Pretty, J.N., and R. Chambers. 1993. *Towards a Learning Paradigm: New Professionalism and Institutions for Sustainable Agriculture*. Discussion Paper 334. IDS, Brighton.
- Pretty, J.N., and R. Sandbrook. 1991. *Operationalising Sustainable Development at the Community Level: Primary; Environmental Care*. Paper presented to the DAC Working Party on Development Assistance and the Environment, OECD, Paris, October.
- Pye-Smith, C. and G. Borrini-Feyerabend, with R. Sandbrook. 1994. *The Wealth of Communities*. Earthscan, London.
- Rahnema, M. 1992. "Participation." In W. Sachs (ed.), *The Development Dictionary: A Guide to Knowledge as Power*. Zed Books, London.
- Reid, W., S.A. Laird, C. Meyer, R. Gomez, A. Sittenfeld, D. Janzen, M.A. Collin and C. Juma. 1993. *Biodiversity Prospecting: Using Genetic Resources for Sustainable Development*. World Resources Institute, Washington DC.
- Rorty, R. 1989. *Contingency, Irony and Solidarity*. Cambridge University Press, Cambridge.
- Rose, H. and S. Rose. 1976. *The Political Economy of Science: Ideology of/in the Natural Sciences*. Macmillan Press, London.
- Russell, D.B. and R.L. Ison. 1991. *The Research-Development Relationship in Rangelands: An Opportunity for Contextual Science*. Plenary paper presented at the 4th International Rangelands Congress, Montpellier, France, 22–26 April.
- Sachs, W. 1993. "Global ecology and the shadow of development." In W. Sachs (ed.), *Global Ecology: A New Arena of Political Conflict*. Zed Books, London.
- Scoones, I., M. Melnyk and J.N. Pretty. 1992. *The Hidden Harvest: Wild Foods and Agricultural Systems*. Annotated bibliography. IIED, London with WWF, Geneva and Sida, Stockholm.
- Shengji, P. 1991. "Conservation of biological diversity in temple-yards and holy hills by the Dai ethnic minorities of China." *Ethnobotany*, Vol. 3, pp. 27–35.

- Sriskandarajah, N., R.J. Bawden and R.G. Packham. 1991. Systems agriculture: A paradigm for sustainability." *Association for Farming Systems Research Extension Newsletter*, Vol. 2, No. 2, pp 1–5.
- Stiefel, M. and M. Wolfe. 1994. *A Voice for the Excluded: Popular Participation in Development—Utopia or Necessity?* Zed Books, London.
- Uphoff, N. 1992. *Learning from Gal Oya: Possibilities for Participatory Development and Post-Newtonian Social Science*. Cornell University Press, Ithaca NY.
- Utting, P. 1994. "Social and political dimensions of environmental protection in Central America." *Development and Change*, Vol. 25, No. 1, pp. 231–259.
- . 1993. *Trees, People and Power: Social Dimensions of Deforestation and Forest Protection in Central America*. Earthscan, London.
- Wellard, K. and J.G. Copestake (eds.). 1993. *Rethinking Roles in Sustainable Agricultural Development: Non-Governmental Organisations and the State in Africa*. Routledge, London.
- West, P.C. and S.R. Brechin. 1992. *Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation*. University of Arizona Press, Tucson AZ.
- Wilde, R. 1994. *Community Participation in Planning Resource Utilisation from within a National Park—Bwindi Impenetrable National Park, Uganda*. WWF International. Mimeo.
- Wood, D. 1995. "Conserved to death: Are tropical forests being over-protected from people?" *Land Use Policy*, Vol. 12, No. 2, pp. 115–135.
- . 1993. "Forests to fields: Restoring tropical lands to agriculture." *Land Use Policy*, Vol. 10, No. 2, pp. 91–107.
- Wynne, B. 1992. "Uncertainty and environmental learning: Reconceiving science and policy in the preventive paradigm." *Global Environmental Change*, Vol. 2, No. 2, pp. 111–127.

Chapter 14

Constraints and Opportunities for Sustainable Forest Use¹

Solon L. Barraclough² and Krishna B. Ghimire³

(1995)

The first five chapters of *Forests and Livelihoods* from which the present chapter is extracted, revealed a bewildering array of issues that have to be dealt with in understanding the social dynamics of deforestation in developing countries and in seeking effective ways of protecting forests, while at the same time improving the livelihoods of those rural people who depend on them. Similar sets of issues, however, seem to keep reappearing in different guises in diverse localities, as well as at national levels in each country and internationally. Before discussing strategies for protecting forests and livelihoods in the last chapter, it behoves the analyst to attempt to synthesize the principal issues.

This chapter examines five clusters of interacting relationships and processes, at different levels, that are influencing deforestation and its social and ecological impacts. Each of these subsystems highlights issues emerging from the case studies. We look first at ecological constraints. Second, we consider the role of demographic trends. Third, we examine the role of farming and other local-level production systems, as well as their links with economic structures, consumption patterns and changing technologies. Fourth, we assess the influence of land tenure institutions and social relations more generally. Finally, we consider the roles of public policies and market forces as a prelude to the concluding chapter, which deals with policy issues and dilemmas.

There is a certain logic to the order of this discussion. Ecological constraints arising from relationships among elements of the natural environment such as topography, soils, water, climate, flora and fauna change rather slowly unless stimulated by natural or

¹ Originally published as chapter 6 in *Forests and Livelihoods: The Social Dynamics of Deforestation in Developing Countries*, by Solon Barraclough and Krishna B. Ghimire (UNRISD and Macmillan, 1995). UNRISD is grateful to Palgrave Macmillan for permission to reproduce this text here.

² At the time of writing, Solon Barraclough was working as a consultant at UNRISD. He retired as Director of UNRISD.

³ At the time of writing, Krishna B. Ghimire was Project Leader at UNRISD.

human-induced catastrophes. There can be rapid demographic changes locally associated with migrations, wars or epidemics, but national and global demographic changes tend to be gradual and fairly predictable for at least a few decades; moreover they are extremely hard to alter through public policies. Farming systems, technologies and economic structures are more responsive in the short run than are national demographic trends to policies and markets; nonetheless, changing farming systems can be difficult and socially disruptive. The same is true with reforming land tenure and other social institutions. Market forces and public policies tend to be more volatile than the other interacting subsystems determining deforestation and its impacts. Within rather narrow limits they are the most readily changed in the short run through purposeful interventions. They appear to peasants, the landless and indigenous peoples, however, to be as much structural barriers over which they have no control as do the climate or social institutions.

Under each heading we address two basic questions: To what extent do these subsystems constrain local-level attempts to improve forest use and management? How could they be modified through purposeful interventions to support initiatives to protect forest ecosystems and to improve the livelihoods of the poor in ways that are consistent with sustainable development? We attempt to examine these questions from the viewpoints of those who are largely dependent on forests for their livelihoods. We also try to look at them from the perspective of outsiders, such as planners or civic and political leaders, attempting to promote more sustainable development.

Ecological Constraints and Opportunities

When considering alternatives to control deforestation, the natural environment imposes sharp constraints on what is feasible. Environmental constraints can often be modified through soil conservation practices, irrigation, the introduction of new varieties of plants and animals, chemical fertilizers and the like. These measures are, however, likely to be associated with significant costs in effort and resources in addition to unforeseen indirect ecological and social implications.

The geological evolution of each area, its soils, topography, climate, microclimates, water regimes, other components of natural ecosystems, the interactions among them and with human activities, are as important to take into account as are socioeconomic factors when analysing deforestation issues. Traditional forest-dependent hunters and gatherers, cultivators and pastoralists learned about the constraints inherent in their natural environment through costly trial and error over many generations. The risks of tampering with natural ecosystems are frequently unknown to or disregarded by planners, developers and settlers coming from different ecological contexts. They may assume that because an area supports a rich tree cover it is suitable for crops and pasture. This is sometimes true. Anyone who has seriously looked into the matter, or tried to farm under diverse ecological conditions, knows it is not always the case.

Some areas that support dense tropical rainforests are also suitable for continuous agriculture. This is true of much of the Tarai in Nepal, for example, as well as in neighbouring countries such as many regions in Burma, India and Thailand. It is also true of rich volcanic soils in parts of Central America, Eastern and Southern Africa and in several other developing countries. Other forest soils can be modified through various management techniques and investments to make them suitable for crops and pasture, but often at rather high costs. Some forested areas could never be used economically for

sustained cultivation or pasture under foreseeable prices and technologies. This seems to be the case in much of the Amazon rainforest area as well as in several other tropical regions. It was the case of several forested areas in Tabasco and other regions of southern Mexico that have been cleared for agricultural development in recent decades (Tudela et al. 1990).

It is possible to estimate the economic potential under alternative uses and management systems of different forest sites with divergent soil types, topographies and microclimates. Such analyses, however, require projections of yields and inputs as well as rather arbitrary assumptions about future markets and technologies. In most developing countries, realistic silvicultural, agronomic and related data are seldom available for making comparisons of land productivity under alternative uses. Experimental results obtained under controlled conditions can be very misleading unless checked against the actual experiences of peasants and others using similar forest areas over sufficiently long periods to indicate their sustainable productive capabilities in practice. The traditional knowledge of indigenous forest dwellers and cultivators constitutes an important reservoir of information in this respect.

Customary forest dwellers are more aware of most constraints and opportunities offered by their local environment than are outsiders. When peasant cultivators or pastoralists first migrate into unfamiliar forest areas they seldom know how to cope, but they soon learn from those already there and from experience. Moreover, self-provisioning forest communities can be highly adaptable in seizing new opportunities and overcoming obstacles accompanying market penetration into their territories, if given half a chance. The case studies provided several examples. Peasant ignorance and shortsightedness about environmental risks are rarely to blame for deforestation.

For example, the indigenous Kunas in Panama found apparently sustainable alternatives to forest clearance in their development of traditional extractive activities and limited "ecotourism". The same is true of ecotourism that has commenced in several forest reserves in Costa Rica. In each case sustainable forest protection requires a combination of local ecological knowledge, local institutions and perceptions, together with supportive national ones. It also implies an economic and political environment internationally that permits them to thrive.

Where institutions and policies are hostile, situations such as those described in Guatemala arise in which ecologically savvy and motivated indigenous peasants were forced to clear the forest to survive. The destruction of the mangroves in Tanzania's Rufiji district showed how insecure property rights contributed to community leaders acquiescing to overexploitation of available forest resources in response to attractive fuelwood and pole prices in urban markets. In the Brazilian Amazon region, indigenous groups and traditional extractivists understood the constraints imposed by local ecosystems and were not the cause of Amazonian deforestation.

In Nepal's Tarai, the biggest constraint preventing agricultural expansion in the region was endemic malaria. When this was removed in the 1950s, colonization and crop expansion proceeded rapidly. This was an example of a major ecological constraint that was effectively and rather cheaply eliminated; in contrast, the persistence of sleeping sickness is preventing agricultural settlement in large regions of Tanzania. Tarai settlers from Nepal's hills brought with them many sustainable soil and water conservation practices and community institutions. Their traditional farming systems put a premium on tree crops for fodder, fuel, soil stabilization and water retention. They also developed ways in some areas to control riverbank erosion through propagating multiple-use grasses

and many other useful locally specific soil and forest conservation practices (Soussan et al. 1991). Similarly many environmentally benign farming practices were brought to the Tarai by migrants from the adjacent plains of India. Both settler groups had a great deal to learn from the indigenous peoples already in the area.

More powerful outsiders such as state or corporate officials, large-scale commercial farmers, sawmillers, timber merchants and land speculators are usually less sensitive to environmental risks than are poor peasants. This is true even when the outsiders are professionally trained agronomists, foresters or engineers. But social insensitivity, the search for profits and the arrogance of power usually have more to do with the social and ecological damage wrought by these social agents than does their ignorance of ecological constraints.

There is a strong case for public and private development agencies and non-governmental organizations (NGOs) acquiring a better understanding of the ecological and socioeconomic issues that will have to be dealt with if they are seriously to pursue a strategy of sustainable use and management of forest resources. The task is formidable in part because many of the issues are location-specific. Little systematic investigation has been done in developing countries concerning potential yields and input requirements associated with forest management for multiple purposes or with conversion of the land to other uses.

In the Brazilian Amazon region, for example, there was almost no scientifically based information concerning the yield potentials of the natural forests under alternative management systems. In fact little was known about the silvicultural practices that might be used and even less of what they implied in demands for labour and other inputs. The longer term ecological implications of such practices were very poorly understood.

Adequate information is not available about the possibilities and implications of sustainable forest and farm forest management systems under a wide range of ecological conditions. The widespread perception by outsiders that alternative uses of forest lands for agriculture are more attractive than they actually are, can in part be attributed to inadequate data. On the other hand, socially and economically attractive development potentials of strictly protected forest areas are sometimes neglected for lack of good information. But the major reasons that the livelihood concerns of peasants and indigenous groups have largely been ignored by the state and other agencies in their projects to protect or to develop forest areas have to be sought elsewhere. They are essentially issues of political power.⁴

Moving to national and global levels, many of the perceived environmental constraints used to justify proposals for controlling deforestation remain rather

⁴ In addition to neglecting the costs suffered by vulnerable social groups, there has been a tendency in projects to develop forest areas to place little real importance on values to the broader society from forests associated with the preservation of biodiversity, the protection of indigenous cultures, the aesthetic and ethical satisfactions of maintaining unspoiled wilderness areas and the externalities affecting climate, water retention and the natural environment more generally. A large recent literature discusses how costs and benefits could be estimated for environmental and social assessments by treating separately direct and indirect use values as well as non-use values such as options in the future and intrinsic values derived from the existence of the resource. Where markets are imperfect or do not exist, the use of contingent valuation and artificial markets is recommended (Pearce et al. 1989; Serageldin 1993; Dasgupta and Maler 1994). Such cost-benefit exercises present tremendous practical and conceptual problems, some of which will be mentioned later. Among other things, one must question the utility of attempting to use a monetary numéraire to aggregate and compare costs and benefits for social groups and classes that may have very different resources, opportunities, goals and value systems. Decisions affecting forest use are primarily political and not technical. Political compromises and trade-offs have to be worked out among different social actors with divergent interests, values and influence. Little is gained, and much may be lost, for finding political common ground by oversimplifying the multiple dimensions of environmental and social questions through pretending that they can all be meaningfully expressed in monetary terms.

problematic, as was emphasized in the first chapter of *Forests and Livelihoods*. Deforestation contributes to the build-up of greenhouse gases, which may lead to global warming. It also contributes to lessened biodiversity, which in turn may decrease the options for unborn generations. At the same time, climate change resulting from various causes affects both deforestation and biodiversity. More research can help shed light on such issues but definitive predictions are impossible. The major problem is not lack of information, but the incapacity of societies with many conflicting interest groups to act coherently and prudently on the basis of what is already known about the risks and uncertainties involved.

Earlier chapters in *Forests and Livelihoods* have suggested the desirability for donor agencies to require environmental and social impact assessments of projects and programmes affecting forest areas and people. Such studies could be useful in alerting social groups that may be affected about the potential problems, but there is insufficient understanding of ecological and social dynamics to carry them out with accuracy and great confidence. This does not imply that impact assessments should be deferred until better data are available, but rather that project planners and funders should be extremely humble and cautious in their forecasts of outcomes. A reasonable assumption seems to be that vulnerable local groups will be hurt and that they will receive inadequate compensation. Moreover, the indirect negative social and ecological impacts of forest clearance or degradation are likely to be serious and neglected. The burden of proof should be on those proposing the projects instead of on their critics. The Polonoroeste road project of the Brazilian government and the World Bank in Rondônia and the Kondoa land rehabilitation in Tanzania were reviewed in the third chapter of *Forests and Livelihoods*. Both are apparently examples of inadequate prior social impact assessments, as they were ostensibly designed to help local people and to protect the environment. Both in reality contributed to serious ecological and social problems.

Where environmental impact assessments have been made in relation to internationally supported development projects in Central America and Amazônia, they not only lacked adequate basic information, but also tended to neglect longer term social consequences and dynamics even more than ecological ones. These assessments were frequently mere appendages to project design and operation. They were apparently tacked on to conventional project feasibility studies in order to appease environmentalists rather than being integral components influencing all aspects of the project from the very beginning. They often neglected political realities.

Nonetheless even very imperfect social and environmental impact assessments such as these raised important questions. They may contribute eventually to mobilizing the political support required to reform some of the policies and institutions that are generating social polarization and environmental degradation. To the extent those social groups most affected by deforestation, and by forest protection measures, actively participate in impact assessments, there are reasonable grounds to hope that the quality and effectiveness of such exercises will improve. Ecological constraints and opportunities for sustainable forest use and protection are for the most part location-specific. They can be tremendously complex and varied even within given localities. They are never purely, or even principally, ecological in the sense of being determined by natural ecosystems and processes. Ecological constraints or opportunities are socially defined. A better understanding of the ecological issues in protecting forests and livelihoods will not be sufficient to bring about needed institutional and policy reforms, but it could help.

Demographic Change

Deforestation is commonly blamed on population growth and poverty. Taken literally this is a truism. There could be no anthropogenic causes of deforestation if there were no people. The absence of poverty would imply a radically different development style that could be socially sustainable. The case studies discussed in earlier chapters of *Forests and Livelihoods* suggest that the relationships between population dynamics and environmental degradation are much too complex to support reductionist generalizations about cause and effect. Similar conclusions were reached in another study looking into the relationships between population dynamics, environmental change and development in Costa Rica, Pakistan and Uganda (Ghimire 1993).

There was no intense population pressure on available land resources at national levels causing massive deforestation in any of the countries studied. The nearest approach to this Malthusian paradigm was in Nepal's hill districts, but a great deal of good unexploited agricultural land was still available in the Tarai. Much of the Tarai's best potentially productive land was unavailable to those who most needed it for food production because it was in forest reserves and parks. In the other countries, including densely populated El Salvador, there was considerable scope for agricultural intensification using sustainable practices.

In all the case study countries the direct cause of most deforestation was what is commonly called "development". This included the expansion of commercial crops and ranching, commercial timber operations, industrial projects such as mining and hydroelectric reservoirs, growing urbanization, together with land alienation associated with insecure and inequitable land tenure institutions. These processes were greatly influenced by market forces and public policies—including wars in Central America—as well as by demographic trends. Population movements such as in- or out-migrations were important. The pressures of growing numbers of poor peasants on the land were a contributory factor in some regions but not in others. In fact agricultural populations at national levels have apparently been rather stable or decreased slightly during recent years in Brazil, Costa Rica, El Salvador and Panama—all of which were experiencing rapid deforestation, as will be seen later from table 14.1.

In several localities, however, pressures on the forests from nearby peasant populations were becoming intense. This was causing considerable hardship and forest degradation, but not rampant deforestation. These regions included Tanzania's western Usumbaras, many Guatemalan highland Indian communities such as those in Totonicapán, and the hill districts of Nepal just mentioned. The peasant communities had devised various strategies to survive while retaining and protecting forest resources vital for their livelihoods. Where serious deforestation occurred—as in Totonicapán and some parts of Nepal's hill region—it primarily resulted from other causes such as alienation of the communities' forests by the state and other more powerful outsiders.

On the other hand, in Tanzania's delta region destructive deforestation was taking place in response to market forces, deficient definition of land tenure rights and the social disruption that accompanied compulsory resettlement in villages. This happened even though there was abundant agricultural land and a stable population due to out-migration to the capital city. In Mufindi district of southern Tanzania the rural population had doubled in a decade in response to the development of a pulp and paper industry. Poverty had decreased while considerable afforestation and agricultural expansion had taken place.

In-migrations of destitute peasants seeking land for self-provisioning were closely associated with forest clearance in some areas of all the case study countries. Sometimes, however, in-migration accompanied afforestation, as in the southern Tanzanian pulp and paper industrial project area just mentioned. In many Central American areas, workers brought to the forest to cut commercial timber simply stayed to farm and brought their families after the logging concessions terminated. These migrations could not be explained simply by population increases at their points of origin.

Migrations into forested regions disrupt traditional social systems as well as directly leading to forest clearance. In the Amazon region settlers, squatters and gold miners brought devastating epidemics to indigenous groups. Traditional rubber tappers lost their livelihoods when their forests were cleared for pasture by ranchers and speculators. In Nepal's Tarai, the indigenous inhabitants were often reduced to being wage workers on their own lands when these were claimed by more politically and economically powerful migrant groups from the hills (Ghimire 1991a).

One should ask whether the deforestation would slow or halt if population growth simply stopped while other conditions remained more or less the same. The cases reviewed have suggested that, even in the absence of increasing numbers of people, deforestation would continue in developing countries as demographic change is only one aggravating factor among many.

Table 14.1 shows the growth of total and rural populations between 1975 and 1988 for countries in various forest regions of Africa, Asia and Latin America. The same table shows FAO's estimates of annual rates of deforestation during the 1980s and the World Bank's estimates of GNP per capita in 1987 for these same countries. It is readily seen that there is no close correspondence between these indicators of deforestation, population growth and poverty. The data are extremely poor, but it is doubtful whether more reliable estimates would change the general picture. As was shown in the case studies explored in *Forests and Livelihoods*, the matter is too complex to expect to find simple relationships.

When proposing and analysing alternatives for more sustainable development, one has to assume that recent population trends at national levels are going to continue at least for the next few decades. There are many debatable assumptions behind the United Nations' and the World Bank's population projections—even though they are based on sophisticated analyses in each country, taking into account such factors as age structures, fertility and mortality trends, international migration and the expected impact of the AIDS epidemic.⁵ Population projections may be wildly wrong in the long run but, barring catastrophes or massive out-migrations, they are likely to reflect demographic trends at national levels for the next decade or two, as they generally have in the recent past. This does not imply, however, that population pressures will necessarily increase in forest regions. As noted earlier, agricultural populations are actually decreasing in some developing countries, largely as a result of urbanization.

⁵ These estimates suggest that Tanzania's population would grow by one-third during the 1990s and reach 59 million by the year 2025. Nepal's 19 million in 1991 is expected to double by 2025, and Brazil's 151 million in 1991 is projected to reach 224 million in the same period. The Central American populations will probably double between 1991 and 2025, with increases being considerably slower in Costa Rica and Panama than in the other four countries (World Bank 1993).

Table 14.1: Total and agricultural population changes 1975–1988 per capita GNP 1987 and annual rates of deforestation 1981–1985 (population in thousands)

Countries by region	Total population	Percent of change 1975–1988	Agricultural population 1988	Percent of change 1975–1988	Average per capita GNP 1987* (US\$)	Annual rate of deforestation**
<i>Tropical Southern</i>						
<i>Africa:</i>	89,466	51	69,525	41		0.3
Angola	9,458	45	6,678	35	x	0.2
Botswana	1,197	58	773	31	1,050	0.1
Burundi	5,153	37	4,718	35	250	2.7
Malawi	7,878	50	6,060	32	160	3.5
Mozambique	14,851	41	12,212	36	170	0.8
Namibia	1,760	48	645	15	x	0.2
Rwanda	6,754	54	6,186	51	300	2.3
Tanzania	25,426	59	20,454	47	180	0.3
Zambia	7,871	62	5,496	51	250	0.2
Zimbabwe	9,118	48	6,303	36	580	0.4
<i>South Asia:</i>						
Bangladesh	109,632	43	76,588	28	160	0.9
Bhutan	1,448	26	1,319	23	150	0.1
India	819,482	32	520,112	25	300	0.3
Nepal	18,237	40	16,772	38	160	4.0
Pakistan	115,042	53	62,072	38	350	0.4
Sri Lanka	16,825	23	8,753	18	400	3.5
<i>Central America:</i>						
Costa Rica	2,866	45	731	0	1,610	3.6
El Salvador	5,031	23	1,937	-6	860	3.2
Guatemala	8,681	44	4,545	27	950	2.0
Honduras	4,830	56	2,804	41	810	2.3
Nicaragua	3,662	50	1,440	22	830	2.7
Panama	2,322	33	601	-5	2,240	0.9
<i>Tropical South America:</i>						
Bolivia	6,198	41	2,942	22	580	0.2
Brazil	144,428	33	36,994	-10	2,020	0.5
Colombia	30,567	32	8,825	3	1,240	1.7
Ecuador	10,204	45	3,277	4	1,040	2.3
Paraguay	4,039	50	1,956	39	990	1.1
Peru	21,256	40	8,022	16	1,470	0.4
Venezuela	18,757	48	2,126	17	3,230	0.7

Sources: FAO 1987; *World Bank 1989; **FAO 1988b.

Population growth is seldom perceived as a serious problem by peasant cultivators and pastoralists. The same style of development that is generating accelerating land alienation, deforestation and poverty creates strong incentives for the rural poor to have many children. Large families are viewed as a source of badly needed family labour, as

insurance for old age and as potential migrants who could send remittances. High fertility rates in poor rural regions are seldom primarily a result of ignorance leading to unwanted births, but of socioeconomic contexts that provide incentives for raising many children (Bongaarta 1994).

Where population increase has slowed significantly in developing countries, this has apparently been largely due to greater security of livelihood. In most developing countries smaller families seem to follow rather than precede improvements in food security, better health, educational and other social services—including access to family planning, more opportunities for women, better security for the aged and other aspects of social development.

Analyses linking population growth, poverty and deforestation in simplistic linear relationships are not only unscientific but also misleading. Both demographic issues and those of deforestation deserve more serious treatment. Formulation and analysis of alternatives for dealing with deforestation over the next few decades should take the direct and indirect implications of projected population changes into account. A dense population is not necessarily incompatible with approaching sustainable development in which forests are protected, livelihoods of the poor improved and population is eventually stabilized. The institutional and policy reforms required to improve natural resource management can also contribute to slowing demographic growth.

Farming Systems and Economic Structures

Dominant patterns of production, consumption and technology constitute a society's economic structure. Economic structures everywhere are changing rather rapidly from a historical perspective. Changes in production and consumption relationships can be modified purposefully through judicious public policies, including education and research aimed at influencing technology and market forces. Such modifications of economic structures, however, take many years and their effects are widely felt only after decades. Moreover, outcomes of policy interventions may be very different to those intended by their initiators.

Farming systems

Different combinations of farming practices, technologies, social relations, cropping and land-use patterns, product uses, marketing channels, inputs and the like that tend to go together and to reproduce themselves are referred to as farming systems. They reflect both local and wider socioeconomic structures. They mediate interfaces between agriculture and forestry as well as those between rural communities and the wider society.

Complexes of large, capital-intensive plantations producing primarily for export and utilizing permanent and temporary labour constitute a farming system. This system could be divided into subsystems specializing in different crops utilizing divergent technologies and having distinctive labour and market relations. There are numerous peasant and small- or medium-sized holder farming systems that can be quite readily distinguished in a given region or country, each with its own characteristics. Moreover these systems often exhibit common traits, as well as important differences, when compared across different cultural, geographic, socioeconomic and political contexts.

The concept of a farming system, like that of a forest type, is somewhat fuzzy but still useful for generalizing about a complex of agrarian relationships and production

processes that tend to be found together in fairly predictable patterns. It is a handy tool for better extrapolating case study findings to draw broader conclusions. The concept can also be helpful in formulating public policies and assessing their social and ecological impacts.

In developing countries one may find very different farming systems operating side by side. In Central America, for example, indigenous people practising shifting cultivation primarily for self-provisioning, together with some hunting and gathering, are still found in a few isolated forest areas. Indigenous peasant systems of intensive settled agriculture for self-provisioning and sale—in combination with complementary use of forest products—predominate in much of highland Guatemala. These traditional peasant systems of resource management tend to be relatively sustainable and equitable until disrupted by land alienation and other outside interventions. Their relations with nearby large commercial estates are complementary in that they supply the estate owners with cheap labour, but they are highly conflictive because both compete for some of the same natural resources.

Peasants evicted from areas of commercial agroexport production and ranching and who move to the forest frontier are likely to adopt systems of shifting cultivation. These are often combined with some use of externally purchased inputs and with cattle raising for national and international markets. Such hybrid systems tend to be less sustainable ecologically than were the indigenous self-provisioning systems they displaced in the same area. There are also various capital-intensive large-scale, small and medium-sized farm systems that are vertically integrated into export markets. These export-oriented farming systems are associated with a high use of purchased inputs, accelerated environmental degradation and considerable social differentiation.

The social and ecological impacts of different farming systems depend in part on land tenure, markets and technologies; they also diverge according to the principal crops or products. Extensive cattle ranching systems tend to be particularly damaging for forests because they require clearance of large areas for pasture. Cotton, banana and sugar producing systems are likely to be more harmful environmentally than those producing trees and shrub crops such as coffee, tea or cocoa.

The dynamics behind the expansion of each of these farming systems into forest areas tend to differ. Peasants principally oriented toward self-provisioning often respond to the alienation of their lands by overexploiting remaining soil and forest resources in order to survive. Commercial farmers, on the other hand, respond more directly to market incentives and to government or transnational corporation policies when they exploit natural resources unsustainably. Moreover, given their different linkages with national and international markets, participants in divergent farming systems have different access to capital and modern inputs. They also have different incentives and disincentives for continued use of traditional farming practices. Traditional self-provisioning systems were frequently highly productive as well as being ecologically more benign and sustainable than are many of the “modern” systems using chemical inputs, selected seeds and mechanization that are promoted by transnational corporations, the state and international agencies.

In the hill regions of Nepal, peasants face a shrinking land base per family that is associated with population increase and land alienation for national parks and forest reserves. Most peasant families now cultivate extremely small parcels of land. Deterioration of soil and forest resources due to erosion and overexploitation results in additional loss of crop land. Peasants have responded to this crisis by intensifying their

agriculture through more terracing, stall feeding of cattle, adopting agroforestry practices and reducing their consumption of fuelwood, as can be seen in the third and fourth chapters of *Forests and Livelihoods*. Some migrated to forested areas of the Tarai, to cities or to India. Peasants have not widely adopted “green revolution” technologies employing purchased external inputs, mostly because they cannot afford them.

On the other hand, export-oriented peasant farming systems are integrated into markets of industrial countries. This is the case of cocoa and coffee producers in Côte d’Ivoire, peanut and cotton producers in Senegal, and peasant systems producing coffee, fruit and vegetables for export in Central America. Such export linkages enabled peasants to purchase modern inputs such as chemical fertilizers, pesticides, herbicides, improved seeds and some machinery when price relationships were favourable. These inputs often made it feasible to increase both production of food crops for self-provisioning and that of export crops simultaneously. But when prices turned against producers, both export and food crop production suffered as farmers could no longer afford the purchased inputs. This often obliged the peasant producers to resort to shifting cultivation in forest areas. Moreover indiscriminate adoption of modern inputs such as insecticides and chemical fertilizer in these farming systems was frequently extremely damaging ecologically and to health. Heavy use of pesticides in Central America by large producers of cotton and bananas—and more recently by peasants producing flowers, fruits and vegetables for export—offers cautionary examples.

Cotton production in Latin America, unlike in most of West Africa, is almost exclusively controlled by large entrepreneurs using imported machinery and inputs. When international cotton prices were favourable there was rapid expansion of areas planted. This uprooted peasant self-provisioning systems previously occupying these areas. Many peasants went to the forest frontier. When cotton prices fell and the large producers ceased to plant cotton, however, the land seldom reverted to food production. Instead it was used for sorghum for animal feed, oilseed production or sometimes held in livestock pasture waiting for an eventual upturn in cotton export prices.

In the absence of alternative employment opportunities, or of access to better agricultural lands, farming systems in developing countries will have to become more productive and labour absorptive in order to be sustainable. This could help reduce pressures on remaining forests, where steep slopes and fragile soils are being cleared to make way for unsustainable agriculture. Intensive farming systems that produce mainly for self-provisioning and generate little cash income cannot depend on purchased external inputs such as chemical fertilizers and insecticides. Peasants producing for export markets may still find the use of “green revolution” technologies to be prohibitively expensive when terms of trade are unfavourable. Also, even in industrialized countries, externalities such as pollution associated with modern high-external-input farming systems are beginning to take their toll. Indeed, many critics question both the social and ecological sustainability of the modern farming systems now being promoted by public policies and transnational corporations in developing countries (Gadgil and Guha 1992).

Some useful research is being done on developing low-external-input, sustainable farming systems and agroforestry systems suited to various ecological and socioeconomic contexts. Much of it is being sponsored by NGOs. There are many centres and networks doing valuable work and promoting research along these lines—such as the Information Centre for Low External Input and Sustainable Agriculture (ILEIA) in the Netherlands, which publishes a useful newsletter. The International Institute for Environment and Development (IIED) in London, the Ecodevelopment Centre in Paris, the Society for

Development Alternatives in New Delhi, some programmes of FAO and of various centres affiliated with the Consultative Group on International Agricultural Research (CGIAR), and numerous others. But the effort is only a fraction of what is required. The United States Department of Agriculture's vast research budget, for example, allocated less than 1 per cent to work on low-input sustainable agriculture in 1992 (Dahlberg 1993). This was in spite of the fact that this issue should be of as much concern to rich countries as to poor ones.

There are numerous constraints and few opportunities at local levels for adapting and improving indigenous agroforestry and farming systems in poor countries in order to make them more productive and sustainable. Improved indigenous-based systems could contribute to development styles that protect forests and livelihoods, if other conditions were favourable. This is a big if. Farming systems are only a minor component of an alternative development style. The peasants' land tenure would have to be secure. Sustainable production systems in forest regions would have to be more attractive and profitable for peasants and other forest users than the other alternatives available to them. There would have to be a supportive institutional and policy context that rewarded those using sustainable practices and that penalized those who did not. Alternative employment opportunities in non-farming activities would be needed for those whom these improved production systems could not accommodate. Otherwise they would soon become as unsustainable as the systems they replaced.

Economic structures⁶

The emergence and maintenance of sustainable agricultural and forestry systems depend crucially on their being integral parts of broader socioeconomic and political structures nationally and internationally that are conducive to sustainable development more generally. Even where traditional systems are preserved as museum pieces, so to speak, this implies some kind of integration with the wider society. To hope that improved farming systems by themselves can lead to sustainable development is, to use a hackneyed metaphor, to expect the tail to wag the dog.

Where market opportunities arise to exploit forest resources unsustainably for short-term profits, entrepreneurial outsiders are going to take advantage of them sooner or later with or without the consent and cooperation of local communities in most political contexts. Moreover, many poor peasants and indigenous forest dwellers aspire to enjoy the conveniences and other perceived benefits from getting some cash, even at the expense of their forests. They hope to get labour-saving machinery, chemical inputs, manufactured consumer goods and eventually "luxuries" such as televisions and private cars enjoyed by the rich in their own countries and by their farmer and worker counterparts in the industrialized ones. Indigenous farming and forestry systems in developing countries are vulnerable to the triple pressures of the search for profits by outsiders, the consumerist aspirations of the poor still struggling barely to survive and the drive by state and private "developers" to "modernize" "backward" social groups. A context of strong and well-designed popularly based policies and institutions nationally is essential for improved indigenously based production systems to prosper in forest regions.

⁶ By "economic structure" we mean the input-output matrix of a region, country or other economic unit. It embodies the complex of final and intermediate demands, production processes and technologies of the nation or other unit being analysed.

Local livelihood systems everywhere are becoming increasingly influenced by the production and consumption patterns (with the technologies these imply) that are dominant in rich industrialized countries. These industrial systems dominate national and international markets. They largely determine what is available commercially in the way of consumer goods, production inputs, capital goods and technologies. This is the case even in remote rural areas.

Agroforestry systems in poor regions are increasingly linked to their national and to the global economy. Most of the effective demand for increased production of commercial timber, pulpwood, export crops, cattle and minerals from forest areas in poor countries originates in rich industrial areas—so, too, do the production technologies and consumption patterns driving market forces. The rich industrial countries, with only one-fifth of the world's population, consume 80 per cent of the world's fossil fuels and generate similar portions of noxious pollutants and greenhouse gases (*E & D File* 1993).

This kind of development is not sustainable. If its “benefits” continue to be enjoyed by only a small minority of the world's people, it is socially and politically untenable. If the vast majority of the world's growing population were able to adopt present-day rich-country production systems, technologies and lifestyles, the global ecosystem could not support the throughput this implies (Goodland and Daly 1993). The rich will have to take the lead in developing production-consumption systems that are socially and environmentally sustainable.

One proposal for inducing environmentally friendly technologies and economic structures has already become part of the conventional wisdom of the development establishment. This is to remove “subsidies” for the production and consumption of natural resources that are being depleted or degraded, such as fossil fuels and tropical timber. The idea is that the prices of these natural resources to consumers should be high enough to cover the costs to society implied by externalities as well as those of the eventual substitution or renewal of the resource.

This is much easier to recommend than to accomplish. The technical issues are dauntingly difficult. For example, there is wide scope for disagreement about what constitutes a subsidy and what a long-term social or economic investment. Moreover the vested interests in maintaining the status quo are extremely powerful. While the rich benefit most from overt and hidden subsidies that are encouraging environmental degradation, most societies are so structured that the non-rich would have to pay the immediate costs of policies such as energy taxes designed to make the prices of natural resources reflect their true social values. In any case, the most fundamental issues of social and environmental sustainability simply cannot be dealt with adequately through pricing and market mechanisms. Profound reforms of social institutions, policies and goals are a prerequisite.

A seldom-questioned axiom behind most discussions of deforestation is that a briskly growing economy nationally and internationally will facilitate solutions of social and environmental problems.⁷ If poverty is a principal cause of undesirable deforestation, as is widely alleged, greater wealth should alleviate it. But the poor consume very little compared with those who are better off. The worst deforestation in developing countries has usually occurred during periods of rapid economic expansion, while at the same time,

⁷ This axiom is being increasingly questioned, however, even by a few well-known economists. For example, the economics Nobelists Jan Tinbergen and Trygve Haavelmo wrote “continuing with the prevailing growth path is blocking (global) chances for survival...The highest priority is to halt further production growth in rich countries” (cited in Daly and Goodland 1993).

in many socioeconomic contexts, the livelihoods of the rural poor are likely to be eroded due to land alienation and loss of employment. Land-grabbing and labour-saving mechanization both advance most rapidly during periods of brisk economic growth.

Nonetheless it would be shortsighted to recommend an end to economic growth to save the forests. Instead, as emphasized throughout *Forests and Livelihoods*, the content and meaning of economic growth have to change in practice. Production, consumption and technologies associated with industrialization will have to become more socially equitable and environmentally friendly. These political issues are examined further in the volume's concluding chapter.

Proposals to reform national accounting systems to reflect capital losses attributable to natural resource depletion, and to show the costs for society of externalities such as air, water and soil pollution, make a lot of sense. A few rich countries such as France, the Netherlands and Norway are already experimenting with such an approach through satellite environmental accounts complementing their standard accounting systems. Recently published estimates along these lines for Indonesia—considering only the depletion of forests, soils and oil—showed that recent rates of growth would be sharply reduced by using these criteria (Repetto et al. 1992; Munasinghe 1993).

Numerous questions arise in considering such accounting reforms. On the practical side, one should recall the notional nature of existing estimates of national product in poor countries. The difficulties of placing reasonable values on the soil, water, forest and other natural resources being depleted are formidable. In most developing countries there are no reliable forest inventories or even credible rough estimates of how much net forest depletion is really taking place. Assigning prices is necessarily arbitrary even if volumes and qualities could be ascertained.

In any case the reformed accounts need not be limited to natural resource depletion. The costs of externalities such as water and air pollution could be included as a debit. This at least would contribute to reducing the present anomaly of environmental clean-up costs being considered a net addition to national product. The same principles could be extended to “human resources” so that national accounts would reflect the costs of hunger, lack of education, and so on.

There is no practical way environmental accounting could become an integral part of national accounts at present for most developing countries. Environmental accounts cannot be expected to have much impact on policy until they are adopted in developed countries with better data and shown to be useful. Subsequently, they could become a part of the national accounting norms of international agencies and little by little extended to developing countries. International financial and aid agencies could begin to use them in assessing development projects and loans. Until these principles are reflected in tax codes and in the accounting practices of banks and other business corporations, they cannot be expected to influence natural resource management decisions directly.

The emergence of socioeconomic systems that are sustainable is going to require a great deal more in the way of social and political reform than improved accounting criteria, although these could sometimes help.⁸ The real question is what social forces could bring about such changes.

⁸ These issues are discussed further in the final chapter of *Forests and Livelihoods*. Efforts to develop workable methods of environmental accounting should be encouraged. They have a tremendous educational potential and illustrate in financial language what has already been said many times in common speech—namely, that rapid economic growth rates are often misleading because of environmental and social costs.

Social Relations and Land Tenure

Property relations are fundamental in determining who loses and who benefits during modernization processes incorporating reluctant peasantries into a profit-driven expanding world system. They are also crucial in determining how forests are used and who gains from mining the forest or otherwise destroying it. Land tenure influences who could benefit from managing forest resources on a sustainable basis and who would not. These are the principal reasons for devoting this section to a discussion of land tenure in relation to deforestation and sustainable development.

Property in land (or anything else) is essentially a subset of social relationships sanctioned by custom and law. Landownership (and other forms of land tenure) implies a bundle of institutionalized rights and obligations. These institutions regulate relationships among individuals, families, social groups and classes, corporate entities, communities and the state in their access to land and its products, including the rights to anticipated future benefits. Landownership may include rights to subsoil resources of minerals and water or these may require separate tenures. The same is true for trees. Also, in many societies control of land confers control over people living on it.

Land tenure systems are frequently classified as being private property regimes, common property, state property and non-property (open access) (Bromley 1989). This typology is useful for some purposes but less so for others. One is dealing with a multidimensional continuum of social relations with respect to land that can assume an infinite number of forms in practice.

Evolution of land tenure systems

In agrarian societies access to land and water is essential for self-provisioning and hence for survival. Land tenure systems evolved to provide everyone with an access to livelihood. These land systems included complex rules concerning cultivation, rights to hunting, gathering, fishing, grazing, fuelwood collection, tree harvesting, the sharing of produce, rights of transit, the rights and obligations of hired or indentured workers as well as rules concerning inheritance, transfers and the admission of outsiders. Moreover the rules were often different for distinct land categories. Taxes, fees and shares often varied according to the physical characteristics of the land, its accessibility, and the availability of water and infrastructure. They also depended on the customary land tenure categories such as whether land belonged to the community, a religious order, the clan, the king, lord or chief. It is a romantic myth that such traditional societies had no concept of property in land, but their concepts were different from those in modern industrial states.

As can be seen in the second chapter of *Forest and Livelihoods*, practically all pre-capitalist societies had been incorporated into the world system by the twentieth century. Agrarian societies became increasingly socially differentiated, unstable and disrupted. This process often accelerated after former colonies became independent states governed by elites bent on rapid modernization.

National legislation concerning land tenure frequently had little to do with customary social norms. Colonial administrations superimposed land laws to suit their own goals, just as previous dominant groups imposed their norms on still earlier settlers. When former colonies became nominally independent, the colonial legal superstructure was usually retained with several modifications. In some countries—whether they had been colonies or not—completely new legal codes regarding land tenure were adopted, often largely copied from some rich-country model.

Not only did legal norms contradict traditional ones, but the new national legal systems concerning property relations were also internally contradictory even when enshrined in constitutional principles. Moreover, they were frequently altered through constitutional amendments, legislation, decrees and judicial or administrative interpretation in order to solve pressing political or socioeconomic and financial problems faced by one or another of the state's powerful support groups. The result was a hodgepodge of traditional tenure rules, on the one hand, and of national legislation, on the other. Not only were national legal codes subject to frequent change but they were usually also far removed from socioeconomic and political realities on the ground. Which rules prevailed in a given place and time depended on particular circumstances. In specific cases, the adjudication of land disputes invariably reflected socioeconomic and political power configurations and alliances of the moment. This caused great insecurity of tenure, which has contributed to overexploitation of soils and forests.

Agrarian structures

Land tenure systems everywhere are a central component of the complex of institutions that regulate agricultural production and distribution, and rural life more generally. Where the control of good agricultural land is concentrated in a few hands, other institutions of the agrarian structure—such as those regulating credit, markets, rural infrastructure, access to education, information and new technology—are likely to be similarly polarized. Public policies in general will show the same bias favouring large landowners while neglecting the vast majority who are landless or nearly landless. The pattern of control of land is a good indicator of agrarian structure in most countries.

While many of the social and environmental impacts of commercialization and modernization diverge in different agrarian structures, the tendency for small cultivators to use their land more intensively than larger ones seems to hold in practically all of them. Small cultivators must use their scant land resources and abundant family labour as intensively as possible in order to survive, while large holders in the same area will commonly use their plentiful and usually better quality land resource more extensively while economizing in the use of labour (Dorner and Thiesenhusen 1992; Barraclough 1973). This implies that, as a general rule, agrarian systems in which land is more or less equitably distributed among those cultivating it will be able to employ more families productively for a similar level of output—while using less capital and external inputs—than will systems in which the control of land is highly concentrated.

There is wide agreement among students of agrarian issues that a well-functioning land tenure system should provide security of tenure for its participants. It should enable them to gain adequate livelihoods and promote productive and sustainable use of the natural environment. In addition, tenure relations should be perceived by the society's members as being sufficiently just and equitable for the system to have a certain long-term legitimacy.

It was shown in the second chapter of *Forests and Livelihoods* how colonial penetration altered traditional agrarian relations in developing countries. These changes were least profound in southern and eastern Asia where, except for plantation enclaves, traditional clientelistic small cultivator systems remained dominant. In Latin America and the Caribbean, export-oriented plantations and other large estates worked by slaves or other non-free labourers were the origin of the region's polarized bimodal agrarian structure. In sub-Saharan Africa, large European commercial farms became dominant in some places, giving rise to structures similar to those in Latin America, but customary

communal land tenure systems remain important in much of the region. Customary African tenure systems show considerable vitality in many areas, but they are extremely vulnerable because they are subordinate to new nation states whose laws seldom protect customary land rights. There can be little security of tenure when customary land rights are threatened by external agents allied with the state, as these outsiders are not subject to effective social sanctions by local communities.

Generally, customary communal agrarian systems are more egalitarian in the distribution of benefits among local community members than are those based on transferable individual property rights. Small cultivator clientelistic systems—even when accompanied by considerable landlessness—offer some minimal security for most community members but inequalities tend to be considerably greater than in customary communal land systems. Bimodal large estate systems generate the greatest social inequalities. This helps explain why serious poverty and undernutrition in relatively high-income and urbanized Central America and Brazil is as severe in rural areas as it is in low-income Nepal or Tanzania.

On the other hand, most forest land in all three agrarian structures is legally owned by the state. The governments of developing countries seldom have the political imperative to protect these state-owned forest lands or to manage them sustainably. Even if they do, they usually lack funds and administrative capacity. This helps to explain why deforestation processes in different agrarian structures exhibit close similarities.

Land reform

Security, equity and participation are the essential attributes of any land tenure system conducive to sustainable development.⁹ This applies to non-forest lands and also to the forests. Where land tenure relations in non-forest areas are insecure, inequitable and autocratic, peasants are soon expelled during agricultural “modernization”. Many invade forested areas in order to survive. Where land tenure relations in forest areas are of a similar nature, there are few incentives to manage either farms or forests on a sustainable basis. Moreover, where access to land is skewed and exploitive, land tenure relations are a source of political instability and social tension. They are often perceived by modernizing elites as an obstacle to development. Modernizing elites and land-poor peasants often form temporary political alliances to push for reforms. As a result, land reforms of one kind or another have taken place in several developing countries and there are increasing pressures for reform in many others.

In countries with highly inequitable tenure systems, such as Brazil or Guatemala, land reform is clearly a prerequisite for dealing with deforestation in an effective manner. Recent assertions that in Guatemala security of tenure without land redistribution would be sufficient for promoting sustainable rural development fail to understand the dynamics of social change in that unfortunate country (Southgate and Basterrachea 1992). There can be no secure property rights for anyone as long as 80 per cent of the rural population—mostly Indians—is landless, or nearly landless, and living in extreme poverty under severe military repression and without livelihood alternatives. Meanwhile

⁹ Generalizations about the advantages and disadvantages of private property, common property, state property and other tenure forms have to be bounded by specific historical situations. Abstract analyses and comparisons lead nowhere if one wants to understand what role land tenure institutions play in concrete contexts of place and time and what might be done to improve them.

2 per cent of the rural families, who are mostly whites or *ladinos*, control over two-thirds of the productive agricultural land, much of it extensively used or dedicated only to agroexports (Barraclough and Scott 1987).

The kinds of land reform measures undertaken have to be adapted to particular circumstances. These include what is politically possible. Land reform in Brazil, if it occurs, would probably be quite different from a reform in Guatemala.

A review of many land reforms undertaken throughout the world during the last half of the twentieth century points to rather sobering conclusions. First, profound redistributive land reforms are only possible in special political circumstances. When they do occur they are sometimes accompanied by continued undesirable deforestation, as is illustrated by the Nicaraguan case discussed in the third chapter of *Forests and Livelihoods*. Second, the political mobilization, the autonomous organization and the ongoing active participation of peasants and rural workers are necessary for maintaining any gains made. Unless the landless and near landless, who should be the principal beneficiaries of any real reform, are organized they will seldom be seen by the state and other politically powerful groups as potential allies or opponents whose interests have to be continuously taken into account. Land reforms are all too easily hijacked later to benefit other groups in society. Land reform, even more than most other social change, implies a fundamental restructuring of social relationships in the whole society and hence of political and economic power. This can never be brought about merely by legislation or decrees. It has to have a solid social and political base (Barraclough 1991a).

Even where profound redistributive reforms are not possible politically, it is frequently feasible to introduce improvements in land tenure institutions that could help in eventually moving toward more secure, equitable and participatory land systems. Modest piecemeal measures may contribute toward strengthening political pressures for more profound social changes. These marginal improvements in agrarian, forestry and associated institutions should not be neglected, when the opportunity arises to implement them, with the excuse that they are insufficient to deal with the underlying issues.

For example, the proposals mentioned in the fifth chapter of *Forests and Livelihoods* for implementation of ecological zoning of land use in Amazônia in Brazil, and the creation of extractive reserves, are obviously inadequate to make much impact on either destructive deforestation or on rural poverty. But if they were to promote the active and democratic participation of the local populations most affected in planning and implementation, they could lead to improvements in natural resource management and in peasant livelihoods in these areas. They might also contribute to a dynamic of deeper and wider social change later. On the other hand, if they are top-down projects planned and administered from capital cities or distant offices, they will probably have little if any positive effects.

In the same vein, legal recognition of customary communal tenure rights could be helpful in much of sub-Saharan Africa as well as in other regions where these systems still prevail. The same caveats mentioned above about democratic popular participation apply. Such reforms could make an important contribution toward protecting forests and livelihoods (Colchester and Lohmann 1993).

One should inject a note of realism. No matter how well organized minority groups of indigenous people may be, they will seldom be able to prevent government-sanctioned invasions of their forests without allies who are politically powerful nationally. There

would have to be radical social and political changes in states that do not respect basic civil and human rights.

Local-level organization by the hitherto excluded is necessary for reforming land tenure in ways that benefit indigenous groups, poor peasants and landless workers, but it is not sufficient in itself. Powerful local and national interest groups will vigorously oppose reforms of land tenure relationships. Their resistance will often be supported by international interests. One only has to recall the role of international interference in reversing land reforms in Chile, Guatemala and a great many other countries. In some countries, however, such as Japan, South Korea and Taiwan, international pressures contributed to radical redistributive land reforms.

Providing clear and equitable rights to land is fundamental for sustainable development whether the formal property regime is one of private, communal or state ownership. A land policy change that would be particularly helpful in many countries is to cease treating forest use of land as being inferior in social utility to its use for cultivation or pasture. What land use is preferable depends on particular social goals, specific contexts and capabilities and much else. An a priori assumption that forests constitute an inferior land use to agriculture, however, is not helpful.

In this respect, land-use planning and zoning could play a crucial role if sufficiently decentralized and genuinely participatory. Tax reforms that oblige owners of larger than subsistence plots to pay rates based on the commercial value of their lands could be a powerful instrument for making zoning toward socially desirable land-use objectives effective. Speculators or other large holders would have to pay taxes close to rental values based on the productive capacity of the land. If the land were used for purposes other than the socially sought ones, it could be taxed at higher rates in order to discourage non-sustainable uses. Cooperatively or communally held lands could be taxed on the same principle, the tax approaching rental values on amounts of land above the self-provisioning needs of the real participants. A combination of ecological zoning, tax reform and assistance to potential land reform beneficiaries in obtaining access to credit, markets and appropriate technologies could be very effective in some circumstances.

But there are numerous difficulties. Land taxes tend to be confiscatory if applied to subsistence peasants—which is why they should be progressive with exemption from taxes of land needed for survival. Local and national power structures are usually heavily weighted in favour of large landowners and other elites, enabling them to evade land taxes. Revenues can be wastefully or corruptly used. Centralized administration of land taxes requires cadastral surveys and continuous adjustments for inflation as well as for other changes in land values. These measures are usually out of the question in poor countries. Decentralized participatory administration is necessary for success. This is seldom feasible in polarized local power structures as it implies democratic popular participation in administering the tax and deciding on priorities for using the revenues as well as for using the land itself.

Land tenure reform implies changes in social relations throughout the whole society. “In the last analysis, there may be no alternative to the efforts of a reformist state and a reinvigorated civil society in which the excluded can make their voices heard” (Stiefel and Wolfe 1994:205). But international relations will also have to be reformed. Security of tenure at local levels is elusive in a global society where the rule of the strongest overrides a rule of law. The land tenure relations stimulating deforestation were in many respects different in Amazônia, the Central American countries, Nepal and

Tanzania. But in some ways they were similar. The interests of the strongest were not subordinated to a rule of law, and the voices of the excluded had not been heard.

Market and Policy Failures

This section reviews a few conceptual and practical problems in attempting to apply cost-benefit analysis to deforestation issues. This approach has been much in vogue during the last decade with many environmental economists and in organizations such as the World Bank and the World Resources Institute. Throughout *Forests and Livelihoods*, we have argued that the political and institutional issues are much too profound to be subject to technocratic solutions. National and international policy issues and dilemmas that have to be confronted in dealing with deforestation are discussed further in the volume's concluding chapter.

Markets cannot operate in a political vacuum, nor can societies survive without markets of some kind. Up to half the GDP in modern industrial states, and more than one-fifth in most developing countries, passes through state budgets. This has a far from negligible effect in directing market forces. States influence markets through trade, investment, monetary, fiscal and other macroeconomic policies. They provide the legal framework and regulations for economic activities and social relations. Markets and policies are too closely interrelated in their impacts on land use and incomes to be treated separately in their linkages with forest clearance.

Economists frequently attribute undesirable deforestation to "market failure" or "policy failure".¹⁰ The assumptions are that with good information perfectly competitive markets would allocate resources most efficiently. The conflicts between land use for forests and for other purposes would be resolved by economic actors attempting to maximize their profits in response to prices that reflect relative scarcity now and anticipated in the future. In the same way, market forces would signal the optimum modes of forest exploitation.

A market failure occurs, according to conventional wisdom, when monopolies or oligopolies charge non-competitive prices, resulting in inefficient resource allocation. Similarly, faulty institutions or poor information may cause markets to reflect erroneously anticipated supplies and demands. Markets may also fail to take into account the costs and benefits of externalities and of non-market values. Downstream pollution, acid rain, the greenhouse effect, and the contribution of forests to clean air and water would be typical externalities. Other costs and benefits deemed important by those making or sponsoring the analysis, such as "option values" (values that do not exist now but that may in the future) and aesthetic enjoyment of forests would be considered non-use or extra-market values.¹¹

A policy failure is said to occur when political institutions and decisions prevent markets from allocating resources efficiently according to economic criteria. For example,

¹⁰ World Bank 1992; Muzondo et al. 1990; Pearce 1991; Pearce et al. 1989; Dasgupta 1982.

¹¹ The recent abundant literature of "environmental economics" is somewhat confusing in this respect as its practitioners have yet to standardize their terminology. A common thread is that, while environmental economists recognize the contribution of other disciplines such as ecology, sociology, anthropology, philosophy and political science, they believe that the superior explanatory power offered by the neoclassical economics paradigm concerning social behaviour provides the best framework for focusing the insights of other disciplines on issues of development and the environment. Many practitioners of other disciplines suspect that the metaphysics of their own field may be as good as that of economics for this purpose.

subsidies or tax breaks for converting forest land to pasture, as was the case in Brazil as of 1993, are considered a policy failure. Making forest clearance for agriculture a requirement to obtain a legal land title and hence institutional credit is a frequently cited example.

Another policy failure that is often mentioned in the literature is when governments severely tax or prohibit the exportation of unprocessed logs in order for the timber to be available for domestic wood processing industries at less than competitive world prices. This is believed by some analysts to have recently encouraged overcutting of forests as well as the uneconomic conversion of forests to farming in Indonesia, Malaysia and many other tropical countries. This is because domestic timber prices are kept low, thus “artificially” stimulating demand for timber and also for cheaper forest land to clear for other uses. It also allegedly encourages investments in inefficient domestic forest processing industries, leading to overcapacity in relation to future sustainable timber supplies. According to this analysis, these industries’ overcapacities will stimulate further undesirable forest clearance in the near future (Vincent 1992; Repetto and Gillis 1988).¹²

This market and policy failure approach can be useful in some circumstances. It helps to bring out some of the hidden economic costs accompanying externalities, monopolies and many superficially benign public policies. Like all forms of economic cost-benefit analysis, the approach can be helpful for comparing alternative projects for reaching a concrete goal in a particular context. It is most widely applicable in developed industrial countries. Even there, it obscures many controversial political issues when comparing projects designed to reach different goals, such as improved education versus an improved highway system or a safe sustainable water supply. It has numerous much more serious conceptual and practical limitations for analysis of environmental issues in developing countries.¹³

The implicit assumption that price relationships in world markets offer the best guide for resource allocation in a particular country with a government attempting to stimulate sustainable real development is not tenable theoretically. In practice there is often little a small weak state can do about this. In many countries a major part of economic activity including most foreign trade escapes state regulation. The rapid expansion of coca production at the expense of tropical forests in Bolivia and Peru is an example of government impotence in countering what many regard as an undesirable resource allocation in response to international markets.

Any attempt to quantify the social costs and benefits associated with deforestation in monetary terms is doomed to be arbitrary. It forgets that poor people in developing countries have practically no impact on national and international markets, except for

¹² There is considerable scope for disagreement among economists about what constitutes “dynamic efficiency”. Indonesia’s “inefficient” policy of banning log exports helped enable it to become one of the world’s leading plywood producers and exporters in a very short time. Other policy failures could be mentioned that are more damaging to people and the environment, such as wars and the devotion of an important part of the world’s resources to armaments.

¹³ Two rigorous and respected analysts of environmental economics have apparently recognized the artificial nature of the distinction often made between policy and market failures. In a recent publication they lump the two together, as we do here, as “institutional failures” (Dasgupta and Maler 1994). Actually, by referring to “failure”, analysts introduce their normative bias by assuming that markets and policies would have protected forests and livelihoods if they had not failed. This view seems rather ahistorical. A large part of environmental degradation and human misery occurring in the past has been a consequence of policies succeeding in doing what those who made and implemented them intended them to do. In this respect, it could be useful to distinguish between (i) policy failures, when they fail to do what they were expected to do; (ii) policy perversities, when they have unintended perverse consequences; (iii) policy hypocrisies, when policies ostensibly have one objective but really have a hidden contrary one; and (iv) policy absence, when benign neglect in reality results in social or environmental degradation.

contributing to depressed wages in some sectors. It assumes that well informed producers and consumers are operating in competitive markets on more or less equal terms.

In the real world, consumers and producers are members of very unequal classes, social groups and nations. They have different resources and information. Markets are segmented, imperfect and manipulated. One has to be extremely optimistic to believe that in these conditions global markets somehow generate price relationships that indicate better than any others for every country the value to society not only of trinkets and luxuries, but also of the basic requirements for survival, the pursuit of happiness and the future of countless species. Such an approach also necessarily assumes that values of different people, social classes, ethnic groups and cultures can be reduced to the same common denominator. It imposes the commercial values of the capitalist world economy on everyone, regardless of their beliefs and needs.¹⁴

The notion that satisfactory solutions can be reached through market mechanisms for resolving the conflicting interests in the access to forests is naive. Those whose very survival depends on their continued access to land and forests lose everything if they cannot protect their interests in the market. Those who desire to use the same land and trees commercially for greater short-term profits can as easily find excuses to dispossess subsistence farmers with no alternative means of pursuing their livelihoods in a fully marketized economy as in any other.

It seems even more utopian to hope that monetary valuations and compensations can lead to solutions of the national, ethnic and class conflicts over access to land.¹⁵ Land conflicts and the passions they generate have done much to shape history. Conflicting interests can only be resolved satisfactorily for all parties through the market when participants perceive they have some influence in bargaining and share similar values about what is being exchanged. The resolution of most social conflicts requires political negotiations and interventions.

Having made these caveats, there is often little alternative in discussing policies affecting deforestation than to talk about economic costs and benefits, illustrating these with assumed market prices. It is the language business and political leaders usually best understand. The same is true for most groups moulding public opinion, especially in the rich industrialized countries. The serious limitations of this technocratic approach should be kept in mind. Markets can be excellent servants in helping societies to approach goals of sustainable development, but they make poor masters. They need to be guided by appropriate policies and institutions.

Market forces and public policies are social products as are land tenure and other institutions, and as is demographic change. All are interdependent. Nonetheless policies remain singularly important.¹⁶ They are the principal means by which social actors can purposefully influence what happens. They help shape both institutions and market

¹⁴ Using standard accounting methods, one wealthy tourist contributes more to the Nepalese or Tanzanian economy in a month than 100 or more poor peasants may produce in a year. Using the logic of cost-benefit analysis, it would be economically rational to dispossess and "compensate" several thousand peasants to attract a few foreign visitors and investments in tourism. A problem is that displaced peasants will seldom be adequately compensated for their loss of livelihood, nor can they be in many situations.

¹⁵ Conflicts over land between Jewish settlers and Palestinians in the occupied West Bank, and between Serbs, Muslims and Croats in former Yugoslavia are other examples.

¹⁶ By policy we mean the purposeful course of conduct of a particular social actor. Public policy refers to the line of governmental action (usually but not necessarily the nation state) in relation to some special issue. Policy has to do with conduct and courses of action, not rhetoric.

forces. They are not only a social product but also a social instrument used by organized interest groups to pursue their worldly goals.

The principal message of this chapter is simple. In developing countries there are many obdurate constraints and few opportunities at local levels for using forests sustainably and equitably. Institutions and policies have to be reformed in order for local-level constraints to be relaxed and for theoretical opportunities for sustaining forests and livelihoods to become practical possibilities. Deforestation issues have to be confronted simultaneously at local, national and global levels.

References

- Barraclough, S. 1991a. *An End to Hunger? The Social Origins of Food Strategies*. Zed Books, London.
- . 1973. *Agrarian Structure in Latin America*. Lexington Press, Lexington MA.
- Barraclough, S., and K. Ghimire. 1995. *Forests and Livelihoods: The Social Dynamics of Deforestation in Developing Countries*. Macmillan Press, London.
- Barraclough, S., and M.P. Scott. 1987. *The Rich Have Already Eaten: Roots of Catastrophe in Central America*. Transnational Institute, Amsterdam.
- Bongaarts, J. 1994. "Population policy options in the developing world." *Science*, Vol. 263, No. 5148, pp. 771–776.
- Bromley, D.W. 1989. "Property relations and economic development: The other land reform." *World Development*, Vol. 17, No. 6, pp. 867–877.
- Colchester, M. and L. Lohmann (eds.). 1993. *The Struggle for Land and the Fate of the Forests*. World Rainforest Movement, Penang; The Ecologist, Dorset; and Zed Books, London.
- Dahlberg, K.A. 1993. "Response." *Science*, Vol. 259, No. 5092, p. 163.
- Daly, H. and R. Goodland. 1993. *An Ecological Assessment of Deregulation of International Commerce under GATT*. Draft Environment Working Paper. World Bank, Washington DC.
- Dasgupta, P. 1982. *The Control of Resources*. Basil Blackwell, Oxford.
- Dasgupta, P., and K.G. Mäler. 1994. *Environmental Resources and Economic Development*. Paper presented at International Colloquium on New Directions in Development Economics: Growth, Equity and Sustainable Development, 9–11 March. SAREC, Stockholm.
- Dorner, P. and W.C. Thiesenhusen. 1992. *Land Tenure and Deforestation: Interactions and Environmental Implications*. Discussion Paper No. 34. UNRISD, Geneva.
- E&D File. 1993. *Consumption Patterns and Sustainable Development*. Vol. II, No. 15. United Nations Non-Governmental Liaison Service, Geneva.
- FAO (Food and Agriculture Organization of the United Nations). 1988. *An Interim Report on the State of Forest Resources in the Developing Countries*. FAO, Rome.
- . 1987. *Production Yearbook*. FAO, Rome.
- Gadgil, M. and R. Guha. 1992. *This Fissured Land: An Ecological History of India*. Oxford University Press, Delhi.
- Ghimire, K. 1993. *Linkages between Population, Environment and Development: Case Studies from Costa Rica, Pakistan and Uganda*. UNRISD, Geneva.
- . 1991. "The victims of development. An enquiry into ethnicity in development planning." *Development and Change*, January.
- Goodland, R. and H. Daly. 1993. *Poverty Alleviation is Essential for Environmental Sustainability*, Environmental Division Working Paper No. 42. World Bank, Washington DC.
- Munasinghe, M. 1993. "The economist's approach to sustainable development." *Finance and Development*, Vol. 30, No. 4, pp. 16–19.
- Muzondo, T.R., K. Miranda and A. L. Bovenberg. 1990. *Public Policy and the Environment: A Survey of the Literature*. International Monetary Fund, Washington DC.
- Pearce, D. 1991. "Towards the sustainable economy: Environment and economics." *Royal Bank of Scotland Review*, No. 172 (December).
- Pearce, D., A. Markandya and E. Barbier. 1989. *Blueprint for a Green Economy*. Earthscan, London.
- Repetto, R. and M. Gillis (eds.). 1988. *Public Policies and the Misuse of Forest Resources*. Cambridge University Press, New York.

REVISITING SUSTAINABLE DEVELOPMENT

- Repetto, R., W. Magrath, M. Wells, C. Beer and F. Rossini. 1992. "Wasting assets: Natural resources and the national income accounts." In A. Markandaya and J. Richardson (eds.), *Environmental Economics: A Reader*. St. Martin's Press, New York.
- Serageldin, I. 1993. "Making development sustainable." *Finance and Development*, Vol. 30, No. 4, pp. 20–23.
- Soussan, J., E. Gevers, K. Ghimire and P. O'Keefe. 1991. "Planning for sustainability: Access to fuelwood in Dhanusha district, Nepal." *World Development*, Vol. 19, No. 10, pp. 1299–1314.
- Southgate, D. and M. Basterrachea. 1992. "Population growth, public policy and resource degradation: The case of Guatemala." *Ambio*, Vol. 21, No. 7, pp. 460–464.
- Stiefel, M. and M. Wolfe. 1994. *A Voice for the Excluded: Popular Participation in Development—Utopia or Necessity?* Zed Books, London.
- Tudela, F. (eds.). 1990. *La Modernización Forzada del Trópico: El Caso de Tabasco*. Proyecto Integrado del Golfo. El Colegio de México, Mexico City.
- Vincent, J.R. 1992. "The tropical timber trade and sustainable development." *Science*, Vol. 256, No. 5064, pp. 1651–1655.
- World Bank. 1993. *World Development Report 1993: Investing in Health*. Oxford University Press, New York.
- . 1992. *World Development Report 1992: Development and the Environment*. Oxford University Press, New York.

Chapter 15

Biodiversity and Human Welfare¹

Piers Blaikie² and Sally Jeanrenaud³

(1996)

The Major Issues

Introduction

This chapter examines the complex relationships between biodiversity and human welfare. It aims to show how biodiversity and human welfare are perceived differently by a wide range of actors. These contested meanings constitute the politics of biodiversity, an understanding of which has profound implications for conservation policy making. The main questions addressed are:

- How has biodiversity been understood by different groups of people?
- What aspects of human welfare are affected by biodiversity degradation and by conservation?
- Who bears the costs and reaps the benefits of biodiversity degradation and conservation?
- What are the practical mechanisms “on the ground” that will deliver such benefits?

While policy makers and writers at the international level perceive a synergy between biodiversity conservation and human welfare as an unproblematic “vision” of conservation, from the level of practice their supposed relationship more often appears as rhetoric. There have been formidable political problems in the way of negotiating biodiversity conservation at the international level. There has also been serious questioning of the capability and will of many states to formulate and implement conservation policies on the ground. At the local level, conservation efforts have led to

¹ Abridged from an UNRISD Discussion Paper of the same title (UNRISD, 1996).

² At the time of writing, Piers Blaikie was Professor at the School of Development Studies, University of East Anglia, Norwich, United Kingdom.

³ At the time of writing, Sally Jeanrenaud was an independent consultant on environment and rural development and a doctoral candidate at University of East Anglia, Norwich, United Kingdom.

the definition and appropriation of biodiversity resources—usually in the name of the state—and this in turn has precipitated struggles over those resources. Finally, there are crucial ambiguities and contradictions in the formulation and practice of biodiversity conservation—particularly in the role of science and “facts” in the biodiversity discourse. Thus, while the contemporary debate about biodiversity appears to represent elements of a new moral dimension of “human nature” relationships, it is also a testimony to familiar political-economic divisions. These involve divisions between international, national and local interests; North and South; science and politics; official and folk; and power relations at the local level deriving from differences of class, ethnicity and gender.

Bearing these issues in mind, it is easy to see that analysis of the relationship between biodiversity and human welfare cannot be only a matter of scientific research. While scientific methods may be powerful ways to identify and present the problems of biodiversity erosion, they are not the only ones. Biodiversity is constituted as a range of resources that are the focus of both commercial exploitation and livelihoods. The debate is thus highly politicized. Even within the academic and international policy-making environment, we need to be critically aware of the social forces that withdraw credibility from and confer credibility to various scientific ideas. A sociology of scientific knowledge indicates that scientific “facts” are used to support various intellectual projects, upon which reputation, promotion and consultancy fees depend. Therefore discourses take place at many different levels and are held by a wide cast of protagonists. This chapter attempts to identify different actors and stakeholders in the biodiversity arena, their interests, and how they are perceived, articulated and then promoted in the face of other different and often competing ones.

An analysis of biodiversity and human welfare must not confine itself only to the economic concerns of the actors involved. It must also involve a critical review of the ideas and ideologies of biodiversity. In other words, it is naive to expect that one can “read off” notions about biodiversity from the structural position that actors hold, or that they will create and use ideas that are somehow explainable in terms of their being instrumental to their economic interests. Rather, different actors create their own ideas about biodiversity, appropriate and adapt others, and experience and use them in different ways in different arenas. It is thus necessary to focus on the ideas themselves as well, and a section on different paradigms for biodiversity conservation is devoted to this task—bearing in mind that actors will use parts of these paradigms, sometimes in an eclectic and contradictory manner, in pursuit of their own “projects”. Actor-oriented approaches have recently been developed to analyse the “development interface” by Long and Long (1992) and others, with particular reference to how various actors pursue their “projects” within the context of their “life-worlds”. While a full treatment of the life-worlds of actors who appear in the arena of biodiversity would be too ambitious for our purposes here, it is useful to extend the analysis of biodiversity and human welfare beyond a mere representation of the interests of different stakeholders (for example, biotechnology prospectors, wildlife protection groups, forest dwellers in the tropics, and so on). It is necessary also to understand how the ideas that different people have about nature are formed and articulated; how those arguments are used and supported by recourse to scientific “facts” or to natural justice and inalienable rights.

In this way we develop an approach in which people have specific interests in very particular natural resources or species for precise purposes. We argue not only that “nature” is perceived and valued from various cultural and ideological perspectives, but also that powerful economic incentives are involved in shaping and conserving particular

aspects or constituents of it. It is by no means all of these different interests and normative notions about biodiversity that concern human welfare—although they may be invoked in its name.

The main objective of this chapter is to contribute to a more consistent and effective strategy for the conservation of biodiversity, and to identify clearly how and whom conservation will and should benefit. For a more effective policy to emerge, the vision must be deconstructed into its often contradictory parts and deepened to accommodate social dynamics. As a first step, we argue, this requires changes both within and outside the conservation movement, which itself must recognize and work with the political economy of biodiversity erosion and conservation. It is not only a matter, as Pimbert (1993) suggests, of a “new professionalism”—one that works closely with local groups and integrates thinking from both the social and natural sciences. We support this initiative, but it also requires two others—a partial rapprochement to the political economic realities in the local and global political economy, as well as the advocacy to change some of the most damaging of these realities in terms of biodiversity erosion and implications for the undermining of human welfare. This change mainly implies the development of effective policies at the international, state and local levels, while at the same time understanding the political and institutional obstacles that stand in its way. These obstacles must not be characterized simply as “lack of political will”, corruption or administrative inefficiency and somehow externalized from the policy-making process. They must be worked with and tackled in arenas other than biodiversity conservation alone—for example, in trade and tariff agreements, the structure and volume of international aid to developing countries, and human rights for indigenous peoples—in short a number of enduring political issues revolving around human welfare that may be only indirectly related to biodiversity conservation.

“Biodiversity”: Some definitions

“Biological diversity” or “biodiversity” is still a relatively new concept that is not found in dictionaries published before the mid-1980s (Dudley 1992). The term “biodiversity” entered the scientific language as a result of a US National Academy of Sciences publication of the same name (Wilson 1988). However it draws together concepts that had preoccupied ecologists and geneticists for some time prior to that date.

There have been a number of international conventions concerned with specific aspects of biodiversity—for example, the Convention on Wetlands of International Importance, especially as Waterfowl Habitat (also known as the Ramsar Convention, 1971), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (also known as the Washington Convention, 1973), the Convention on the Conservation of Migratory Species of Wild Animals (also known as the Bonn Convention, 1980), and the non-binding International Treaty on Plant Genetic Resources for Food and Agriculture (also known as the International Seed Treaty). There have also been conventions concerning biodiversity in particular regions—for example the Convention on the Conservation of European Wildlife and Natural Habitats (Bern 1979), the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (Washington 1940) and the African Convention on the Conservation of Nature and Natural Resources (Algiers 1968). As the names of these conventions imply, the issues involved concerned species and landscape conservation. None of them were focused on biodiversity on a global scale or on the full and integrated set of definitions of

the word (which are discussed below)—nor did they explicitly consider the implications of conservation for development and human welfare, except in passing.

By 1987, there was growing scientific evidence of the erosion of biodiversity on a global scale. This also resonated with emerging problems over the control of genetic information, which emerged with the rapid development of biotechnology. Since the beginning of the 1990s the conservation of biodiversity had also become one of the central goals of international conservation organizations such as the World Wide Fund for Nature (WWF), the World Conservation Union (IUCN) and the United Nations Environment Programme (UNEP) (WWF 1993a). Much of the scientific and commercial interest originated in the United States, which was the first country to pressure for a global convention. UNEP was prompted to organize an Ad Hoc Working Group of Experts on Biological Diversity. After a number of meetings this was turned into an intergovernmental negotiating committee, which ran into some key political issues concerning sovereign rights over genetic resources. Nonetheless, it addressed the wider issues of all biodiversity protection on a global scale, and is used as a framework for the discussion in this chapter. It now has international recognition as a result of the Biodiversity Convention signed under the auspices of the United Nations Conference on Environment and Development (UNCED) in Rio in June 1992, and has since become an increasingly prominent public policy issue, as governments seek to ratify the Convention.

The term biodiversity involves a complexity of meanings and levels. As used in the Convention, the term has the following definition:

‘Biological diversity’ means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. (IUCN 1994:16)

Thus biodiversity is the variability of life in all forms, levels and combinations. It is not the sum of ecosystems, species and genetic material, but rather represents the variability within and among them (IUCN 1994). Biologists usually consider it from three different perspectives.

- “Genetic diversity” refers to the frequency and diversity of different genes and/or genomes. It includes variation both within a population and between populations.
- “Species diversity” refers to the frequency and diversity of different species.
- “Ecosystem diversity” refers to the variety and frequency of different ecosystems.

It can be seen that these three perspectives form a hierarchy and are basically different ways of looking at the same thing (IUCN 1990). All biodiversity is the result of natural selection working on the consequences of genetic variation (Lee 1993). Much important diversity is invisible—such as microscopic life-forms in soil (Beard 1991), or not obvious—such as variation within a single species.

The scientific understanding of biodiversity is still at an early stage (as discussed below). The initial scientific focus was on estimating the diversity of life forms and the scale and rapidity of their decline (Wilson 1988). Although an estimated 1.7 million species have been described to date, we do not know the true number of species on Earth, even to the nearest order of magnitude. While counts for small groups, such as birds, are relatively well known, the biggest question mark lies over the number of insects and micro-organisms (WCMC 1992).

A summary of the biodiversity problem

The proximate or direct causes of biodiversity loss are well documented. These include mechanisms such as habitat loss and fragmentation, overexploitation of plant and animal species, introduced species, pollution, climate change and agro-economic processes that have resulted in a concentration upon a short-list of few heavily utilized species, at the expense of and extinction or threatened extinction of the remaining species. This process began with the emergence of settled agriculture and more sophisticated hunting and herding techniques. Until approximately 10,000 years ago, only natural processes of extinction had occurred, but were added to by spatially isolated cases of the extinction of wild animals that competed with humans, usually at sites of intensive settlement. It is estimated that in the present greatly accelerated phase of extinctions, current rates of extinction may be between 1,000 and 10,000 times the historical rate (Wilson 1988).

Once this short-list of heavily utilized species is established, the forces for specialization become firmly established in which capital goods are applied to the production of these species and these species alone. "Sunk costs" such as technologies, along with adapted social and economic structures (for example, irrigated paddy production), are important considerations acting against the diversification and extension of the short-list of existing species (Swanson 1992c). The result is that it becomes attractive to increase the quantities of these established specialized species, rather than to invest in the new technologies and socioeconomic and political structures that would be necessary in order to begin to exploit other species not on the short-list of the 20 or so that produce the great majority of the world's food (Plotkin 1988). As specialization of agriculture deepens and diffuses (from early settled areas, and from the North to the South), the rates of conversion to specialized species and the associated conversion of wild (and biologically relatively diverse) habitats to settled agriculture or livestock production increases greatly. Table 15.1 indicates rates of conversion of natural habitat to agriculture between 1960 and 1980.

Table 15.1: Rates of conversion of natural habitat to agriculture (million hectares)

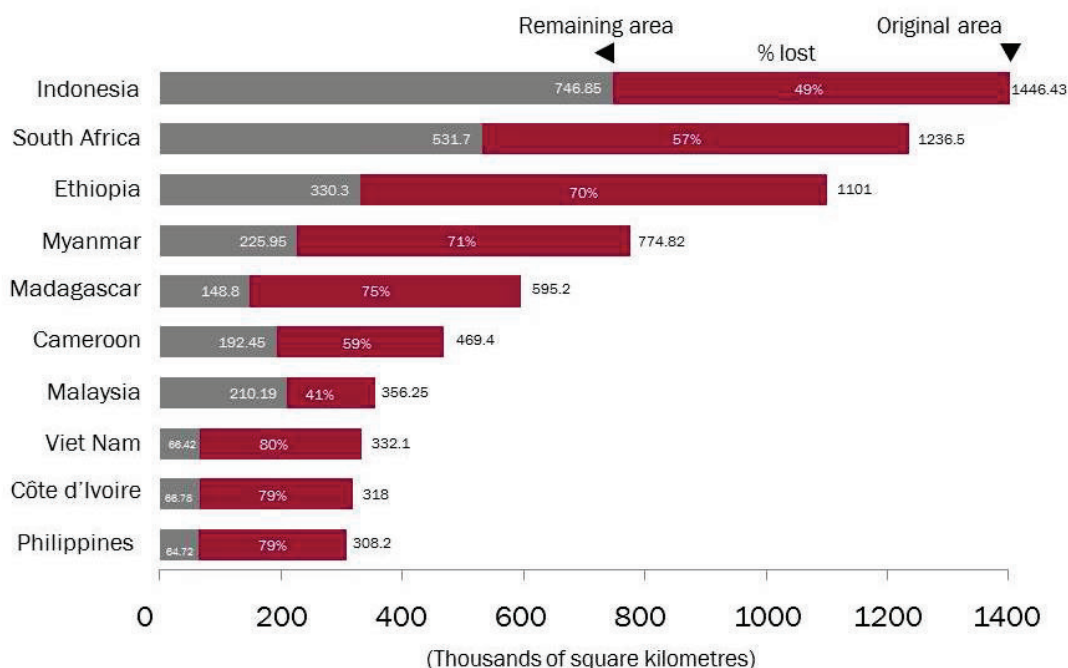
	1960	1980	% change
<i>Developing regions</i>			
Sub-Saharan Africa	161	222	37.8
Latin America	104	142	36.5
South Asia	153	210	37.2
Southeast Asia	40	55	37.5
<i>Developed regions</i>			
North America	205	203	-0.1
Europe	151	137	-10.0
USSR	225	233	2.0

Source: Repetto and Gillis 1988.

From table 15.1, it will be clear that conversion is far greater in developing countries, since the process is largely completed in the developed countries. In addition, population growth in developing countries is relatively rapid. It increased between 1950 and 1990 from 1.6 to 4.0 billion people; at least 85 per cent of the world's population will live in these countries by the year 2100 (Western 1989). Other statistics (WRI 1990, for example) also show that the conversion rate to crop and pastureland from 1977 to 1987 in developing countries was extremely rapid (for example, Paraguay 71.2 per cent and

Niger 32 per cent to cropland; Ecuador 61.5 per cent and Thailand 32.1 per cent to pastureland). This process of conversion can be expressed in an alternative way (see figure 15.1).

Figure 15.1: Loss of wildlife habitat



Source: WWF 1993a:15

The implications of the conversion process, expressed in terms of area related to estimated rates and projections for extinction, are open to debate and the range of projected losses is quite large (see discussion below). Swanson (1992b) has collated a number of estimates of extinctions of global species per decade (see table 15.2).

Table 15.2: Estimates of extinctions of species per decade

Rate ^a	Projection ^b	Basis	Sources (as cited in Swanson 1992b)
8%	33–50%	Forest loss	Lovejoy (1980)
5%	50%	Forest loss	Ehrlich and Ehrlich (1981)
—	33%	Forest loss	Simberloff (1986)
9%	25%	Forest loss	Raven (1988)
5%	15%	Forest loss	Reid and Miller (1989)

Notes: ^aRates are percentage losses of total number of species per decade. ^bProjections are based on the extrapolation of this trend at their current rates through to the total conversion of the examined forest area. **Source:** Swanson 1992b:23.

There are many global projections of the rates of extinction. For example, Reid (1992) estimates that there will be a 1.5 per cent global loss of biodiversity per decade, while WWF states that “half the species alive today could be extinct by the end of the next century” (WWF 1993a:14).

What is less well understood are the remote or fundamental causes of environmental change embedded within the global political economy. Analysis of these

causes would need to address the impact of political and economic processes on biodiversity, at different levels.⁴ These might include:

- the global economic system (the foreign debt crisis, oil prices, restructuring, etc.);
- the nature of the state (land tenure laws, abilities of administration, government stance on transnational companies in forestry, etc.);
- the nature of agrarian society (distribution of rights to land, laws of inheritance, gender division, etc.);
- local land users' resources and practices, etc.

It is clear that most current biodiversity reduction is taking place in developing countries. It is perhaps for these reasons that initial attention has been given to tropical "hot spots" (Myers 1988). These are usually forest areas characterized by exceptional concentration of species with high levels of endemism, and experiencing rapid rates of depletion, such as the Atlantic rainforest of Brazil, Cameroon, Madagascar and peninsular Malaysia. However, since the early 1990s interest has broadened to include the world's temperate and boreal forest regions (Dudley 1992). Biodiversity in some plant and animal groups, such as soil microflora and fauna, can approach that found in tropical forests (Lattin 1990). Genetic diversity within species is also thought to be particularly important in temperate forests, making some local populations of great ecological importance (Dudley et al. 1995). However, in terms of species diversity, the aphorism that "the North has the technology but the South has the bio-" captures one of the central political economic issues of biodiversity conservation. This will be further discussed below.

Despite much biological and ecological literature, the theory behind biodiversity and the functioning of ecosystems remains nebulous, lacking in hard data and open to varying interpretations. It appears, for example, that there are no clear-cut relationships between biodiversity and ecosystem productivity or stability (Gadgil 1993). Experimental reduction of ecosystem diversity has shown that it does not necessarily lead to loss of productivity. In fact, some simple man-made systems with low levels of biodiversity are the most productive of all. However, monocultures are less resilient in the face of perturbations such as pest outbreaks. Deep sea benthic ecosystems are very diverse, but maintain low levels of productivity, whereas highly diverse coral reef ecosystems appear to be very susceptible to disruption. However, despite (and also because of) the lack of any clear relationships, conservationists have been quick to promote the "precautionary principle" until further scientific evidence becomes available.

Estimates of biodiversity loss involve large degrees of uncertainty and are derived from extrapolations of measured and predicted habitat loss and estimates of species richness in different habitats. Some critics argue that the assumptions about extinctions have little scientific support and are wide open to question (Mann 1991). For example, most predictions of species loss are based on using islands as a model, whereas on mainland territories species may escape into bordering areas. Data on habitat and species loss can therefore be misleading. Moreover, current models of the relation between species and geographic area imply that an infinite increase in area implies an infinite increase in the number of species. However, others argue that the species-area curve levels off at its upper reaches. Thus, habitats on the upper part of the species-area curve can be

⁴ See Blaikie (1994) for "the chain of explanation" model for land degradation.

reduced without substantial species loss. Furthermore, the estimates of mass extinctions are largely based on species predicted to exist, rather than species actually identified (Mann 1991). The problem of biodiversity policy resting on a questionable scientific basis can be summed up by a quotation from a prominent but anonymous conservationist who said: “they’ll kill me for saying this...but the lack of data worries me. I am absolutely sure we’re right, but a gut feeling isn’t much backup when you’re asking people all over the world to change their lives completely” (cited in Mann 1991).

According to some observers, conservation of biodiversity is merely a sophisticated expression of a well-established preoccupation with the conservation of a small number of extinction-prone animal species and their habitats. Despite the rhetoric, conservation policy is still aimed at key species (Dudley 1992). However, Pimbert (1993) acknowledges that most of the species important for the maintenance of ecological processes (the inconspicuous organisms) are located in human-managed ecosystems such as agricultural and forestry land, which therefore lie outside protected areas, with (presumably) greater species diversity. For example, in West Germany only 35–40 per cent of the total 30,000 species are found in protected areas; the remaining species live in human-managed ecosystems (Pimbert 1993). There is a strong case for conservation organizations to pay more attention to human-managed ecosystems to fulfil the goals of biodiversity conservation, rather than to concentrate efforts and data collection on unconverted habitats.

Biodiversity and human welfare

The notion of “welfare” is also subject to multiple interpretations, and can be identified in the current context as ways in which different values of biodiversity are appropriated by different actors. Thus there is a growing recognition of the need to accommodate qualitative and indigenous concepts of the values of biodiversity with a particular emphasis on the ways in which these appropriated values are distributed. Also, the range of measures of welfare has been steadily extended—as illustrated by the increasing sophistication of the Human Development Index (HDI), published annually by the United Nations Development Programme (UNDP). For example, in 1993 UNDP introduced the idea that the participation and empowerment of individuals and groups to shape their own lives are important dimensions of welfare (UNDP 1993).

Many of the methodological and scientific references that mention the connections between biodiversity and human welfare have done so in very general terms. The discourse usually focuses on the benefits of biodiversity to “mankind” over long time periods and on a global scale. Attempts are made to identify the value of biodiversity conservation, to demonstrate its constituent parts and then go on to capture those values in decision-making criteria. It is, of course, in the latter that the question of how these benefits affect humans (and which humans) impinges upon our concern for human welfare. We believe there is an urgent need to analyse the social complexities of these generalized arguments. This is done first by identifying the different values of biodiversity in principle and then by specifying who appropriates each of these values, which contribute to their welfare.

Biodiversity and values

How have the values of biodiversity conservation been understood? Values have to be relevant to human beings, and implicitly values of a resource such as biodiversity, when

they are realized, are a way of understanding human welfare. However, at the outset it is worth mentioning that the reasons for conserving biodiversity do not only relate to human welfare and that there are other non-anthropocentric reasons for conservation. The section concludes with an illustration of the contested meanings and values of biodiversity.

Five general reasons have been given to explain the importance of maintaining biodiversity (summarized among others by Inskipp 1992):

- *Ethical reasons*: the belief that every life form warrants respect independent of its worth to people and human welfare.
- *Maintaining ecosystems*: a myriad of life forms are essential for keeping air clean, stabilizing weather, disposing of wastes, recycling nutrients, creating soils, controlling diseases, pollination, etc.
- *Material and economic benefits to people*: biodiversity contributes to agriculture, fisheries, medicines, industry, etc.
- *Maintaining evolutionary processes*: biodiversity is the raw material of further evolution. If the genetic resource base is drastically reduced, the result is likely to be a depletion of evolution's capacities for speciation and adaptation persisting far into the future.
- *Aesthetics*: many species inspire beauty and awe. Conservation literature is full of statements about the connection between biodiversity and human well-being in terms of these subjective criteria.

These general reasons for conserving biodiversity may be expressed in terms of the values they represent, as described below.

Direct and instrumental/use values

These are concerned with the enjoyment and satisfaction derived from the use of biological resources. Thus they involve the consumption of those resources and their realization is a major factor in the possible depletion of those resources. Direct values can be decomposed into two types.

First, consumptive use values, which refer to the values placed on those products consumed directly without passing through a market, and are clearly of greatest importance to rural populations in developing countries, where biological resources are collected and used (often from the "wild", or those areas not subject to the rights and obligations under private property). They include a vast array of wild animals, insects, fish, fibres, resins, medicinal plants, fuelwood, fruits, fungi, dyes, gourds, construction materials and so on. They also refer to cultural, religious and recreational values involved in the consumption of the resource (for example, the importance of whale meat in Inuit cultures, or of hunting in the initiation rites of many African pastoral peoples).

The loss of this value of biodiversity can come about for a number of different reasons. Population pressure on forest areas can convert them into privately held agricultural land, which may well result in increased aggregate food supplies, but a reduced variety of resources for subsistence. Also, such encroachment on forests and common property or open access resources typically impacts on those who have least access to private property. It is important to note that the erosion of consumptive use values of biodiversity for the poor and politically weak usually arises for three main reasons: (i) there occurs an alteration in the distribution of those resources at the expense of less powerful groups; (ii) there is a widespread conversion of value from consumptive to productive use values through an extension and deepening of the market for many of these resources; and (iii) a decline in their aggregate supply on the remaining *de jure*

common property and de facto open access resources tends to occur through overuse. It is common that all three processes operate together in an agrarian political economy, and that the purely biological issue of diversity and supply of different resources is only part of the picture. These reasons for the loss of biodiversity and the implications thereof are illustrated in the section on “Actors”.

Second, productive use values, which are assigned to resources harvested and sold in the market, and therefore appear in national income accounts. They are generally valued at the point of production and harvesting, and involve a similar overall range of resources used for direct consumption—although these may be very different at different locations. In some cases they may involve domesticated agriculture and a short slate of specialized crops or products (such as a few tree species that are recognized to be commercially useful), but in other cases the same products may be considered to have both consumptive and productive values (for example, commercial and subsistence-based culling of the same wild animals).

Productive use values therefore contribute to welfare in the provision of monetary income to those who can appropriate this value through the effective realization of private property rights, which may already exist in their favour, or through the acquisition of these rights. It is often the case that entrepreneurs may secure agreements with the state that overlay or directly overturn existing customary rights to resources that had hitherto been enjoyed by local groups in the agrarian political economy. These groups include forest dwellers, farmers and pastoralists who had previously been able to exploit these resources locally—both as productive use values through their sale as petty commodity producers and directly through consumptive use. Technological change has continually created new opportunities to develop productive use values, such as in the development of genetic material for new varieties of domestic crops and in medical research. Issues of the ownership of intellectual property rights of these resources (for example, landraces) arise as a result of these new market opportunities at the global scale.

Indirect instrumental/use values

First, these mostly refer to the functions and services of ecosystems that have value for society in general rather limited to the specific user(s) and therefore support and have important social and economic implications for direct values. These are values that are not consumed or traded in the marketplace and are known as public goods. Conservation of biological resources has the following benefits:

- providing the support system for harvested species by photosynthetic fixation of solar energy and its transference into food chains that involve harvested species;
- providing ecosystem functions involving reproduction. There are a variety of ways in which wild biological resources may contribute to the productive use values of domesticated resources (Prescott-Allen 1986). These include wild species forming the genetic resource for the breeding of new domesticates, wild pollinators being essential for domestic crops and wild enemies of pests controlling attacks on domestic crops;
- maintenance of hydrological regimes, including the recharging of water tables and the buffering of extreme hydrological conditions that might otherwise precipitate drought or flood;
- soil and water conservation by the regulation of water flows, the provision of suitable environments for the creation and maintenance of soil and its fertility through storage and cycling of essential nutrients;
- absorption, breakdown and dispersal of harmful pollutants (air and water pollutants, organic wastes);

- provision of the aesthetically and culturally preferred environment for human habitat.

It is clear that the contributions of these indirect use values to human welfare will be very substantial—even if their measurement is both practically and methodologically very difficult. They are also diffuse and distributed widely between populations, both at present and in the future. Also, the erosion of these functions may not result from the reduction of biodiversity per se. For instance, there are plenty of examples of adverse impacts of soil erosion and declines in productivity of primary and secondary production of rangelands, but the physical processes involved usually do not revolve around a local or regional reduction in biodiversity.

Second, option values, which refer to the future uses of both direct and indirect values, described above. The future is uncertain but the fact of the extinction of a species is all too certain. The future paths of socioeconomic (including technical) change are also uncertain, and unforeseen developments such as the implications of climatic change for natural resource use, and for biodiversity in particular, can only be guessed at and their aggregate effects cannot be known at the present time. However, there is a value in maintaining genetic diversity, even though we do not know its value—although we do know that there is a positive value for maintaining the option. There are also other options which society may be prepared to pay for, such as having future access to a given species or ecosystems, even though people cannot specify what these might be, or even contemplate ever visiting, reading about or benefiting from them in any way.

Non-instrumental intrinsic value

Many—particularly but not exclusively from “deep ecology” movements—would argue that all species have an intrinsic value, that biodiversity is a moral condition and its conservation a moral responsibility, since non-human species have rights too. Therefore this value is non- (even anti-) anthropocentric, and has no connection with human welfare other than (and this will be important to Gaians and others in the ecology movement) that the act of discharging a moral responsibility contributes to human welfare.

While this list undoubtedly points to general categories of value, it hides a complexity of particular and contradictory interests. For example, while “charismatic” species such as elephants may inspire awe and wonder among the urban middle classes of the North, they may be regarded as pests to agricultural communities in the South. While biodiversity clearly provides material benefits to commercial companies, new developments in the biotechnology industry may be at odds with the ethical or aesthetic values of other groups, and may even undermine the material subsistence of some. The point is that different actors appropriate different values from different aspects of biodiversity, and gain access to different functional benefits. How this and other values are understood and measured is discussed below. The task remains to identify these different values of biodiversity, at which level of biodiversity they may be realized and to whom they might typically accrue. This is complex because of the number of combinations of value, benefit, uses and levels of realization, and the hierarchical definitions of biodiversity. These different combinations are thematically illustrated by examining a brief case study taken from the Nepalese Terai and are drawn from both authors’ professional experience there, and from Ghimire (1992) and Brown (1994).

An illustration of social differentiation and biodiversity values

The pressures for conversion to agricultural land in the Nepalese Terai are formidable. Population densities are still about half those on the Indian side of the border (a few kilometres away), but the Middle Hills of Nepal are experiencing extreme pressure on land, and out-migration to the Terai is rapidly gaining pace.⁵ It is mostly the very poor (*sukhumbasi*, “those without any place to go”) who encroach on the forest, and their prevention by evictions, crop burning and other acts of violence is undoubtedly a cost for them. However, forest resources are being used, and biodiversity reduced, by other more powerful groups such as timber contractors, and their clients in the local political hierarchy (the *pradhan panch*, or village headman, for example). Thus the issue of biodiversity is also a struggle over the classification of those resources (such as whether the land is demarcated as official state forest or agricultural land for settlement). The meaning of “biodiversity” is, at the local level, one of naked struggle over resources. The costs of conserving the forest are also borne, at least theoretically, by the Nepalese state, in terms of the opportunity costs of foregone timber and grain exports to India. But here again local specificities of the political economy of Nepal prevent all but the smallest proportion of those revenues from reaching the national accounts and being used to further human welfare in such ways as the provision of educational and health facilities in the area by the state. So it is with Cameroon, for example, in which the costs of biodiversity conservation are borne in practice by local people who rely on wildlife for subsistence and the forest for shifting cultivation. In examining the global responsibilities for conservation below, who bears the real costs of conservation must also be considered, as must the question of whether local communities do in fact benefit at all from attempts to offset such costs. Table 15.3 indicates the variety of interests in biodiversity, the different values accruing to different people and the different meanings attached to “biodiversity”.

From this example, some of the complexity of biodiversity issues may be unravelled in more general terms that illustrate the different and competing notions of the values of biodiversity:

- There are different actors who relate in different ways to the resources in question.
- They therefore define “biodiversity” in very different ways and at different levels or geographical scales.
- They bring to bear on these definitions their culture, their material circumstances and their experience of biodiversity.
- They engage in the issue often in contradictory ways, expressed in struggles over the meaning and control of biodiversity between themselves and with outside parties. Diverse activities such as “poaching”, evictions, commercial negotiations and academic arguments at international workshops are examples of these struggles.

One of the implications of the competing meanings of biodiversity is that discussion of the subject outside the natural sciences tends to lack rigour, and sinks to the lowest common denominator of the meaning of “biodiversity”. In some literature, the term is used as a synonym for “conservation”, even “sustainable development”, or as a goal of national parks. It also can be reduced to an issue of local struggles over a range of natural resources. Debates at the international academic level are thus usually very generalized,

⁵ Brown 1994; Ghimire 1992; Blaikie et al. 1980.

focusing on the benefits of biodiversity to “mankind” over long time periods and on a global scale. More recently conservation policy has directed greater attention to an assumed convergence of grassroots and global interests; “people oriented” conservation projects are becoming more important, and have tried to engage these struggles to provide feasible policies (Pimbert and Pretty 1994).

Table 15.3: Interest groups and stakeholders in grassland conservation in the Terai

Group	Scale of influence	Source of power	Interests/Aims	Means
Indigenous people	Local	Very limited	Livelihood maintenance; use protected areas for subsistence needs, minor trading of products; thatch, fodder, building materials, fuel, wild foods, plant medicines, hunting and fishing	Subsistence farming, minor marketing; legal and illegal extraction of resources from protected areas
Migrant farmers	Local	Limited	Livelihood maintenance; use protected areas for subsistence needs; thatch, fodder, fuel, building material	Cash farming plus subsistence; legal and illegal extraction of products from protected areas
Local entrepreneurs	Local	Many hold official positions locally	Profit; commercial; range of small enterprises tourist and non-tourist- based	Small business enterprises, buying and selling to tourists
Tourist concessions	National/some international	Lobbying/may hold official positions	Profit, commercial expansion; some of revenue may be earned overseas; control tourists staying in protected areas overnight	Tourism revenues; concessions from government
Government conservation agencies	National	Administrative and supervisory	Conserving wildlife and facilitating tourist development	Enforcing park boundaries; imposing fines
Conservation pressure groups	Local/national/some international links	Lobbying, may have personal contacts, international funding	Conserving biodiversity but with considerations for local livelihoods	Lobbying, publicity
International conservation groups	International	International funding “green conditionality”	Conserving biodiversity; limited interests in human welfare	International legislation, lobbying
Central government	National	Political and administrative	National development; economic growth?	Legislation, bureaucracy, budget allocation

Source: Brown 1994.

A similar pattern of the distribution of the costs of biodiversity degradation emerges. The majority of rural populations, especially the poorest groups, lose livelihood opportunities and habitat through the depletion of the list of species used in local consumption and in petty commodity production. The indirect values of biodiversity—of underwriting the regional ecological maintenance of natural systems, for example—will benefit a wider spectrum of local people, although compensatory adjustments to the loss of biodiversity can always be made more easily by the more wealthy. The case study in the Nepalese Terai provides several examples of this. The wealthier can “buy their way out of trouble”, or offset the costs of biodiversity loss by such means as purchasing fertilizers where the provision of natural fertility fails, or tubewells where water from public sources

for drinking and irrigation dry up or become polluted, and so on (Seddon et al. 1979). In other words, some are able to compensate for the failure of public goods by private purchase. It is thus inadequate to impute the impact of degradation on human welfare costs only in terms of those costs; it is necessary also to consider how those costs will be met in a given, and usually unequal, political economy. The impact of biodiversity degradation upon human welfare must be set within the political economy as a whole.

Furthermore, this illustration brings into focus the disjunctures between different “cognitive maps” of biodiversity, which are held by different people. These maps are constructed at different scales—the scientific maps tending to be global and regional, and those of the local populations, local. The disappearance of forests may have a symbolic, political or aesthetic significance for some, while for local people it directly affects their livelihood opportunities. Therefore the cognitive map will consist of specific natural resources, and competitors and allies who have an interest in those resources.

Approaches

While the concept and science of biodiversity are largely biological in origin, many of their issues have been taken up by thinkers and writers from other disciplines, and then used by a variety of actors. Who is interested in biodiversity and why? How has biodiversity become incorporated into other agendas?

An overview of biodiversity issues

Before reviewing other disciplines, it is important to discuss a more general issue here. This concerns the use to which scientific facts are put, what ones are used, and what fails to create any significant agenda. The increasingly dated rationalist approach, with policy makers simply using the facts of objective science, is difficult to sustain, since it has been increasingly recognized that scientific information, as “authoritative knowledge”, is frequently used selectively to legitimate particular policies. Thus, the view of science in policy making as “truth talking to power” (Carnegie Commission 1992) must continue to be questioned. That science will, independently and in an apolitical world, uncover the environmental problems of biodiversity degradation and tell policy makers what to do, invites critical enquiry into how and why knowledge is created, promoted and used.

It is helpful to consider a continuum of cases in which at one end, there are comparatively simple scientific facts, where perceptions and definitions are widely shared, and normal “objective” science—at least for relatively tame and carefully bounded problem-solving areas—will continue to play a central role in understanding society-environment relationships. At the other end of the continuum, there are scientific ideas and research areas in which the social construction of the environment is more clearly contested. Here, they are culturally embedded and rest upon particular problem definitions and implicit ideologies that are not necessarily shared by scientific definitions and understandings. For example, the issues of land degradation, pollution and risk may imply straightforward concepts for natural scientists that can be measured in a socially and politically neutral manner, that are analysable by normal positivist natural science, and where the only problems are technical ones (for example, of definition, data

collection and experimental design). But all these issues are loaded with social significance and subject to a rich variety of meanings.⁶ They simply cannot be captured by a single and authoritative scientific set of facts. In all these cases, their natural science components are imbued with judgements about scientific agendas (what gets studied and what ignored), how scientists study these agendas (the institutions in which they study and the reward structures for doing so) and the ideological assumptions about the terms themselves.

For example, the terms at the top of contemporary conservation agenda—such as sustainability, degradation or biodiversity—are at the same time technical issues, but the privileging of some over others, the ways in which they are defined, measured and used in modelling, are subject to alternative social constructions. The current debate in range ecology is a case in point. The notions of ecological succession and carrying capacity of the range have for many years been a topic of solely scientific and technical debate. But as Behnke and Scoones (1993) and Abel and Blaikie (1988, 1990) have shown, these notions rest upon a very particular interpretation of the human impact upon rangelands and of human decision making. In the same way, the interpretations of the value of biodiversity rest upon partisan assumptions. Some of these derive from the discipline of the researcher—there is debate among economists, and even more so between economists and sociologists, as the discussion below shows. In such cases, the “scientific problem area” is extremely problematic, and scientific problem definition, method and interpretation cannot be made upon apolitical and objective grounds. One of the implications that derive from the fact that the “biodiversity problem” has been framed by the environmental scientific disciplines is that it has been framed as a scientific problem with scientific solutions. Redclift (1994:31) argues that this creates a process of disengagement and lack of responsibility for our behaviour, since the problem is seen scientifically and as being understood to lie in the physical and not in the social environment. Rather, biodiversity erosion is the scientifically defined problem with social and economic implications that has scientific solutions.

We argue that there are three broad areas of intellectual interest in biodiversity that are helping to incorporate it into wider social debates. The first is articulated mainly within the natural sciences, the second within the social sciences (particularly economics) and the third in more philosophical and ethical schools. The three areas of intellectual interest can be distinguished by their approach to “human-nature” relationships; the origins of environmental problems; and how to solve them. Their policy implications are analysed in the “Policies” section later in this chapter.

Natural sciences

Ideas formulated within the natural sciences tend to conceive environmental problems as products of unbalanced “human-nature” relationships. They tend to emphasize the physical and technical aspects of “sustainability”, which is often expressed in terms of not exceeding the earth’s carrying capacity. Publications such as *Caring for the Earth* (IUCN/UNEP/WWF 1991) reflect the commonly held belief that the quality of human life depends primarily on the health of the earth, and sustaining the planet in a relatively unaltered state. Thus poverty must be addressed because it inhibits the right balance

⁶ See, for example, Douglas and Wildavsky 1982 for a social analysis of risk.

between humans and nature and not necessarily because of its intrinsic importance. Therefore solutions to environmental problems are focused on changing human attitudes, behaviour and technologies, which negatively affect a harmonious balance with the environment. Wilson (1993) argues that the technical problems in achieving this balance are so formidable that they require a redirection of much of science and technology, and a reconsideration of our self-image as a species.

As ecological science and an understanding of global environmental systems theories have developed, conservation priorities have expanded beyond the traditional emphasis on single or endangered species, to concern for whole ecosystems and life support processes. These elements have simultaneously embraced humanistic concerns for indigenous people's rights, cultural preservation and rural development, and have enriched all thinking on conservation, especially the neopopulist approach described in the "Policies" section below. Conservation now sees itself as a preserver of the principle of "diversity": biological, ecological and, more recently, cultural. An example of cultural diversity is provided in the following quote:

Even the diversity of human communities is at risk. It is thought that 92 Brazilian tribes have disappeared this century, taking all their traditional knowledge with them. As more and more habitats are destroyed, indigenous peoples all around the world are threatened with extinction. By the end of the twenty-first century, the number of languages spoken in the world could have fallen from 6,000 to 3,000. (WWF 1993a:14)

It is argued that biodiversity or life-diversity underpins and enriches the material basis of human and non-human life. Until some time towards the mid-1990s, development was seen as leading inevitably to an impoverishing monoculture, which threatened diversity and thus our ability to adapt and survive. Many are critical of those who fail to see humanity as a natural species dependent on the natural world, and who underestimate the consequences of "dismantling a support system that is too complex to understand let alone replace in the foreseeable future" (Wilson 1993).

Social sciences

Ideas formulated within the social sciences take a number of paths that tend to be defined in a disciplinary manner. First of all, political science, political economy and international relations tend to conceive environmental problems as products of inequitable "human-human" relationships (for example, North-South divisions; class; gender, and so on). Thus solutions to environmental problems are centred primarily on transforming social, economic and political relationships. Environmental problems are perceived and analysed within specific socioeconomic and political contexts. The two main sub-divisions of social analyses are the liberal/reformist and radical traditions. The former conceives of the problems and solutions within the context of continued capitalist growth (Bauer 1976). However, the latter, while not challenging growth, wishes to transform capitalist structures of production and distribution. The more radical analyses of the social dimensions of environmental problems are expounded by authors such as Blaikie (1985, in the case of land degradation). In more global and abstract terms Daly and Cobb (1990), point to the laws of capitalist growth, leading through competition to overproduction and depletion of resources, to inequality on a global scale and enforced

“eco-cide” by the South. The application of this kind of thinking has linked biodiversity issues to human rights issues, grassroots conservation and environmental entitlements.⁷ More specifically, Shiva (1989a) identifies the social origins and consequences of genetic resource erosion, particularly for women, and identifies the gender implications of such issues as intellectual property rights and biosafety.

Sociology has not addressed issues of environmental management in the same comprehensive way as economics, and there is not a “sociology of the environment” as there is an environmental economics (see below). Machlis (1992) has suggested a possible role for sociology in biodiversity research and management. First, he suggests that sociology should be able to throw light on the social construction of biodiversity issues. For example, the choice of the measure of biodiversity (number of species, “richness”, abundance and distribution of populations, number of endangered species, centres of species richness with high endemism, degree of genetic variability) is crucial to the social construction of the problem. In fact, the whole project of the deconstruction of science, which in part derives from a post-modern strand in the social sciences, is invoked by Machlis, though many of the main writers are not sociologists (see above). Sociology can also lead to a better understanding and management of habitat change, through an analysis of perceptions and knowledge of biological resources, and struggles over them, although the enormous literature on the subject has been written by geographers, anthropologists, ethno-botanists as well as sociologists.⁸

Economics

A second strand of thinking in the social sciences has been developed by economists to study and provide more rational bases for environmental policy (Pearce 1991; Pearce et al. 1992). The economic approach to the environment has been one of the most innovative applications of economics in recent years, and has provided a basis for a distinctive approach to environmental management—the neoliberal approach, with a particular set of ideological and political assumptions (discussed in the “Policies” section). Two related analytical tasks are (i) the demonstration and measurement of the value of biodiversity; and (ii) the appropriation of that value—that is to say, how are those values realized and who does and should realize them. Both of these have been briefly discussed above.

Turning to the first task, there are two largely contradictory paradigms (Brown and Moran 1993, quoting Machlis). The first is a utilitarian one appropriate for industrial economies, where the cost of a lost species is defined as a lost commodity and the income streams that would have accrued, had it been conserved. Thus the value of conserving biodiversity in plants may be reduced to the potential pharmaceutical value of those plants, and biodiversity is redefined and reduced to a “pharmaceutical and industrial warehouse”. It has also led to other conclusions following the earlier work of Clark (1973) where—for certain types of species that are not competitive as assets (because their natural growth rates are uncompetitive with other species)—optimal management policies might lead to extinction, and investments made in other more useful species. Thus the blue whale or the African elephant would (and should?—the normative aspect of neoclassical economics may not be as neutral as some economists would like to claim) be

⁷ Horta 1991; Lohmann 1991; Colchester 1991, 1992, 1993; and Shiva 1989a, 1990.

⁸ See, for example, Croll and Parkin 1992; Milton 1993.

hunted to extinction in an “optimally” managed regime (Spence 1975; Dasgupta and Heal 1979). It is hardly necessary to add that many from all disciplines will find this conclusion unacceptable for the reason that values for the conservation of biodiversity other than productive use values (in very narrow terms) must be demonstrated and given more weight. The other paradigm is the argument that species have intrinsic value, which is immeasurable and unmeasurable. Between these two extremes, a number of economic analyses have developed that incorporate some of the other values as described above—particularly indirect use values such as the regulatory functions of the environment. Very little of this work addresses human welfare, except in so far as the less quantifiable consumptive use values and option values have sometimes been added as afterthoughts, although their importance and legitimacy may be granted in principle. It must also be said that economists have tried to pursue these values in their computation of the “total value of an environmental asset”.

In addition, the basis of measuring the value of biodiversity is through measuring peoples’ revealed preferences or willingness to pay. Two general criticisms apply here. First, humans are the only species able to state their preferences either explicitly or implicitly in money terms. Therefore, the valuation is anthropocentric and cannot accommodate intrinsic values except as they are interpreted by human beings. Second, revealed preferences are subject to our tastes for different states of nature but also to income endowments. Thus poor groups in the developing countries do not have the disposable income to underwrite their preferences, and therefore the states of nature and levels of biodiversity that they prefer would tend to be valued lower than those preferences of people with higher disposable incomes. Hence the total value of biodiversity will tend to be underestimated for a variety of reasons. Intrinsic value can be acknowledged but not incorporated easily into a total valuation.

The second issue concerns appropriation. Swanson (1992b) expresses it as a problem of a decentralized regulatory process, whereby countries independently at each point in time consider the costs of conversion (for example, of wilderness and high biodiversity to agricultural land and reduced biodiversity but increased food supplies from specialized food production called “agriculture”) without considering the global costs of biodiversity loss. Conceptually, this is due in part to a lack of information—decision makers do not know of these costs—and in part to the lack of a global market that would capture the value of conservation at the margin. There are important externalities that are not considered in each conversion decision. Those that convert land in this way do not at the present time compensate those who suffer the consequences of that conversion. These costs can be local, regional, national and global. Typical local costs are the reduction in natural regulatory functions (for example, soil and water conservation at the watershed or regional level) and losses of products consumed by rural populations in developing countries. At the national level, they may be rapid changes in the area-species relationship, where final conversions of undisturbed habitats (say, the last 10 per cent of the national territory) may have an extremely severe impact on species diversity within the national territory itself. At the global level the costs may be in a reduction in carbon sequestration and option values of various types discussed above. It follows therefore that an incentive structure should be put in place where these values of conservation should be reflected in marginal decisions by actors both within national governments and in civil society (for example, forest contractors, land hungry farmers, national park operators, and so forth). Attempts to create such a global market are now making their first appearance (in the climate and biodiversity conventions, as discussed in

the next section). Finally, economists have identified “perverse” incentives put in place by national governments that accelerate the conversion process. These are now well known and include examples such as the subsidies to forest conversion for livestock in Brazil up until the 1980s, subsidies for beef production in Botswana to take advantage of preferential tariffs by the European Union, subsidies and tenurial concessions to mechanized farmers in the clay plains of Sudan, and hedgerow removal in the European Union itself encouraged by intensive farming under the Common Agricultural Policy.

In summary, the economic approach to the environment is providing a rationale for biodiversity loss and the institutional means at different levels to deal with it. However, virtually all economists would admit that there are unresolved and unresolvable problems with the demonstration and measurement of biodiversity, and that the practical and political realities of instituting properly functioning markets require other considerations more effectively understood and handled in other disciplines—particularly eco-philosophy, sociology, political science and anthropology.

Philosophy

Biodiversity has also been taken up by eco-philosophers who are using the issues to rethink culture-nature relationships and to formulate systems of bioethics. According to Simmons (1993), there are at least two basic environmental ethical questions: one concerning the ethic for the use of the environment, encapsulated by the term “wise use” of the environment; and the other concerning an ethic of the environment in which the moral standing of non-human species is given equal value to the human species. Many of the contemporary eco-philosophers have their origins in the radical tradition outlined above, but differ in that they have incorporated a strong ecological consciousness.⁹ Many of the approaches stress both the ecological and social dimensions of their world-view, and argue that survival depends on transcending the dichotomies of dualistic thinking, which separates humans and nature. For example, Eckersley (1992) argues powerfully for an ecologically informed philosophy (“ecocentrism”) that recognizes the internal relatedness of all organisms. Unlike conventional “anthropocentric” ethical and political theory, which justifies the exclusive moral rights of humans on the basis of our separateness from the rest of the animal world, ecocentrism would be protective of the Earth’s life-support system, because of its orientation of inclusiveness of all beings. Therefore, the intrinsic value of biodiversity is privileged above narrower utilitarian and instrumentalist concerns that directly concern human welfare alone.

Interdisciplinary research initiatives

This subsection summarizes the main elements of interdisciplinary research in the social sciences that have provided interpretations and approaches to the information provided by the natural sciences about biodiversity. This helps to explain the important place of biodiversity on the international agenda.

First, there has been a long history of wildlife conservation, especially in Africa. It involved single high-profile species such as the elephant, the rhinoceros and the lion. Initiatives sought to preserve these “flagship” species and tended to ignore human welfare issues, such as the loss of grazing rights and access to forests by local people. Limited

⁹ For example, Bahro 1984; Bookchin 1980, 1982; Friberg and Hettne 1985.

treatment of the biodiversity issue therefore had a long policy history, the defects of which had been well recognized by the 1970s.

Second, scientific research on global warming that progressively emerged from the early 1970s and 1980s was undoubtedly a major catalyst both empirically and theoretically to biodiversity research. Some issues were shared by both (for example, carbon sequestration), and the acknowledgement of global interdependence with systems-based research of global warming resonated with emerging research on biodiversity.

Third, international environmental agreements such as CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), but also the Vienna and Montreal Protocols (to phase out ozone damaging substances), the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (commonly called the London Dumping Convention), the International Tropical Timber Agreement (or ITTA, which, although a trade agreement, has important conservationist clauses) and the Convention Concerning the Protection of the World Cultural and Natural Heritage (or the World Heritage Convention, dealing with sites of world cultural, scenic and scientific value) had already provided an experience of international negotiation and political initiative to conserve different aspects of the environment. UNCED-sponsored Earth Summit agreements at Rio are also important in this context, of course; these are discussed below.

Fourth, the interdisciplinary research initiative by the Board on Science and Technology in International Development (BOSTID) on common property resource management brought together a large number of social scientists to understand the nature of property regimes with a focus on environmental management. About 20 case studies, mostly in developing countries, were written within a mutually developed theoretical framework. The problems of externalities, rights, duties and expectations under different property regimes—and their implications for environmental management—were discussed, and seminal works by Ostrom (1990), Bromley (1992) and Birkes (1989) followed. Many theoretical advances emerged from this initiative, as evidenced by their application and extension in the social science literature on biodiversity. This is especially so in responding to scientific research, as mentioned above, in which the “management of the global commons” has become a catch-phrase of this fast-developing research field.

What is surprising is the scant attention paid by these converging academic approaches to the issue of human welfare in biodiversity. There are disciplinary and methodological reasons for this, which have already been mentioned. The main impetus has come from other strands of thought and development paradigms, and as yet has made only a partial impact.

UNCED and the biodiversity convention

The United Nations Conference on Environment and Development (UNCED), which took place in Rio de Janeiro, Brazil, in June 1992, forced biodiversity onto the international political agenda. It represented the culmination of efforts and concern about the environment that have been around since the warnings of the Club of Rome about the “predicament of mankind”. For example, IUCN published the *World Conservation Strategy* in 1980. The United Nations created a World Commission on Environment and Development and published *Our Common Future* (United Nations 1987).

UNCED has been seen as especially significant because for the first time a process of democratization in international policy making was set in motion. However, many considered this to have been limited to the “lowest common denominator” due to an unwieldy bureaucratic process of bargaining over the minute details of the text of the convention. It produced the Rio Declaration, a Framework Convention on Climate Change, a Convention on Biological Diversity and “Agenda 21”. (Agenda 21, which attempts to integrate development and environmental conservation, is strongly supportive of neopopulist “bottom-up” participatory approaches, but also develops a neoliberal economic approach to the environment.) Finally, a set of Forest Principles emerged, which in effect was a set of compromises between the declared sovereign rights of nations to manage their forests, along with non-binding principles governing protection and management.

Negotiation of an international agreement on the conservation of biodiversity began in 1990, as a result of increasing concern that the world’s biological diversity was diminishing at an alarming rate. There was also a concern that developing countries, the biodiversity “hot spots”, needed increased assistance from developed countries to be able to conserve their biodiversity effectively. Furthermore, there has been a growing recognition that, in return for access to genetic material, countries of origin should get a greater share of the benefits arising from the commercial use of the material (Inskipp 1992).

The Biodiversity Convention contains the following significant points:

- It recognizes that biodiversity is essential to our planetary life-support systems.
- It commits countries to a series of national-level obligations—including making inventories of biological resources, developing national conservation strategies and integrating conservation in development planning.
- It requires developed countries to assist developing countries in carrying out their conservation programmes.
- It recognizes the role of indigenous and local communities in protecting biodiversity.
- It promotes the fair and equitable sharing of the benefits arising from the use of genetic resources by way of appropriate access to genetic resources, transfer of relevant technologies to developing countries and sufficient funding to underwrite these activities.

The Biodiversity Convention was signed by 157 countries, with the United States being the only major non-signatory (it was later signed by President Clinton). The Convention has now been ratified.

The many lessons of the Rio Conference have been well documented (Grubb et al. 1993). Perhaps the most prominent lesson is that biodiversity, like all natural resources, has become a new focus of global politics. While the global vision of biodiversity loss would predictably face formidable political problems in the path of implementation, it struck a number of commentators how timid and rhetorical the convention turned out to be (Chatterjee and Finger 1994). The political and institutional environment of the negotiations themselves goes a long way toward explaining the outcome. Minute contestations of the text of the convention became the currency of deeper conflicts. The lowest common denominator of agreement is bound to produce a bland, conservative and non-committal product. However, optimists can rightly point to the first global meeting of its kind, and the firm establishment of global environmental issues on international and national agendas. The negotiations reflect familiar patterns of development discourse. Three are reviewed below.

First, the extension of North-South confrontation. It has become increasingly clear that the central issue of global sustainable development is centred on the divisions between the developed and developing countries. Debates focused on economic issues such as financing, resource and technology transfer, population, poverty and patterns of unequal consumption and control of natural resources. UNCED did force a renewed period of self-reflection in both the North and South. Analysts from developing countries point out that the convention is skewed in favour of the North—and in particular of US corporations. Shiva (1993b), for example, draws attention to issues of intellectual property rights and biotechnology, and “biosafety”. She argues that the convention does not recognize the sovereign rights of local communities to conserve and use biodiversity, and that biotechnology that uses the “raw materials” from the South does not aid conservation (because of the tendency of biotechnologies toward monocultures) and that it exploits citizens from the South because they end up buying biotechnologies back. While there is a protocol concerning patenting genetic materials of living resources and transfer of biotechnologies between North and South, there is concern that the convention will open the floodgates toward patenting of genetic materials already in gene banks, which ignores sovereign rights issues.

Second, international responsibilities and perceived sovereign national interests. UNCED is one of the first and undoubtedly the biggest effort to forge a unified environmental ethic and sense of global responsibility. However, there are clear tensions between United Nations processes and the interests of individual states—many of which asserted the principle of national sovereignty. Some argue that issues of sovereignty are often used to avoid discussions on uncomfortable topics: for example, in discussions about forest principles, Brazil argued that international intervention in its internal affairs was out of the question. The debate about global sustainability also reopens the debate about the proper limits to national sovereignty (Grubb et al. 1993). In other spheres too, such as human rights and even health, there are vigorous advocates for the limitation of the sovereign rights of nation states in the name of safeguarding human welfare as an international right and therefore a duty to uphold internationally.

Third, guidelines to action. There has been a lack of detailed prescription about how to implement the convention. Instead there has been much in the way of exhortation, and statements of general commitment. Some economists (for example, David Pearce) argue that the convention does not touch upon the fundamental forces underlying biodiversity loss. He argues that losses are due to the ways in which national economies and the world economy are organized, in addition to population pressure. He argues for an “economic theory of biodiversity loss”. Although regulations and agreements play their part, unless the economic incentives and disincentives are worked out so that a global market for natural resources, and particularly biodiversity, can be created and operate efficiently, all the rhetoric in the world will not help to conserve biodiversity. However, global markets require international agreements as well as institutional strengthening of national policy-making capability, as well as heroic improvements in the effectiveness of national and local bureaucracies in developing countries (as discussed below). Critics of UNCED have pointed out these and other shortcomings. This chapter reviews some of the ways in which these shortcomings are bridged and may be bridged in the future.

Conclusions about conceptual issues of biodiversity

The initial identification of the biodiversity problem has come from the natural sciences and it stimulated and developed earlier more fragmented concerns of single species

conservation, national parks, and Western concerns about “Edenism”, which refers to the vision of an untrammelled nature, a state to which it should be restored.¹⁰ This earlier notion of conservation was, of course, oblivious to its detrimental implications for human welfare.

Biodiversity has a complex scientific basis, much of which is still not understood, but some of the basic data on trends of species and genetic diversity are increasingly persuasive that there is a very serious problem in global terms. How this will impact and who will bear the costs of its prevention or palliation are still far from clear.

The contested nature of the social construction of “biodiversity” and the related variety of interpretations by different actors have meant that the term has become a bandwagon and means all things to all people. The result is that much of the analysis is being degraded and reduced to the status of a fetish—sometimes even an excuse for posturing and doing little. This difficulty is similar to that faced by other complex and imprecise notions at the environmental-social interface such as “sustainability” or “environmental degradation”.

Therefore it may be helpful (i) to accept plurality of definitions, but define them carefully and attribute them to the stakeholders involved; and (ii) to be prepared to link biodiversity with other issues too, but acknowledge that there are other issues involved that intersect with (some of) the aims of biodiversity, but that do not share the same final goals. Human rights, particularly of indigenous people, income distribution, rights to clean water, education, shelter, and so forth, and human welfare are all related to biodiversity and its different values, but have agendas and goals other than biodiversity conservation.

As with other systemic environmental changes on a global scale, the impact of biodiversity loss upon human welfare will be spatially and globally patchy and always mediated through patterns of wealth, access and power. Also, biodiversity loss is only one of a number of implications of habitat loss/land use conversion, modernization and commercialization of agriculture, etc., and so the implications of biodiversity loss will be complex. For example, loss of indigenous forests will be associated with both a contribution to global warming and biodiversity loss, some of the impacts of which will be felt locally (for example, sea level rise at some coastal locations and loss of access to use values at other locations), and some globally.

Loss of biodiversity is irreversible (unlike climatic warming, holes in the ozone layer, soil erosion, etc.). Once genes (biochemical units of hereditary information) have been lost, they are gone forever. It is clear that the process of impoverishing the genetic basis of evolution and adaptation is accelerating. Some are currently drawing apocalyptic conclusions, such as the possibility that we are witnessing the “end of nature” (McKibben 1990). While these conclusions may be overdrawn, there are very strong scientific arguments for taking action, even if this only amounts to holding operations or palliative action. The critical approach in this chapter to the ways in which the concept of biodiversity has been used should in no way be seen to detract from this point.

¹⁰ See Colchester 1994 for an excellent critique.

Actors

One of the pervasive themes of the last section was the contested quality of the natural and social environment of biodiversity. There are conflicts of interest over natural resources, different interpretations of the term by scientists, different perspectives upon both means and ends, and struggles over the meaning of different terms and classifications of natural resources (for example, whether a patch of land is designated a National Park or agricultural land for clearing and cultivation). In this section, attention is turned to a brief introduction of the actors themselves who are involved in biodiversity issues. The differences in the way each perceives, understands and experiences “biodiversity” derives from differences in their daily lives.

There are groups of actors who enjoy direct benefits from biodiversity and whose welfare is thus directly affected by biodiversity erosion or the loss of control and access to it. This group includes rural populations whose livelihoods are affected by the changes in habitats and in their access to a range of biological resources, primarily in developing countries. Especially important are those who are politically, economically and ecologically precarious within overall changes of the agrarian political economy. These include the poorest sections such as tribal groups, marginal farmers, forest dwellers and women within these groups.

Also, there are other groups of actors whose daily lives are affected by biodiversity issues in contingent and indirect ways. These are government servants who are involved in the conservation of biodiversity and those who control access to biological resources through official means. These include the police, forestry officers, district-level officials, chairmen of the village council, chambers of commerce at the local level, and so on. In their daily lives they control access to resources, which collectively are “biodiverse”, however defined. So, for example, local customs officers responsible for monitoring the export of live species from a developing country at a remote airport experience the “biodiversity issue” in a most contingent and indirect manner. At the same time, their performance in their duties is actually quite important to biodiversity conservation. Their daily life concerns managing on a meagre, post-structural adjustment government salary. They have to distinguish different species of parrot, for example—a task for which they do not have the training or the personal commitment. It is only by identifying their contingent relationship with biodiversity that the basis of an understanding of their actions can be constructed. To take the case of the hypothetical customs officers, their welfare may be better served by extracting bureaucratic rent (or bribes) and allowing through for export all manner of rare species threatened with extinction. It is very often the case that income earned at the margin by the disposal (rather than the conservation) of rare and endangered species is more attractive to those who control these resources through the exercise of formal and informal political power.

There is an important general point to be made here concerning the relationship between biodiversity and welfare that many actors share. Conservation of forest resources, wildlife and sites of scientific importance often work against the short-term economic interests of virtually all sections of the rural populations of developing countries. In many tropical and subtropical regions, timber is used as fuelwood on a day-to-day basis; the land on which it stands is required for agriculture under present agricultural technologies and population growth; and certain species offer opportunities for immense and rapid enrichment for foreign firms as well as small-scale loggers. Wildlife provides meat for the majority of the population, both urban and rural; some species may fetch very high prices either as live specimens or as trophies, or may yield ivory. Simply, most people who are

part of the state apparatus or in civil society make money from continuing to exploit these resources, or from selling access to them. Since the aggregate rate of exploitation is non-sustainable, any aim of either sustainable resource use or conservation will tend to be frustrated. The present and future values of biodiversity are diffuse, in both the senses of widely distributed among the present and future populations and ill-defined. These values of biodiversity are also usually unperceived altogether by most of the population because they refer collectively to particular species as a whole, and not to the value of a particular animal or plant at the margin, where they offer an immediate and (for many) essential income or use value. This point questions any simplistic assumption that rural people will necessarily prefer to conserve biodiversity, or even to use resources in a sustainable way.

To understand the political dimensions of biodiversity it is necessary to understand how the groups of actors interact. Long and Long (1992) call this the “interface”, and typically this is the interface between bureaucrats and state or project officials, on the one hand, and civil society (ordinary people), on the other. In the case of biodiversity, interaction between a broader range of actors is relevant—between scientists and policy makers, between members of the timber trade and activist groups, and so on. In this chapter, four major groups are critically discussed in relation to contemporary biodiversity issues: international policy makers, officials and state functionaries, entrepreneurs and commercial corporations, and local resource users. There are many other actors involved in one way or another with biodiversity, such as ecotourists and safari tour operators, conservation project managers, non-governmental organizations, and local action and protest groups.

This section also develops a critique on how actors are assumed to interact in the arena of biodiversity. There are persuasive images of the behaviour of some actors that are often central to policy making, but that are frequently left unexamined. We take two—the image of the “community” as an assumption of social order in rural society in the South; and the image of rational policy discourse about conservation strategies. Here it is suggested that the “community” as a concept is needed by international conservation agencies, international NGOs and aid donors, and that it is frequently imagined rather than real. A more contingent and contested approach is put forward that has considerable implications for biodiversity conservation policy. In the section on policy makers, the influence of institutional politics and professional rivalry on policy development is explored. While these insights are neither new nor confined to conservation, they are of great importance in understanding how global decision making and opinion forming about biodiversity take place.

Policy makers at the international level

International policy makers have a major influence on discourses surrounding the environment and development, and more specifically the way natural resources (and thus biodiversity) are managed. Of course there are other actors at the national, regional and local levels who will also enter the discourse. There will be filters to the ideas of international policy makers, in terms of political bargaining in policy formulation, and issues of interpretation and implementation of the policy itself. It is important to make a distinction between the high-level policy negotiations among a range of government representatives, international organizations and NGOs (for example, the UNCED and post-UNCED process), and the particular policies of the international conservation organizations. The following discussion refers mainly to the policy-making practices of international conservation organizations.

International conservation policies are largely promoted by international agencies such as IUCN, UNEP and WWF. Their general policies are set out in documents such as the *World Conservation Strategy* (IUCN 1980) and *Caring for the Earth* (IUCN/UNEP/WWF 1991), and other papers such as WWF's *Global Priorities to the Year 2000* (Martin 1994). The last decade has seen a notable shift in their policies away from the classical emphasis on nature preservation toward ideas of sustainable development, which include the more populist and neoliberal approaches to conservation (see the policies section below for further discussion). Conservation activities have also evolved significantly over the last decade. For example, 30 years ago WWF was a grant-making organization, funding small conservation projects, or collaborating with national governments to set up national parks. Currently they devote a significant portion of funds and human resources to lobbying and advocacy work. The social history of WWF reveals strong strategic relations with Northern states and with elites from the South, but at the same time a firm adherence to its independent NGO status. Because of these ties, WWF is well positioned to press for changes in government policy. For example, in 1985 WWF helped to bring about an international moratorium on whaling, and in 1990 another on the ivory trade. It has also pressured governments to sign the Biodiversity and Climate Conventions (elaborated in Rio in 1992) and has played an influential role in the negotiations of the United Nations Commission on Sustainable Development (CSD), particularly on forestry, biodiversity and climate change issues. In addition, WWF is actively involved in trying to influence business and trade practices (see the subsection on entrepreneurs and corporations below). Its contacts with political elites in the South have enabled the organization to negotiate debt-for-nature swaps, whereby a portion of a nation's debt is converted into conservation funds. These have been made in a number of countries including Ecuador, the Philippines, Poland and Zambia (Russell 1993).

International and national conservation policy makers increasingly come from different social backgrounds. Much contemporary policy making is characterized by inter-NGO networking and collaboration, and more emphasis on local- and regional-level participation. For example, at a national level WWF-UK frequently collaborates with other NGOs such as Friends of the Earth, Greenpeace and Survival International, for particular campaigns. In 1991, an inter-NGO campaign was aimed at bringing a halt to World Bank funding of projects that exploited primary moist tropical forests. In 1992, an association of conservation NGOs established the Boreal Forest/Taiga Rescue Network in Sweden as a forum for exchanging information, and to run joint campaigns aimed at the protection of boreal forests. WWF also carries out its own field programme at the local level in the South, often in collaboration with southern NGOs, and may bypass state institutions altogether.

In the post-UNCED era, conservation policy making at the international level has involved complex, time consuming and politically sensitive negotiations between a range of international organizations, government representatives and NGOs. The talks are often characterized by their lack of detail on specific issues, and deliberate strategies to block any initiative that may threaten sovereignty. Some observers suggest that governments have failed to meet the commitments made at UNCED and that things may be worse now (Dudley et al. 1995), and that the United Nations process "lacks the teeth" to make changes on the ground.

While environmental NGOs continue to struggle for representation at high-level negotiations, many at the same time have been disillusioned with the UNCED process and choose to develop or support independent initiatives. For example, the Forest

Stewardship Council (FSC) was founded in Toronto in 1993 by a diverse group of representatives from environmental institutions, indigenous peoples' organizations, community forestry groups, the timber trade, the forestry profession and forest product certification organizations from 25 countries. It is notable for its strong concern for forest ecosystems and for the welfare of local communities in both the North and South. The FSC has evolved in response to the growing public demand that purchases of wood and other forest products do not contribute to deforestation but rather help secure forests for the future. During the past few years there has been a proliferation of self-certification programmes of wood products on the market. The FSC seeks to guarantee the authenticity of their claims. The goal of the FSC is to promote environmentally responsible, socially beneficial and economically viable management of the world's forests, by establishing an international set of respected "principles" of forest management that will apply to all tropical, temperate and boreal forests (FSC 1994). At present the FSC has developed 10 such principles—including compliance of forestry management with national and international laws, tenure and use rights and responsibilities, indigenous peoples' rights, community and forests workers' rights, and other management principles concerning sustainable forest management. More than four million hectares of forest have been independently certified in 17 countries, and a number of retailers in the United Kingdom and the United States are selling products from these forests (J.-P. Jeanrenaud 1995).

While the FSC is still in its infancy, its inauguration marks a significant step in the development of international forest conservation policy. It has been able to transcend a number of professional, organizational and intellectual barriers—although it is too early to evaluate it in terms of progress on the ground. It has attempted from the outset to be multidisciplinary in character, and has sought to integrate biological, social and commercial criteria in its principles. It articulates a strong ethical position in support of the rights of the rural poor. The development of the FSC has included a systematic international consultative process, involving regional and local participation in decision making in 10 countries. All major stakeholders have been involved in the consultations with environmentalists, representatives of indigenous peoples, industry, etc. This is regarded as one of its major strengths and lent it legitimacy. Unlike many other international policy efforts (TFAP, ITTA, for example), it addresses biodiversity issues in both North and South, bringing into focus the impact of forest management practices on biodiversity and forest quality in the North. Thus, for the first time many Northern forest management practices are experiencing the same scrutiny as those in the South. The FSC goes some way toward helping equalize power differences between North and South. Rather than relying on donor aid to influence forest management, the FSC is unique in that it is designed to use trade and the market as instruments of influence. Through buying certified products, individual consumers have the potential to support well-managed forests worldwide. It currently receives funding from the Austrian government, the EEC, ODA, several American foundations and WWF.

These developments demonstrate that a different type of professional criterion is circulating at the international level. This reflects neopopulist and neoliberal approaches to development and conservation (discussed further in the section on policies), as well as a change in how policy making is actually done. The literature is full of references to the "new professionalism" and much of it comes from an understanding of the day-to-day lives of development professionals, their training, mindsets and the institutions in which they work. Pimbert and Pretty (1994) summarize much of the earlier literature such as

Chambers (1983, 1992). These authors attack “normal professionalism”, inappropriate science and professional and disciplinary biases. There are, of course, strong reasons why existing orthodoxies survive, since they derive from long-established reward and career structures and from the momentum of established paradigms of conservation and development thinking. However, such developments as the FSC and the circulation of new policy approaches in reports and journal articles show that a new approach among international policy makers and opinion formers is taking shape. Specifically, this has meant a widening network of international policy makers and other actors (for example, the leaders of the timber trade). It also shows how the principal divide between the two cultures of natural and social science is being bridged both within individuals and between them. In turn, this may indicate that historic academic criteria of narrow disciplinary rigour and excellence may finally show signs of being eclipsed. Lastly, such developments demonstrate how social and political issues, particularly concerning the implications of conservation for human welfare, have been accorded a higher priority.

Policy practices

A persuasive image of policy development is that of the “rational” policy process, by which (non-problematic) objectives are set and resources are allocated. However, we question here whether interactions about concepts, ideologies and strategies follow an orderly cycle of hypothesis, testing and adaptation, in the same way as, for example, manuals outline the project cycle. This image of the policy process has long been criticized as a poor model of what actually happens (Clay and Schaffer 1984). Instead, we suggest that the development and promotion of conservation policies can become the currency of politicking, manoeuvring and professional rivalry. A closer look at the policy process reveals how scientists, policy makers, academics and communicators tend to compete to establish their own interpretations and definitions of “biodiversity”. Here we look at two key influences on conservation policy and its interpretation: the struggle between different conservation ideologies and the tensions between communicators/fundraisers and policy makers.

Populist approaches to biodiversity conservation have become firmly established. They appear in many international policy documents such as *Caring for the Earth* (IUCN/UNEP/WWF 1991), the *Global Biodiversity Strategy* (WRI/IUCN/UNEP 1992), *Parks for Life* (CNPPA 1993) and Agenda 21. However, it appears that, despite the UNCED mandate for such approaches, the institutional climate is less favourable toward neopopulist policies now than it was three years ago. For example, WWF International established a Biodiversity, Protected Areas and Species Conservation Programme in 1991 to promote a community-based conservation approach. To many outsiders, the work of this group represented a more socially oriented approach to conservation, and led many people to believe that WWF was transforming itself in this direction. This programme was eliminated in 1995 during a “downscaling” exercise at the organization, however, amid widespread protest. Critics have claimed that the restructuring in fact reveals an ideological struggle between the classical and populist approaches to conservation at the international level (Ehringhaus cited in Tickell 1995). For example, Tickell (1995) reported that WWF is divided into two contending schools of thought: the traditionists who believe that conservation encompasses only animals, plants and protected areas; and a group that subscribes to more holistic people-oriented philosophy. The recent changes at WWF may be interpreted as a reaffirmation of the traditionists’ power, although there may be several other dimensions to this policy discourse.

While undoubtedly many senior conservationists fail to recognize the full implications of the populist model, and a few traditionalists do remain, the central management of WWF International has made it absolutely clear that the organization remains firmly committed to community-based conservation. Very few international conservationists would dare voice the “fortress mentality” of the 1970s. WWF has long supported people-focused conservation and has every intention of continuing to promote it, according to the central management (Martin 1995). The official reason for the downscaling at headquarters was decentralization, and the rationale of reallocating resources to build up this approach in the field, rather than at the international secretariat, which needed to be streamlined.

However, despite the above rationale, a further explanation may be the growing influence of the neoliberal approach on international conservation policy. The proponents of this approach tend to perceive the emphasis on grassroots work as naive. There are some powerful internal and external forces pushing to bring economics closer to conservation, and a desire to address the perceived economic causes of biodiversity loss (and this approach is discussed in more detail in the policies section later in this chapter). For example, WWF has made some of its work on various macroeconomic themes special policy issues (such as “green accounting”). The growing economic emphasis resonates too with the approach of the World Bank’s Global Environment Facility (GEF) which has a leading role in financing biodiversity conservation projects. According to Chatterjee and Finger (1994), there have been various confrontations between the neopopulist and neoliberal approaches to conservation. Those who promote the latter tend to have increasing political power and are either alienating or partly co-opting the former.

This brief example illustrates how ideologies, personalities and institutional practices are mutually constituted in a context of constantly shifting conflicts and alliances. The successful development of certain policies appears to be related to the degree of “empire” or constituency building within organizations. This involves various tactics and strategies, including deliberate internal consensus building and special modes of institutional discourse.

While the UNCED process has apparently supported the rise of neopopulism within conservation, the trend has acquired a distinctive technocratic flavour. Organizations like IUCN and WWF are being asked to manage some GEF projects, and to submit proposals for projects on biodiversity that they promise to fund. Both organizations are responding positively to these opportunities. However, populists fear that a more technocratic approach will not be concerned with empowerment and capacity building, or be sensitive to local problems or issues, but instead will be based on neoclassical economic theory (discussed in policies section). Despite the neopopulist jargon, the recent GEF guidelines for community-based biodiversity conservation clearly view communities as “resources” to achieve conservation as defined by the outside experts (GEF 1993). There is also concern that this approach will lend support to a new class of technocratic global environmental managers (Sachs 1994).

The recent debate on people-focused policies has also pushed conservation organizations to reassess and reinforce their identities as “nature conservation”, and not “social development” organizations. While many agreed about the unproblematic concept of integrated conservation and development in the 1980s, many conservationists now realize that it may entail unacceptable costs and trade-offs.

Conservation ideologies are not the sole forces shaping policy. Organizations consist of many intersecting struggles, and disjunctions of knowledge and interests

between actors, which play their part in shaping strategies and agendas. Another dynamic within WWF is the tension between its “conservation” and its “fundraising” cultures. Some policy staff have voiced the fear that policy is not driven by field issues, but rather by donors’ concern for the charismatic and extinction-prone mega-vertebrates (such as the panda, tiger, rhino, whale). These have become the symbols of the international conservation movement, and many organizations find it easier to raise money through manipulating the images rather than promoting its actual policy or field work. Indeed, institutional survival may depend on these public relations exercises.

While fundraisers and communicators may argue that emotive appeals to save “flagship” species or the undifferentiated rainforest enrol public opinion in the North by providing a powerful image and entry point to more complex (and important) “projects”, their objectives and criteria of success are different to those of policy and field staff. The business side of the organization values donations, number of members, perceived (rather than actual) effectiveness, target fulfilment, quotes in newspapers and maintaining a high international public profile. A pervasive informal rule is “don’t upset the donors”. In this sense it can be argued that policy development is in part constrained by its relationship with the donors, and conservation becomes a construct of the fundraisers. The outcome may have quite serious implications for the human welfare of local rural actors in developing countries.

The two examples above give some insights into the dynamics of policy practice, and reveal some of the contested meanings of conservation at the international level. The socially constructed nature of “conservation” will now be examined in other arenas.

State functionaries in biodiversity conservation

State functionaries are involved in the regulation of the use of natural resources and in the formulation and implementation of policy. They do not form a homogenous group, since they occupy different places in the administration (from first secretary to forest ranger), and their role and effectiveness in implementing biodiversity conservation will depend on the degree of technical and administrative competence of the civil service. Also, some environmental protection agencies are not adequately staffed (including those in many developed countries)—with legal work, routine monitoring and basic administration becoming bogged down in delays.

An important consideration in biodiversity conservation, as with other environmental policies, is that for many government servants, particularly in developing countries, the issue of biodiversity is probably of little direct interest, and impinges on their lives only as a series of regulations or bureaucratic procedures. For many, their main preoccupation is to keep their jobs. There are opportunities for the collection “bureaucratic rents” (bribes) on the part of strategically placed officials in biodiversity conservation projects and programmes. For example, the issuing of hunting licences, the inspection and monitoring of CITES, and customs inspections where live species, ivory and trophies may be exported. The monitoring and reporting systems for many developing countries are often also hopelessly inadequate. Many officials are in a contractually inferior position in negotiations with foreign firms that may not be too concerned about keeping to conservation guidelines. There are too many cases of large-scale illegal smuggling, either overlooked or run by official bodies. Most instances are highly sensitive and are not officially documented (or the documentation is suppressed), but there are enough notorious cases to support the claim that biodiversity conservation is seriously compromised in many countries—especially but not exclusively in the South.

For example, Ellis (1994) reports that South Africa's policy of destabilization of neighbouring countries was closely associated with the rise of South Africa as a key transit country in the international ivory trade. South African traders—acting in partnership or with protection from officers of the South African Military Directorate—imported raw ivory from Angola, Mozambique and elsewhere and exported it to markets in the Far East. This was a source of income both for the South African secret services and for the individuals associated with them. There is evidence that counter-insurgency specialists are using Mozambique as a base for operations inside South Africa, and that they continue to have an interest in ivory and rhino horn. Former officers of counter-insurgency units have also found employment as game wardens in national parks. Ellis shows how the South African conservation lobby has been used by some of the specialist counter-insurgency units of the South African Defence Force, and how proposals for the large game parks along the South Africa-Mozambique border have important implications for politics and national security, as well as biodiversity conservation (1994).

The implementation of CITES and the environmental clauses of ITTA are markers for the future implementation of the UNCED Biodiversity Convention, and current research being undertaken by the American Social Science Research Council on the implementation of and in compliance with international accords shows how signing these accords may be no indication of a country intending or undertaking to implement them. It is clear that biodiversity conservation may not be of much professional and personal concern to many state functionaries at all—and this applies even to personnel in wildlife protection and forestry agencies in many developing countries.

Entrepreneurs and corporations

The relationship between commercial interests and biodiversity is a vast subject and can only be touched upon in this chapter. In general terms, commercial actors usually exploit a narrow range of natural resources in any one location or sector, which may have implications for genetic, species and ecosystem biodiversity. Their profits are linked to using biodiversity, which is seen as a raw material. The actions and views of entrepreneurs with regard to biodiversity may be considered to lie along a continuum. At one end there are distinctly “anti-nature” views of some multinational corporations, while others have developed distinctly “green” objectives and are seeking mutually beneficial relationships with local communities. For example, a Cargill executive claimed they had succeeded in “stopping bees from usurping the pollen” (cited in Shiva 1993b). The latter may use a “green” image as a marketing asset, but be careful that earning it does not reduce their competitiveness. The controversy in mid-1994 over the Body Shop focused attention upon the degree of substantive change toward conservationist practice, as opposed to window dressing. There are undoubtedly examples, in the retail sector particularly, where the notions of biodiversity and conservation are being used in misleading ways to sell products without any change in the way the constituent natural resources are obtained or purchased.

Within this commercial context, much of the contemporary debate is focused on the contribution of the new biotechnologies and intellectual property regimes to genetic erosion and conservation, and the impact of the timber trade on biodiversity.

Biotechnology and intellectual property

Historically, Northern countries have had easy access to the biological resources of developing countries. The colonial relationship underwrote this access. Indeed, over the

past few centuries it was (and still is) access to and control of commercially important tropical resources that has given Western powers economic advantage in the world economy. Brockway (1979) illustrates how the acquisition and monopoly of scientific knowledge played a key role in the development of several highly profitable and strategically important plant-based industries during the colonial era (rubber, cinchona, sisal, for example). The acquisition and control of knowledge and resources has taken on a new dimension with the development of modern biotechnologies and intellectual property (IP) systems. According to the Crucible Group (1994) access to genetic diversity will be the key to human survival.

While on the one hand the world is experiencing a decline in the resource base, on the other there is a proliferation of new biotechnologies that can use genetic resources in new ways. The growing interest in new biological compounds means that the genes of many plants, animals and micro-organisms are becoming commercially more valuable and biotechnology companies are making large investments in screening genetic resources. For example, gorgonian corals from tropical reefs are being assessed for anti-inflammatory compounds; traditional medicinal plants are being screened for anti-HIV properties; soils from tropical rainforests are being studied to find new pesticides and antibiotics. In agriculture germplasm specialists are screening traditional strains and their wild relatives for plant and animal breeding programmes (Pimbert 1993). The vital contribution of genetic diversity to crop production and medicines is impossible to predict. In industrial manufacturing it has been estimated that plant resources will recapture the share of the total industrial materials they enjoyed in the 1920s (Morris and Ahmed 1992); while in medicine it is estimated that over 7,000 medical compounds in Western medicine are drawn from plants (Mshigenio 1990).

In order to safeguard the time and capital that they have invested in screening and developing new resources, commercial companies and some governments have pressed for the extension of intellectual property rights (IPRs) to biological products, and for a global “harmonization” of patent systems (that is, for all countries to adopt the types of IPR system currently operating in industrialized countries). The most recent GATT agreement obliges all signatories to adopt either a patent or some form of *sui generis* protection for plant varieties and micro-organisms. Governments can include IPRs for animals if they wish. The intellectual property debate is highly controversial, and is seen by many to represent a new phase in the debate on which genes will (and should) become privatized (Vogel 1994). On the other hand, the debate has drawn attention to the relationship between science, business and power in global terms and the impact of IP on local livelihoods, and the ethical implications of patenting “life forms”. Many believe that IP systems need to be reshaped to accommodate social concerns (ODI 1993).

There is concern that the development of modern biotechnologies and IP systems will have a profound influence on biodiversity and rural communities in the South, and may even accelerate genetic erosion. During this century a large proportion of the genetic variability of the world’s major food crops has become extinct, and the conservation and development of the remaining crop diversity has become an urgent task (Cooper et al. 1992). Four major reasons are discussed below.

First, it is feared that biotechnologies and IPRs are likely to accelerate genetic erosion by facilitating the breeding of modern varieties. The genetic base of the modern varieties of commercial agriculture is very narrow, which is typical of conventional plant breeding where cycles of selection tend to reduce the level of variation within a plant population. Intellectual property enhances the incentives toward the development of

varieties with the largest market potential (that is, widely adapted over large areas) and that suit the needs of commercial farmers and the marketing and processing industries. Crops that are preferred by small-scale farmers are usually neglected or abandoned as their relative profitability suffers. The exercise of intellectual property rights means that seed companies obtain a higher return on protected varieties than on unprotected varieties. It also establishes a bias in favour of the newest varieties, which emphasize uniformity rather than genetic variability (Crucible Group 1994). Since the 1950s, the spread of "Green Revolution" varieties of corn, wheat, rice and other crops has squeezed out native varieties, as farmers replace traditional varieties with only a few introduced ones. In Indonesia, 1,500 local paddy varieties have become extinct in the last 15 years (Pimbert 1993). In Zimbabwe, two hybrid varieties account for 90 per cent of all maize seed planted, and have displaced many traditional varieties of millet and sorghum (ODI 1993). Shiva (1993b) illustrates this global trend in her book *Monocultures of the Mind*.

Second, it is widely agreed that current IPRs do not accommodate the contributions made by local farmers to the maintenance of diversity through their strategies of growing a wide range of cultivars and centuries of indigenous experimentation. For example, *Azadirachta indica* (the neem tree) has been used for centuries by Indian doctors and farmers. Its chemical properties have made it suitable for many types of medicines and effective insecticides. These properties have been known to Indians for millennia, and over the course of the past 100 years there has been considerable research carried out by scientific institutes in India itself, but its chemical properties have never been patented. Indeed, under Indian law agricultural and medicinal products are not patentable. However, since 1985 over a dozen US patents have been taken out by US and Japanese firms on formulae for neem-based solutions and emulsions, and one patent-holding company (W.R. Grace) has set up a plant in India that will process neem seed for export to the United States. They are also developing a network of seed suppliers, to ensure a constant supply of seeds and a reliable price. The appeal of the neem tree to these multinational companies is clearly commercial. There has been a mounting chorus of objections from Indian scientists, farmers and political activists, who argue that multinationals have no right "to expropriate the fruit of centuries of indigenous experimentation and several decades of scientific research" (Shiva and Holla-Bhar 1993). The debate has stimulated a bitter controversy about the ethics of IP and what is believed to be "intellectual piracy". Monopoly control of genetic resources makes it illegal for local communities to renew their stock biologically without payment, and it is feared that the seed and breeding stock of vulnerable farmers may gradually become the intellectual property of national and multinational companies. This has strong implications for the welfare of farmers and consumers in developing countries since they could be forced to pay high prices for products that they would have formerly provided for themselves. IP is also seen to undermine biodiversity associated with traditional and low input agriculture. Brockway (1979) points out that royalty payments on patents, copyrights, franchises and licences constitute monopoly rent on technology and knowledge, and thus act as a drain on poor countries.

The commercialization and privatization of biodiversity through IPR can be seen as the growing power of global capital, which currently has free global access to the products of traditional knowledge. Discussion on alternative *sui generis* patent systems and new forms of cooperation with local communities are slowly growing. For example, the Crucible Group (1994) reviews various IP options and alternatives for biological resources within the global trading system. It argues strongly in favour of protecting farmers' and

community rights, and suggests that biotechnology may warrant its own *sui generis* IP system. Some countries are developing their own response to the IP challenge. For example, in India an alliance of farmers and scientists are developing an alternative form of intellectual property, the *Gaon Samaj*, or a collective at the village level, that would hold intellectual property rights (CIPR—collective intellectual property rights). These recognize knowledge to be a social product, subject to local common rights, and give the community the right to benefit commercially from traditional knowledge (Shiva and Holla-Bhar 1993).

There are also a growing number of commercial initiatives that seek to cooperate with indigenous communities. For example, in Latin America, the drug company Shaman Pharmaceuticals has outlined its intention to return a percentage of profits to all communities it has worked with. It intends to funnel compensation through a non-profit organization for the protection of indigenous knowledge and conservation of biodiversity. The Merck-InBio agreement in Costa Rica is another example of a new model of cooperation between commercial companies and countries (Reid 1993). It is clear that there are early signs that countervailing forces, although politically still weak, are making some headway in defending the rights of vulnerable groups in the face of strong international commercial pressures.

Third, there is also evidence that the sheer quantity of some biomaterials required from so-called “wild” collections will contribute to the decline of forest species, coral reefs, wetlands, etc. For example, medicinal plant material exported from Cameroon to France between 1985 and 1991 includes 900 tonnes of *Voacanga africana* seed; 11,537 tonnes of *Prunus africana* bark for an extract to treat prostatitis in Europe; and 286 tonnes of *Pausinystalia johimbe* bark to be sold as an aphrodisiac in sex shops (Cunningham 1993). These products are not harvested on a sustainable basis. The total value of imports of medicinal plants to Japan, the OECD countries and the United States increased from US\$335 million in 1976 to US\$ 551 million in 1980.

Finally, the testing of new biotechnologies is considered to be a potential threat to biodiversity because it alters the wider ecosystem. Biosafety issues are a major concern of some observers as some new products are known to have adverse ecological and epidemiological consequences. In the North, for example, biotechnologists are trying to make some commercial plants more tolerant to frost. A gene that triggers ice nucleation in plant cells has been isolated and eliminated from certain bacteria. When the ice-minus bacteria is sprayed on a crop, it is meant to displace the naturally occurring ice-forming bacteria, and the plants do not freeze when they normally would (Shiva 1993b). There was a public outcry when the researcher was allowed to conduct a field test, and a group of citizens and environmental interest groups filed a suit against the National Institutes of Health in the United States for approving the project. There is a strong possibility that the frost-preventing bacteria might be swept up into the upper atmosphere and disrupt the natural formation of ice crystals, which could affect the local climate if not the global climate. As Shiva (1993b) points out, many Northern governments and companies are taking their trials to countries in the South with little or no regulation, in order to avoid public protest and court injunctions. This charge parallels that of the dumping of hazardous waste and marketing of hazardous chemicals by companies of the North in developing countries, where regulations are not in place or not implemented.

The timber trade

Threats to forests are among the most serious environmental problems of the late twentieth century (Myers 1979; WRI 1985). Not only do forest destruction and degradation have major implications for local and global climate patterns, but loss of forest also threatens global biodiversity. Various studies have identified the role of the timber trade in the degradation of tropical, temperate and boreal forests.¹¹

In the 1980s the European Timber Trade stated that no tropical timber was traded in Europe, and that forest loss was due to problems of “overpopulation” and the collection of fuelwood in the South. However, Friends of the Earth challenged these claims by revealing that about one-third of the world’s international tropical timber did in fact come to Europe (cited Dudley et al. 1995).

Much of the world’s timber continues to come from primary, natural or old-growth forests, which is leading to loss of habitats and biodiversity. Logging can cause enormous damage to remaining stands of trees, particularly if recommended techniques of “treading lightly on the forest” are ignored. The technologies of environmentally sound logging are known, but are very often totally ignored. Logging roads also act as migration routes for settlers leading to further destruction of forests (Witte 1992). Some studies have focused on the intensification of management in secondary forests (for example, plantations). Modern management systems and greater mechanization often result in simplified biodiversity and other detrimental ecological effects (Dudley 1992).

Over the past few years ownership of forest enterprises has become concentrated in the hands of a few transnational companies, which have enormous economic power and political influence, both formally and informally. For example, Marx (1994) reveals how the Japanese Mitsubishi Corporation, Mitsubishi Bank and Mitsubishi Heavy Industries (along with their numerous subsidiaries) have become the largest corporate family in the world, and are all involved in the timber trade. The Corporation structures the timber deals; their Bank finances them, and their Heavy Industries supplies equipment for logging, processing and shipping.

Due to their political and economic power, some multinationals are known to be logging in national parks and other protected areas, and to operate outside the framework of international law. Much of the mahogany sold in the United Kingdom and United States comes illegally from Indian reserves in Rondônia (Brazil) and elsewhere (Dudley et al. 1995). Logging companies usually have short-term logging leases, and demonstrate little or no concern for good forest management, or indigenous peoples’ rights (Horta 1991). Much forested land, which was previously under state control, has recently been privatized (particularly in Central and Eastern Europe). Large tracts of forests are quickly being converted to cash with serious implications for biodiversity in the North.

The global demand for timber has also greatly increased, with particular implications for deforestation pressures in Southeast Asia (particularly Indonesia, Japan, Malaysia, South Korea and Taiwan). Demand for wood and wood products has rapidly increased in the newly developing countries, and has become the motor for deforestation in the Asia-Pacific area and elsewhere. Having exhausted their home supplies, some logging companies based in these countries have moved to countries as far away as Canada. Mitsubishi, for example, is behind the giant ALPAC project that controls some

¹¹ Marshall 1990; Hurst 1990; Horta 1991; Marx 1994; Dudley et al. 1995.

70,000 square kilometres of boreal forest in Alberta, Canada. It also owns Crestbrook Forest Industries, which is being sued by Revenue Canada for transfer pricing. Mitsubishi continues to be a major buyer of old growth logs from McMillan-Bloedel, and has frequently played a role in the exploitation of natural forests (Marx 1994).

Further studies have exposed widespread illegal felling operations; intrafirm trade and transfer pricing are often characteristic features of transnational corporations involved in the timber trade (see Marshall 1990 for a discussion of corruption in the timber trade in Papua New Guinea). Among other things, such trade is known to involve an undermeasuring of timber volumes, misclassification of species, underdeclaration of profits, payment of tax in low tax countries, underestimation of timber values, violations of native land claims, violation of pollution standards, etc. Not only do such procedures allow timber companies to make quick and large profits, without paying for any of the environmental and social costs of their operations, but forest-exporting countries are also losing legitimate revenues. It has been estimated that only 10 per cent of timber logged in Brazil is exported legally (Dudley et al. 1995).

Finally, there have been profound changes in forestry and timber technology. Recent technological changes in the forestry sector allow previously uncommercial stands of trees to be converted to woodchip, which further encourages clear felling. Previously untouched stands of trees are now being harvested by their virtual physical removal, with the most drastic implications for biodiversity.

However, despite ample evidence of these negative impacts of the timber trade on biodiversity, there are also signs of new forms of cooperation between environmental NGOs and some companies within the timber trade. Dwindling tropical timber resources are beginning to threaten commercial interests, and according to one environmental spokesman many companies are beginning to see the “writing on the wall” and privately admit to it (J.-P. Jeanrenaud 1993). In 1991, WWF-UK established a “1995 Group” of wood-using companies committed to phasing out by December 1995 the sale and use of all wood and wood products that do not come from well-managed forests as defined by the Forest Stewardship Council’s “Principles and Criteria”. There are currently 23 companies—ranging from large retailers, major purchasers such as British Rail, to smaller companies that are committed to reaching this target. They are required to write an action programme detailing how the company will reach its 1995 target, and to phase out immediately all labels claiming sustainability until a credible independent certification system for timber is established (Jeanrenaud and Sullivan 1993). The 1995 Group trades over 1,000 million British pounds worth of wood products—almost 10 per cent of total wood consumption in the United Kingdom—and more than 35 million customers shop in their stores each week (J.-P. Jeanrenaud 1995).

Martin Laing, Chairman of John Laing plc, wrote in March 1994:

I implore all wood using companies to...be bold and join WWF’s 1995 Group, which is committed to phasing out the sale of wood and wood products that do not come from well-managed forests by December 1995—as Laing Homes already has. We should see environmental achievement as a welcome business opportunity—not as a threat. (Cited in Dudley et al. 1995:153)

However, this collaboration must not be overemphasized, since it is recent and is still dwarfed by the prevailing contradictory nature of the relationship between the timber trade and biodiversity conservation. Indeed, there is currently an industry backlash against conservation in many developed countries. In January 1995, the *Financial Times* reported that a leading North American publisher was planning to join forces with the

forest products industry to “blunt environmental protests against forest practices in the US and Canada”. In Australia, loggers have violently clashed with environmentalists to bring a halt to further logging in many areas of old-growth forest. The executive director of the New South Wales Forest Products Association was filmed saying:

If we have to physically confront those people who've opposed us for so long then so be it; maybe the time has come. And I'd say to the people in industry, if you are going to do that, use your common sense and make sure it's not being filmed when you do it. (Cited in J.-P. Jeanrenaud 1995)

Australian Prime Minister Paul John Keating condemned the loggers for their “intolerable violence”, and censored the director on television and in the press forcing him to make a public apology (J.-P. Jeanrenaud 1995). In Japan, Mitsubishi sent out hundreds of thousands of letters defending logging activities, and blaming poverty as the real cause of forest destruction. The company produced a comic book for Japanese high schools refuting the environmentalists' claim. The Japanese Minister of Education subsequently recalled it as “propaganda for a single company” (Marx 1994).

Thus the evidence for a growing mutuality of certain commercial and environmentalist interests is mixed. It appears that commercial interests can be aligned with concerns for biodiversity conservation if intensive advocacy work and networking are undertaken, as WWF-UK has done. However, some cautious observers are concerned that, by working with industry, conservation objectives may get lost or watered down. In the case outlined above, WWF-UK is confident that negative publicity and public pressure will lead timber traders and retailers to align themselves with the more reformist conservation lobby. However, it is clear that the timber trade has the incentives and the resources to be a strong countervailing force.

Local agrarian groups

Local agrarian groups are those that use a range of natural resources either as use values or for petty commodity production. Access to this range of natural resources is therefore crucial to livelihoods. There has been much recent interest in the role of biodiversity in the livelihoods of local agrarian communities.¹² This research has lent support to the argument that local communities can potentially play an important role in biodiversity conservation (Pimbert 1993). There are numerous case studies that show how local communities rely on an enormous variety of products—fuelwood, fibre, bush meat, medicines, vegetables, craft materials, and so on. It has been estimated that three-quarters of the world's population relies on wild foods for its livelihood security, and that 80 per cent relies on traditional medicine for primary health care (Pimbert 1993).

Some of the best-known examples come from studies of tropical rainforest communities, particularly in West Africa and Latin America. For example, the report of an ethno-botanical study in 12 villages around the Korup National Park in Cameroon contains a 35-page appendix of local medicinal species, seeds, vegetables, fruits, spices, roots, mushrooms, and other species used by local people (Thomas 1989). Falconer and Koppell (1990) review the major significance of so called “minor” forest products to local communities in West Africa.

¹² See Scoones 1992 for a comprehensive bibliography.

Other communities in less diverse environments also use a wide variety of species for food and medicine. For example, the Pokot pastoralists are known to use some 61 plant species for food and 118 for medicine. They are known to have an exceptionally detailed understanding of fodder species. They can identify species to promote milk or meat production, and for wet- or dry-season fodder (Barrow 1991). Similarly, in Nepal, surveys have shown that Nepalese farmers use between 70 and 130 species of fodder trees, (Robinson and Thompson 1989). Local knowledge of species and varieties is of course not isolated to so-called wild foods. There are well known examples of diversity in cultivated crops. For example women rice growers in India are reported to recognize and use over 100, mostly indigenous, varieties of paddy (Shiva and Dankelman 1992).

Gender

A number of case studies reveal the varying importance of species variety to different categories of rural people—primarily on the basis of gender and class, and especially in times of crisis, food shortage or outright famine. There are three major reasons why a gender perspective in biodiversity erosion and conservation is important:

- Women may be key actors in biodiversity conservation since their knowledge of natural resources may be differentiated from men's—and in some instances greater than men's;
- The value of biodiversity to women in rural areas in the South may be particularly important on account of their patterns of access to a wide variety of plants for food, medicine and other household uses;
- The effect of agroecological change and biodiversity erosion may, therefore, impact women in different ways than men.

Let us examine each of these hypotheses in turn.

Shiva and Dankelman (1992) argue that women have traditionally played a silent yet central role in the management and sustainable use of biological resources and life support systems. Their relationship with the environment is holistic, multidimensional and productive. Western research and technology are undermining the control women have over these systems and breaking down linkages that made evolution possible. Successful management of biological resources depends on women's control over environmental systems. This role of women must be respected and reinforced if conservation of genetic diversity is to succeed (Shiva and Dankelman 1992).

In general terms, there are cautionary comments from Jackson (1994), who argues that we should beware of linking gender issues too tightly with biodiversity conservation. It is possible to produce counter-evidence that shows that women resist conservation. There should be no a priori grounds, she says, for assuming an affinity between women's interests and those of environmental protection and conservation in the Third World. She argues that environmental conservation frequently seems to be based upon coercive social relations, and that the emancipation of women, or other dominated groups, may not necessarily create a breakthrough for conservation—rather there are possibilities for breakdowns of eco-order. Also, Fairhead and Leach (1992) warn that “the importance of differences of agroecological knowledge can be overstressed as a basis for assessing people's differential capabilities, adaptability and flexibility in agriculture”.

Against these cautionary remarks about the specificity of women's knowledge of natural resources and therefore of biodiversity, there are arguments that since women are major users of the natural environment they have a wide knowledge of natural resources, based upon the exclusive or dominant use of many species of wild and cultivated plants,

animals, fuel, fibres, fodder and medicines. Their work and knowledge are based on linkages within production systems (that is, ecological systems), which are crucial to maintaining ecological stability.

For example, it is argued that women's knowledge can make a potentially important contribution toward international genetic resource conservation with regard to fuelwood scarcities, since women predominantly collect fuelwood in many different countries.¹³ However, it is only occasionally that diversity of fuelwood species is the major problem, rather than the increasing scarcity of biomass overall, although both problems almost certainly coexist widely. Also, it does not necessarily follow that women's knowledge of fuelwood species is separate from and superior to that of men, just because women usually do most of the work in collecting fuelwood. Bakweri women in southwest Cameroon are involved in gathering a vast range of diverse products from the tropical forest: wild foods, spices, medicines, various fuelwood species, leaves used for plates and wrapping, and products for income-generating activities such as basket-making.

Although men are also involved in gathering a range of products, they tend to specialize in wood products, hunting and honey collection (S. Jeanrenaud 1991).

Women hill farmers in Dehra Dun in India know and use over 145 species of forest plants. However, knowledge is declining as indigenous forest declines. In Kenya, women use 65 indigenous species of plants for food and 99 for medicine. Factors affecting selection of indigenous species include abundance, ease of access, preparation requirements and palatability (Rocheleau et al. 1989). Women are also involved in wildlife utilization in South Africa, where they hunt birds and rodents and collect insects. They spot large game when gathering, and stop their activity to tell men. Large game management has negative impacts on women, because such animals destroy crops and may make travel dangerous (Hunter et al. 1990). Evidence from Kenya demonstrates the importance of wild foods and medicinal plants for supplementing diets and increasing their variety. In the rainy season when cultivated foods are not available, women collect many wild foods that are rich in protein and minerals. Wild foods also substitute for meals when away from home and during times of famine, and are used for preventing illness (Wanjohi 1987). Hoffmann-Kuehnel (1989) termed this women's knowledge of the "survival economy" because of their identifying, growing, conserving and processing wild and indigenously cultivated plants in Africa. In conclusion, the application of knowledge differentiation of species diversity in livelihood strategies along gender lines is highly variable and site-specific.

The next hypothesis is that local biodiversity may be more valued by women and contribute more to their welfare than to men's. A number of examples support this view. It might be expected that use and knowledge of local species are highly correlated, but the point made above that use of may imply knowledge of, but does not necessarily imply control of those resources. Sometimes, a higher value of species diversity to women is a result of them being excluded from the control of and consumption of a narrower range of the most important (and if marketed, most lucrative) sources of income. Women then become marginalized to common property and wild foods.

Evidence from the Tukanoan Amerindians of Colombia shows that, in the rainy season, insects (beetle larvae, ants, termites and caterpillars) can contribute up to 26 per cent of the crude protein in women's diets (12 per cent for men). Women do not have

¹³ Agarwal 1986; Ki-Zerbo 1981; Nagrobrahman and Sambrani 1983.

the same access to game and fish as men and so consume more insects. On some days insects are the only source of animal food for women. Insects have a very rich energy value per 100 grams, providing an essential contribution to dietary diversity and daily consumption needs (Dafour 1987). In Ghana, women depend heavily on forest-based gathering and processing for income. The roots of *Parkia bicolor* are gathered by women and beaten into sponges and sold in rural and urban markets. The gathering of food wrapping leaves (of the *Marantaceae* family) is the main source of income for many women. In Kumasi market in Ghana hundreds of traders and leaf gatherers sell their bales of food wrapping leaves. Women are also involved in the processing of logs into chew sticks. Moreover, 90 per cent of the traders of non-timber forest products in Kumasi market are women. Trade of such products provides a source of cash income for family food, clothing, school fees, and farm investment (Falconer 1990).

Studies in Kenya illustrate that gathered plants are more important to the poor than to the rich. The collection of wild products tends to be gender and age differentiated: women prefer wild vegetables (they appear during the rainy season and provide an inexpensive food source during a time when food supplies are decreasing); children prefer fruit; men prefer fibre and medicinal plants. Two species of fruits are sold in markets: *Tamarindus indica* and *Ximenia caffra*. Wild resources are gradually decreasing (Maundu 1987). To take an example from India, in Uttar Pradesh it was found that women were responsible for the management of tree resources for food, fodder, fuel and household items. A total of 33 per cent of women's income was derived from forest and common land (for poor women it was 45 per cent), while men, on the other hand, rely on off-farm employment, and only obtain 13 per cent of income from forest common land (FAO 1987). A final example comes from Kenya where, in times of drought, survival strategies may be gender-specific. Wild foods became more important in the diet, resulting in greater collection activity, largely by women. "One man's field becomes another woman's commons during drought" (Rocheleau 1991). Wild foods are often collected from private fields, but with communal access to wild foods found in the bush and from boundaries and paths.

Finally, it may be argued that biodiversity erosion—a reduction in the local availability of a range of species—will affect the welfare of women more than that of men. Women are often affected more immediately than men by environmental degradation because they are usually involved on a day-to-day basis with household food security, fuelwood collection, water collection and water quality. Therefore their workload may be increased in the fulfilment of these gender-defined tasks. Shiva and Dankelman (1992) argue that the shift from subsistence to commercial agriculture has led to reduction in women's sphere of influence, and an increasing dependence of women on men for extension services, seeds and the handling of tools and money. The loss of control over natural resource management is thought to lead to loss of women's knowledge and intellectual integrity with regard to forestry, plant and animal genetic resources. It results in the de-skilling of women. Shiva and Dankelman further argue that the effects of the introduction of new agrotechnologies results in the loss of biodiversity and replacement of local varieties (1992). This in turn is thought to lead to the increased vulnerability of women due to loss of sources of food, fodder and minor forest products. Also, natural evolutionary and local breeding mechanisms will be undermined by new biotechnologies, thus threatening life-support systems.

The rural poor

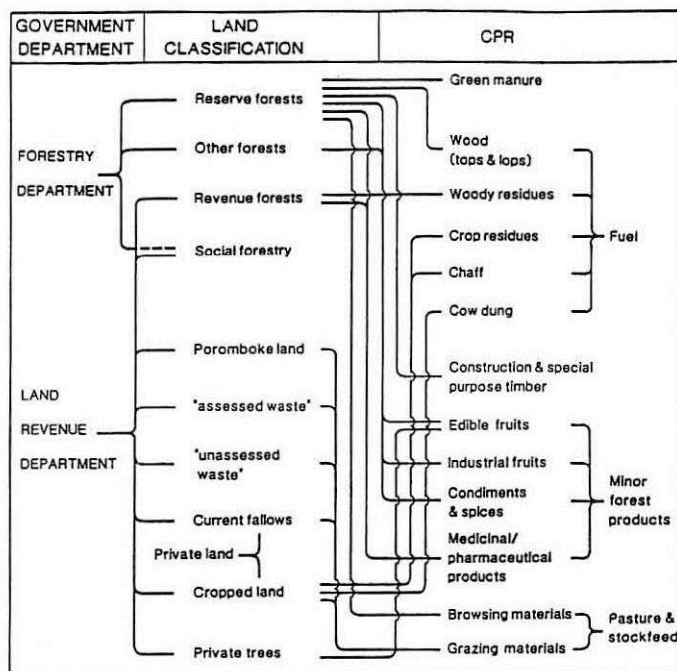
Species variety may be important to those with limited income and access to private resources, especially land, and particularly in times of environmental stress such as drought. Coping strategies of poor rural people in times of food shortage often include use of wild foods. In particular, those who do not have access to adequate private resources (for example, agricultural land) rely upon common property resources where wild foods are found.¹⁴ Conversion of forests and uncultivated land may reduce biodiversity in the sense that the variety of species used as dietary supplements, and as scarcity foods at certain seasons and during times of food shortage, will be reduced. It is reasonable to assume that this process will have detrimental impacts on poorer sections of rural populations.

One of the few detailed case studies of this process has analysed the reduction of common land in Tamil Nadu, India, and its impact on species diversity and the users of common land (Blaikie et al. 1985; 1992). The local situation was governed by such factors as population density, farming system and other local ecological variables. However, it was clear from all sample sites that a process of social and economic differentiation was taking place, and that weaker sections of the population (for example, tribals and scheduled castes) were being economically and spatially marginalized onto a shrinking and degraded commons. Common land and forest land itself was being encroached upon both legally and illegally. The volume and diversity of products from the different categories of land are shown in figure 15.2. For each of the categories of resource an inventory was made of the most important plant species.¹⁵ It is clear from this list that local livelihoods relied upon a very considerable range of species. For example, ten species were identified as sources of green manure, six as edible fruits (almost certain to be an underestimate), ten as construction timber, and five as condiments and spices. This case study focuses on an important general point regarding the relationship between biodiversity and the welfare of the rural poor. It is that the impact of biodiversity erosion on the rural poor must be considered in the wider context of economic and social marginalization. Many have inadequate access to agricultural land and other privately held resources and are pushed into wasteland or common land, or into squatting illegally in state forests. Decline in the availability of diverse resources from uncultivated, wild or semi-wild habitats thus impacts particularly on the rural poor (Agarwal 1990; Jodha 1991).

¹⁴ See de Waal 1989; McGlathlon et al. 1986; and Agarwal 1990 for examples in Africa and India, respectively; and see Blaikie et al. 1994 for a review.

¹⁵ Not listed here for lack of space, but see Blaikie et al. 1985:28.

Figure 15.2: Common property resources and land classification in Tamil Nadu, India



Source: Blaikie et al. 1985:27

The notion of “the community”

As we have already emphasized, it is important to take an overall view of the actors concerned in biodiversity within an agrarian political economy. One of the main themes of this chapter is that the biodiversity issue in agrarian societies in the South revolves around competition for scarce resources, strategies for gaining access and struggles that sometimes involve direct physical confrontation as well as the creation, use and manipulation of legal means. There is a comforting and misleading notion of “community” that is used in many conservation documents. It has become a social construction that policy makers and foreign donors need and upon which they base assumptions about local management of resources. Anderson (1983) talks of “imagined communities” that meet policy objectives. In reality, “communities” are often highly differentiated—along lines of gender, age and wealth, for example—and therefore their members may have very different perceptions and definitions of biodiversity. Also, the implications of biodiversity loss—as well as the costs of conserving biodiversity—must be differentiated according to wealth, gender and age. There is a need to “deconstruct” the notion of community. This issue will be discussed in more general terms below.

There are other problematic conceptual areas at the interface between agrarian groups and policy makers’ images of them. The notion of the conservation of the natural resource base and of the community’s existing use patterns may constitute a form of “enforced primitivism”. Even where local people use a wide variety of species that may be crucial to their livelihoods, they may want different lifestyles. S. Jeanrenaud (1991) showed that even in the same community there was a wide range of views about the rainforest—some valued its products, while others wished to see it converted to other uses. Linking biodiversity and cultural preservation may require a kind of enforced primitivism unacceptable to local people.

There may be further divergences of values put on different species, where use value in the short-term may identify different species than those identified on biodiversity conservation grounds. Whereas conservationists value high forest, some case studies show that most of the locally valued species are within secondary forest. For example, Thomas et al. (1989) show that only 18 per cent of the most valued medicinal plants were found in high forest, the rest came from secondary forest and cultivated areas. Leach and Fairhead (1994) draw attention to the importance of bush fallow to local subsistence rather than high forest.

In summary, biodiversity conservation, as with other conservation policy in general, demands that the whole “cast of actors” concerned is identified, along with actor’s interests in the elements that comprise collectively the notion of biodiversity, how they go about pursuing their objectives and their source of power to reach them. In biodiversity conservation, social mapping is just as important as ecological mapping. An example of this approach has already been given for the Nepalese Terai (Brown 1994).

A case study concerning a national park in Zambia (Abel and Blaikie 1986) illustrates the ideas of competition, different identifications and meanings of natural resources, and the strategies of different actors. The Lwangwa Valley is a national park that can be viewed as an assemblage of resources, together constituting an ecosystem and containing valuable biodiversity. There are a number of groups interested in components of this system or, in the case of scientists in the system as a whole and its contribution to biodiversity. Table 15.4 identifies these groups, their interests and how they pursue them. The outcome of this configuration of interests since this chapter was written is instructive. The authors came to the conclusion that most of the actors could get most of what they currently required from the park at the same time as most of the conservation criteria were being fulfilled. This required a “deal” between the local actors and the outside agency that had its own conservationist criteria. What the authors did not consider at the time of writing was the prevailing unequal distribution of power. An appeal to democratic negotiation toward an environmentally friendly outcome may be attractive to donors, but it was essentially an optimistic one. A number of IUCN reports have noted that the participatory design of the subsequent project failed, and local “communities” did not secure the benefits of conservation or project resources. Instead, it was the chiefs (the leaders of the local communities) and project personnel themselves who benefited. Here actors pursued their own “projects” with the political resources available to them. The methodological point is well illustrated—that peoples’ involvement with biodiversity is often contingent and unwitting, and will involve competition with others.

Policies

Here we review three distinct intellectual paradigms that frame the general approach to conservation and, more specifically, to biodiversity conservation. Each paradigm has profound and pervasive effects both on the international discourse about conservation and on policies themselves in different countries. These paradigms also have fundamentally different approaches to human welfare, and assume different sets of relations between civil society, the market and the state.

Table 15.4: Interest groups, a national park and wildlife policy in Zambia

Group	Position in political economy	Source of power	Interest aims with regard to national parks and wildlife	Direct means to reach aims
Hunter- cultivators	Incorporated and marginalized; labour extracted; hampered by hunting laws; excluded from most valuable parts of trophy trade.	Limited, but chiefs retain some influence. In direct opposition to National Parks and Wildlife Service bureaucrats and guards, except in crop protection and predator control.	Source of meat; land for cultivation; ivory; rhino horn; honey; etc. A little employment with National Parks and Wildlife Service Safari firms, tourist organizations.	Stealth; "poaching"; firearms (some modern).
Safari hunters	Small companies controlled by expatriates with support from Zambian shareholders, a few politicians and Zambian bureaucrats. Ad hoc links with Wildlife Conservation society and Save the Rhino Trust.	Astute informal negotiations; profitability—funds for lobbying, etc.; ability to earn foreign exchange.	Right to hunt in best areas and obtain high-quality trophies with very high rate of success.	Vehicles and modern firearms; use of local trackers and local knowledge; areas close to national park boundaries are excellent hunting areas due to higher densities there.
Conservation pressure groups	Connected to top Zambian politicians; ad hoc alliances with safari hunters; most members are expatriates, many with influential posts.	Lack of informed opinion in Zambia; individuals also have other skills essential to Zambian economy; opinion formers and "national conscience" on conservation.	Conservation of species, with individuals using wildlife for recreation and sport hunting.	Lobbying; publicity; publications; conservation education; fund anti-poaching efforts; many members are Honorary Rangers.
Bureaucratic bourgeoisie	Includes politicians as well as senior career bureaucrats. Control state apparatus to secure access to capital (loans, etc.) to manipulate prices. Because of this control, senior bureaucrats must be part of any executive decisions concerning national parks.	Political, administrative and thorough control of product (directly and indirectly); form major part of the dominant urban alliance of mineworkers, urban entrepreneurs, big business interests, politicians, bureaucrats.	Individuals benefit from ad hoc informal agreements; as opinion enhancement in international arena; as earner of foreign exchange in line with urban interests	Legislation; budget allocation; policy making; patrimony. Backed by powers of the state (police, army, national Parks and Wildlife Service, etc.); establishment of parastatal tourist organization.
Scientists	Direct and indirect access to foreign aid for Zambia. Access to highest positions of political power, often on individual basis, but very unevenly. Allied to local conservation forces to promote some of their aims.	Science as legitimation; Zambia (particularly urban elites) dependent on international aid and therefore indirectly on international opinion; little formed scientific opinion in Zambia to question and refute various scientific theories.	Development of "rational" policies based on "knowledge"; pursue individual careers (recognition, esteem, research funds, etc.).	Publications; individual access to decision makers, both national (bureaucratic bourgeoisie) and international (various aid agencies).

Source: Abel and Blaikie 1986.

It is apparent that international conservation policy and practice are undergoing rapid transformation. Contemporary conservation ideology, at least on paper, represents an evolution away from predominantly nature preservation to sustainable use of natural resources, with stronger emphasis on livelihoods and, in more general terms, on human welfare. Policies that once viewed people as a threat to nature now regard people as potential partners in sustainable development. However, it must be emphasized that the role of theory in policy making (and in conservation policy making in particular) is one of persuasion and legitimization through the demonstrable (rather than actual) force of reason. Thus most institutions appropriate and use theories, or more usually parts of theories, to persuade others and enrol them in their particular “projects”. This has already been illustrated by the review of international policy making by WWF International in the section on “Approaches” above. It is not surprising therefore that policy and strategy statements are eclectic in their theoretical exposition. To take an example, the World Bank’s *World Development Report* (1992a), while taking a neoliberal economic approach to the environment and conservation, also weaves strongly neopopulist strands of thought throughout (for example, the links between poverty and environmental degradation). It is thus to be expected that—while the genealogy of conservation paradigms may be traced to a relatively pure set of mutually consistent principles, policy and strategy—documents can be hybrid.

Conservation has a complex heritage; both the “classic” and “neopopulist” approaches can be traced back to historical themes within early conservation. While the “classic model” was always predominant, its history also includes popular environmental movements resistant to colonial regimes and destructive “development”, and conflicting views about conservation within many colonial regimes (Grove 1987). Much of the contemporary interest in “people-oriented” conservation has its roots in the historical struggles and strategies of local groups to protect their environments and livelihood interests, and the more populist conservation thinking in the nineteenth century. The reasons for the early predominance of the classic model and subsequent growth of the neopopulist and neoliberal approaches are complex, but deeply embedded within world political-economic change (especially decolonization in the South) and the social dynamics of conservation in particular countries.

However, the somewhat contradictory mixture of classical and contemporary ideas within the conservation movement is causing some discomfort for two main reasons. First, it creates new practical dilemmas of how to integrate conservation and development on the ground with local communities. Second, it creates the potential for new and unknown political alignments and allies, particularly with grassroots political organizations and campaigners for indigenous people’s rights. Third, the two different paradigms have implications for who designs and controls conservation programmes, and whose agenda prevails. These approaches are discussed below.

The “classic” approach

This approach focuses on environmental solutions to perceived environmental problems. It is best exemplified by the traditional (exclusionary) national parks and protected area systems. It promotes conservation “technologies” that are assumed to be known by and accessible to resource users, which address the apparently physical problems of environmental degradation.

The wider objective of the protected areas system is to conserve and manage entire ecosystems and to prevent loss of wild species. Parks and nature reserves are seen as the

key instruments in conservation. The IUCN describes a comprehensive system of protected areas that includes 10 main management categories. These basically represent a continuum from no human intervention to increasing emphasis on human use and resource development. There is a growing science of protected area design and management, and numerous publications that specify conservation techniques and special practices for buffer zones. With increasing emphasis on biodiversity conservation, the international conservation movement is calling for more protected areas.¹⁶ It is widely agreed that each country should aim to protect a minimum of 10 per cent of each biome under its care (for example, forests, wetlands, oceans, tundra, grasslands, etc.). During the 1970s the total area under protection increased by 80 per cent (MacKinnon 1986). Most of the growth of protected areas has taken place in economically poor, but species-rich tropical countries where the world's biodiversity occurs and is most threatened (Myers 1979). By 1993, there were some 7,000 protected areas throughout the world, covering 4.8 million square kilometres, which represents 5 per cent of the world's surface (Pimbert 1993).

The expansion of protected areas, particularly of national parks, is highly controversial. There is also much debate about the appropriateness of protected area categories in diverse socioeconomic settings. As West and Brechin (1991) point out, the categories remain ideal, while management practice is often muddled and ineffective on the ground.

Origins

Many writers (including Nash 1970; Runte 1979) have examined the inappropriate and widespread export of the concept of the national park, which evolved in the United States, to many countries in the South. (It is widely agreed that the international parks movement began with the creation of Yellowstone National Park in 1872). The goal of the traditional park system was to set aside and preserve areas of natural beauty and phenomena from human exploitation, for the enjoyment of visitors. Boundaries were drawn around special places, so that they could be set aside from the "ravages" of ordinary use (Hales 1989). However, analysis shows that this model of a national park is the product of an affluent culture, emerging in the context of boundless wealth, and usually in sparsely populated areas, with urban populations no longer subsisting directly from the land (Nash 1970). This original conceptualization of the national park, now embodied within IUCN's framework, tends to exclude resident people and use of resources from parks. As a model for countries with entirely different circumstances, it has caused enormous social deprivation and suffering.

A central critique of the classic approach to conservation refers to its colonial origins in developing countries. Several authors draw attention to the mythical dimensions of colonial conservation, suggesting that protected area policies may reveal more about Western eco-cosmologies and subliminal notions about "human-nature" relationships than "objective" ecological science. For example, Anderson and Grove (1987) examine the wider psychological function of the African environment in the European mind. To understand how and why European ideas have shaped conservation policies in the past and present we have to understand how nature's eternity was seen to

¹⁶ IUCN/UNEP/WWF 1991; CNPPA 1992; Keating 1993.

be symbolized in Africa, and how man has sought to rediscover his lost harmony with nature. Further, it is suggested that European-shaped preservationist policies hold vast acreages of land hostage to its romantic and arcadian myths (Marks 1984).

Perhaps an important lesson for contemporary ecologists and conservationists is to be aware of the deep and reiterative relationship between science and the values of society. Conservation policies will inevitably symbolize the views and values of their authors and cultures and in this context may be analysed as social constructions. International policy needs to be open to other eco-cosmologies that may have different views about the relationships of the human and natural worlds.

In many cases the establishment of national parks has been (and continues to be) closely tied to elitist interests. For example, in the words of Colonel Mervyn Cowie, an early preservationist instrumental in the establishment of the Serengeti Park in East Africa, protected areas were designed to provide “a cultured persons’ playground”. He believed that the natives had very little interest in the parks; in fact the main purpose of the parks was to “protect nature from the natives” (Cowie, cited in Gilges 1992). Some parks also served important economic functions. For example, Mackenzie (1987) examines the essential role of wildlife (particularly ivory) and subsidies provided by the “Hunt” in the economic survival of colonial regimes. He illustrates how the “hunting ethos” and ideas about conservation became intimately connected to the structures of privilege and power of the new rulers of Africa.

Impact on local people

Many national parks displace people from their traditional lands and undermine their common property institutions. Access to resources such as food, fodder, medicinal herbs, fuelwood and timber, which are crucial to livelihoods, is often restricted. A contemporary example is the proposed eviction of over 7,000 people from 19 villages from the core areas of the Kuno area in Madhya Pradesh, India (from March to July 1995), to create a lion sanctuary. About 90 per cent of the people in the area are Sahariya tribals, forest-gatherers who make their living by collecting and selling medicinal herbs (Jain 1995). According to Parashar (cited in Jain 1995) “breaking the Sahariyas’ bond with the forest to accommodate the lions is a perpetuation of the tribals’ growing alienation from the land, caused by official conservation strategies”.

Without access to traditional land, the land surrounding protected areas is often degraded due to increasing pressure from local people, and a free-for-all open access situation may arise. In the long-term this puts pressure on protected areas themselves. Denying access to traditional lands without providing sustainable land use alternatives can lead to perpetual land use conflicts between park authorities and local communities that are rarely resolved. Indeed, open protests, attacks on park guards, poisoning of animals and deliberate burning of forests have become common in some developing countries.¹⁷

Historically the protection of parks and reserves has been based on policing and patrolling methods, using forest guards in attempts to prevent illegal activities and agricultural encroachment and to enforce park and reserve regulations. Local people are often subject to fines or imprisonment if they are caught breaking regulations. These

¹⁷ Ghimire 1991, 1994, with an example of panda sanctuaries in China; and Pimbert 1993.

methods have been notoriously unsympathetic toward local communities, and have encouraged antagonistic attitudes toward conservation. They have also encouraged the appropriation of “bureaucratic rent” by local officials, such as forest guards, wildlife officers and project personnel. There is increasing recognition that this “preservationist approach...requires an essentially militaristic defence strategy and will almost always heighten conflict” (Machlis and Tichnell 1985). Furthermore, the logistics and costs of protecting reserve areas in this manner are often beyond the capability of many governments. Guards rarely have adequate technical or financial resources for effective management. They tend to be poorly paid and trained, and have low morale. It is widely agreed that most lack the inclination or capability to identify or address local park-people conflicts (Wells et al. 1992; Hough 1988).

Partly in response to these conflicts, the idea of buffer zones is often incorporated into protected area models. These seek to combine socioeconomic development with protected area management. However, they are notorious for not providing enough land for sustainable livelihood alternatives; they are often located in risk-prone environments and are underfunded, “top down” or “blueprint”-oriented and of a short-term nature (Pimbert 1993). The term “buffer” zone clearly expresses a defensive posture, beyond which nature needs to be protected from people.

The discourse of fortress conservation mentality also changes the way we think about people living in the vicinity of reserves. “Hunters” become “poachers”, “settlers” become “squatters” and “land clearing for agriculture” becomes “deforestation” (Brown and Singer 1991). Local people are acutely aware of these changes in their perceived status. For example, the Bakweri people from the Etinde forest reserve in Cameroon say that “protected area legislation turns the locals into thieves” (S. Jeanrenaud 1991).

Ecological models

People have often been excluded from parks even where there is no proof of resource degradation. The fact that humans may be instrumental in shaping ecosystems or enriching biodiversity through management practices has, until recently, rarely been considered (Rabinovitch-Vin 1991). Pimbert (1993) argues that a “paradigm shift” is occurring in ecological thinking and that past management of ecosystems has been based on a far too static concept. Much recent ecological research points to the importance of understanding historical information (including human activity) and disturbance processes as important components of ecosystems. For example, Gomez-Pompa and Kaus (1992) argue that until we understand that tropical forests are “both artifact and habitat”, we will be advocating policies for a mythical pristine environment that exists only in the neocolonial imagination.¹⁸

Policies and politics

In the classic approach to conservation, the state (often in alliance with an international conservation organization) plays a major and leading role in defining the conservation problem, formulating policy, then implementing it. It promotes “its own” science, appeals to a (particular) scientific interpretation of the problem, and attempts to use state power and the institution of state property to impose its policy on civil society. The issues of

¹⁸ See Behnke and Scoones 1993 and Abel 1993 for a review of these models in rangelands management.

human welfare hardly appear on the agenda at all, and conflicts that arise with the imposition of state appropriation of biological resources are resolved by coercion. Other parallel critiques of soil and water conservation may be found in Blaikie (1985) and Baker (1981).

Why, then, has the national park model of conservation been so widely adopted in developing countries in the post-colonial era? The answers are embedded within the political economy and in alliances between political elites. As in the colonial era, national parks often become the “political tools” or instruments of certain dominant groups, and may be considered symbols of affluence or ways to attract tourists and foreign exchange. For example, the Malagasy government is known to be keen to expand its network of national parks in order to generate foreign exchange through tourism (Ghimire 1991). It is not alone, as the Luangwa National Park in Zambia discussed in the “Actors” section above showed. In order to encourage tourism, the legal status of some forest reserves has been changed to national park status. Moreover, some foreign aid donors encourage alteration of the status of many other protected areas into national parks, in order to increase earnings from tourism. Peluso (1993) argues that many state agencies are interested in linking up with international conservation interests in order to use the ideology and technology of conservation as a means of gaining control over valuable resources and recalcitrant populations.

It is also feared that the classic model of parks and reserves is well suited to serve the economic and political interests of governments and local elites as they seek to benefit from biodiversity prospecting and the so-called “gene rush”. As genetic materials acquire market value, protected areas in the biologically rich developing countries are becoming commercially significant. All the major pharmaceutical firms are already screening the genetic resources of Brazil, China, Costa Rica, Micronesia, and other countries. Many governments are making agreements with multinational corporations for the exploitation of useful genes in the fauna and flora of protected areas. For example, Merck pharmaceutical company has recently signed a five-year bilateral agreement with Costa Rica’s National Biodiversity Institute (INBio). They pay one million US dollars for prospecting rights and have agreed to share royalties on sales of products derived from useful genes (Reid 1993). There is much concern that these and similar deals will have negative consequences on local communities. Not only will they fail to receive compensation for their knowledge and role in enhancing genetic diversity, but locals will also be further marginalized from resources crucial to livelihoods as elites capture the benefits of gene prospecting in protected areas (Pimbert 1993).

Summary

It has become increasingly apparent that the classic model of conservation is being seen as ineffective in reaching the objectives it has set itself, and is being questioned on ideological, ecological and political grounds. Communities adjacent to protected areas frequently lose access to those areas and consequently bear substantial costs, while receiving few benefits in return. As FAO pointed out in 1985, the “profits” of genetic resource conservation often accrue to people in other countries and regions, and do not provide benefits to local people. Although benefits are increasingly recognized as global, significant costs of conserving biological diversity are being borne by those least able to pay (Wells et al. 1992). Thus, while the expansion of national parks and other protected areas may be seen to be potentially beneficial for biodiversity conservation, conservationists need to ask whether the means justify the ends.

The history of protected area policy represents a shift in thinking away from the “fortress” mentality of national parks to more emphasis on sustainable use of natural resources. Today many forms of protected areas coexist. McNeely (1988) argues that, while national parks are as important as ever and “as carefully protected as ever”, they must be supplemented by other kinds of protected areas to meet the broader needs of social and economic development. Some of these new developments are examined in the following subsections.

The “neopopulist” approach

This has re-emerged within the last 15 years as a response to the failures of the “classic” approach. It seeks to integrate biodiversity conservation with the needs of local communities. It is exemplified by the more “people-oriented” conservation programmes, such as the integrated conservation and development projects (ICDPs) and joint or co-management schemes that attempt more participatory modes of project formulation and implementation. The neopopulist approach can be seen to embrace two broad streams of thinking about conservation. One is conceptually derived from environmentalists and the other from the social sciences.

Origins

Elements of the populist approach to conservation can be traced back to earlier experiences within colonial regimes. For example, Grove (1987, 1990) argues that the ideas of the early conservationists (the “surgeon-botanists”) in South Africa and of the East India Company were essentially a humanitarian response to the environmental consequences of colonialism and were relatively holistic ideologies. Many of these ideas were difficult to reconcile with the driving interests of European capital and posed a threat to the unregulated activities of the settlers, particularly those whose capital-intensive activities depended on deforestation. Indeed, in 1880, the Natal Forest Commission published comments on the process of land alienation and consequent psychological impact on African farmers. Grove (1987) suggests that contemporary conservation ideologies that identify with the basic needs of peasant populations have much in common with the ideas of the colonial botanists and much less in common with the land-alienation strategies of some colonial policies.

The contemporary neopopulist debate has gained strength since the mid-1970s, particularly since the publication of the *World Conservation Strategy* (IUCN 1980), *Our Common Future* (United Nations 1987), and *Caring for the Earth* (IUCN/UNEP/WWF 1991). There has been a growing awareness of the links between the environment, development and poverty, and a rebirth of earlier concerns now embodied in the concept of “sustainable development”. The controversy over national parks has led to a new wave of thinking about conservation, particularly over the fate of people affected by protected area policies. That the poorest sections of the community should bear the costs of conservation is increasingly questioned on ethical and practical grounds. The key message to planners is that conservation is an economic and social as well as a biological decision. Decisions should not be made on biological grounds alone, in isolation from the needs of local people.

Contributions from other disciplines

Developments within other disciplines (for example, politics, anthropology, agriculture, forestry) have also lent support to a new wave of populist thinking within conservation. For example, a significant impetus comes from work of human rights activists and the so-called “red-greens” (Adams 1990). Unlike environmentalists, who tend to conceive of sustainability in ecological terms, this group takes up the social and political dimensions of sustainability. Indeed, conservation itself is understood as a central political issue in the lives of affected communities because it involves the very basis of their subsistence: their right to land (Horta 1991). In the past, traditional conservationists and radicals have had very different agendas and interests, but today many are converging to form (potentially) new alliances and a more radical approach to conservation.

For many, the concept of “sustainability” has been stripped of the social and political issues implicit in the notion as originally acknowledged by the Brundtland Report (United Nations 1987). Colchester (1992) and Redclift and Sage (1994), among others, argue that the promotion of sustainability is by definition political. It is fundamentally linked to concepts of social justice and equity—both within generations and between generations, as well as both within and between nations—but it has been taken over by more technical (ecological) definitions. According to the United Nations (1987) the pursuit of sustainability requires a political system that allows effective participation in decision making, which is best secured by decentralizing the management of resources upon which local communities depend and giving communities an effective say over the use of resources. It requires promoting citizen’s initiatives, empowering peoples’ organizations and strengthening local democracy.

These themes are central to the welfare of marginalized, tribal and indigenous peoples, particularly forest communities. For example, Colchester (1994) argues that indigenous peoples across South and Southeast Asia are making similar claims: the right to the ownership and control of their territories, the right to self-determination and the right to represent themselves through their own institutions—all of which have their basis in international law. In the context of human rights, sustainability for forest people throughout the world means maintaining supplies of natural produce essential to their livelihoods. Lohmann (1991) claims that community-based management can secure biodiversity far more effectively than imposed conservation plans. He suggests that the political leadership provided by grassroots groups might be central to conservation movements—although it currently it seems too “exotic” even to mention—and that the political rights of villages, societies and movements should be represented in discussions of conservation programmes. Without secure land tenure, control of resources, popular decision making and basic needs provisioning, conservation of natural resources will be unsustainable.

Over the last 15 years a further contribution to community-based conservation has come in the form of a growing interest in indigenous knowledge, local management institutions and indigenous technologies. Kiss (1991) argues that there are many examples of where community management of common-property resources is sustainable and has been historically common—though Brown and Wycoff-Baird (1992) point out that many traditional structures are losing their viability in the face of pressures both within their own societies (population growth) and from without (in-migration of other resource users, penetration of market forces, political instability). The theoretical insights of the Common Property Resource Management workshop in 1985 and subsequent publications by Ostrom (1990), Bromley (1992) and others noted in the first section of

this chapter, have all been central to this rapprochement with resource users in the South.

An expanding interest in participatory approaches and the development of new associations such as “user groups” in natural resource management, co-management, and conflict resolution techniques are key contributions to the populist approach. An enormous literature on participatory techniques has grown up over the past 10 years.¹⁹ However, there are a growing number of caveats and revisions to the realism of participatory conservation. West and Brechin (1991), for example, argue that the state of the art in testing and evaluating the new innovations is simply not advanced enough. They suggest that the international conservation movement is in for a second major revolution based on shock therapy in the face of harsh reality and warn against assuming that things are working out better than they really are.

It is worth discussing some of these concerns here, not so much to counter the neopopulist paradigm as a whole, but to throw light on some of its more comfortable rhetoric and insufficiently challenged assumptions.

An emerging critique of the neopopulist approach

First, participatory conservation requires a high degree of skilled inputs, sensitive handling of the political issues and a long planning horizon. Non-governmental organizations have been seen as the appropriate institutions—indeed there is a high degree of reflexive advocacy between the participatory approach, techniques of data collection and planning, and the institutional needs and image of NGOs. While NGOs may be able to provide this sort of input, the issue of replicability must be raised. Can NGOs expand to provide these inputs on more than a small, even token, scale? If NGOs expand in size, will their flexibility and capacity for face-to-face dialoguing with local people be compromised? Thus the “scaling up” debate concerning the future of NGOs in developing countries is very relevant to the future realism of the participatory approach to conservation. Moreover, issues of co-option by local elites and government, bureaucratization and corruption have all taken their toll on the view of NGOs as the ideal vehicle of the neopopulist approach. It is an open question whether large international organizations can institutionally adapt to the local specificities that the new paradigm demands. At the present time many of them are experimenting with decentralizing control of their operations, and attempting to link international headquarters more closely with their operational divisions.

Second, there is usually competition for resources that comprise biodiversity at the regional and local level (see the discussion on the “community” in the section on “Actors”). Therefore, participatory conservation must focus on brokering a compromise not only between the outside agency and local people, but also between different local people themselves. Any political economy is unequal where power will be exercised by certain groups to gain and maintain access to resources. The experience of the Swedish International Development Agency (SIDA) in its Community Forestry Programme in India is a case in point: forestry planting and regeneration projects on common lands faced the greatest difficulty in preventing local landowners and contractors from appropriating most of the timber; the poor, who hitherto had used the common land,

¹⁹ See, for example, Chambers 1992; Pimbert and Pretty 1994.

had been excluded from it. Jackson (1994) also points out the limitations of the participatory approach from a gender perspective. After making sure that women are represented in decision making, it assumes that communication is unproblematic and ungendered. It fails to recognize the extent to which expressed views reflect dominant/dominated ideologies, “mutedness” and the unwillingness to express alternative views where these may generate conflict. Policing of conservation programmes should be done by consent, along democratic (accountable and fair) rules. Whether this can be achieved, when the outside agency’s back is turned, or after external funding ceases, remains an open question. These discomforting thoughts contradict the assumptions of community and consensus, which are crucial to the participatory approach.

Third, participation between local people and outside agencies takes place because there is a perceived need for conservation—usually on the part of the latter. If the objective of the project is primarily conservationist, the agenda will usually be based on scientific information. If the project has an integrated objective of enhancing human welfare through the promotion of sustainable development, it will be based on socioeconomic and natural science analysis. These dual concerns have resulted in a new generation of projects that attempt to link the conservation of biological diversity in protected areas with local social and economic development, called integrated conservation and development projects by Wells et al. (1992). Although many of these projects are of recent origin, various concerns are already emerging. Some observers comment that rural development aspects have been merely “tacked on” to conservation projects; or that programmes do not offer sustainable livelihood alternatives (Ghimire 1991). In many cases, there is a lack of consultation with local people during the planning process and the benefits from conservation are not directed to the advantage of local people.²⁰ In most cases, project personnel bring their pre-set agenda to a range of local people for discussion. The degree to which local people move along the “participation continuum” (from passive participation through to self-mobilization, Pretty 1994) depends on the extent to which the outside agency can get its own way, and how flexible it is in jettisoning parts of its own agenda in the face of opposition.

Finally, what should happen if local people (or the most powerful groups) want to use and thereby extirpate natural resources thought important for biodiversity conservation? What happens if they want to substitute imported materials and non-sustainable technology? The usual outcome is less participation, a coerced set of priorities and the familiar outcome of failure. This means that the outsiders’ scientific agenda may be significantly undermined or altered, depending on the pattern of local interests and power. Land security and local control of resources demanded by indigenous groups and their supporters do not themselves guarantee prudent resource use. Colchester (1992) cites a case from Papua New Guinea where collective land rights are strongly protected by law, but where New Guinean communities have frequently negotiated away rights over their lands by leasing them to logging or mining companies in exchange for royalties. Indigenous elites may make land use decisions for personal gain rather than in the interests of the communities that they are meant to represent. For example, the indigenous elites in Sarawak very often side with loggers against local people. But many societies are radically transforming their political institutions to take account of this

²⁰ See Brandon and Wells 1992 for a review of some of the conceptual dilemmas inherent in their design.

problem. Communities have begun to evolve “Longhouse Associations” run under much more democratic principles than the traditional institutions, to provide themselves with truly representative leadership (Colchester 1992).

These points may be taken as a caveat to the uncritical promotion of participatory conservation. There are many cases of self-mobilized local groups conserving their environments, and where *etic* (outside) and *emic* (inside) agendas coincide. Success stories in the promotional literature are meant to illustrate and promote a progressive and exciting paradigm of development and conservation. Yet, for every highlighted success (often reified and selectively reported itself), there are countless stories, accounts and reports of the problems of the participatory approach. It is simply very difficult to implement—and at the same time to fulfil externally created agendas for conservation.

Beyond participation to environmental brokerage?

It may be more realistic to talk about negotiation and brokerage, rather than (unproblematic) biodiversity conservation. In this sense, real participation in the formulation and implementation of conservation can be viewed as the “best case”, but one that is rarely achieved, and is certainly not replicable on a large scale. This perspective prompts two further considerations:

- Outside conservation agencies, with their scientific ideological and institutional characteristics, have to be brought into the analysis. Outside agencies therefore become part of the solution and the problem—actors in the cast of players as any others.
- The outcomes of conservation projects (national parks, for example) will only fulfil part of external agendas. This must be expected, since projects can go against political economic structures that promote unsustainable use of natural resources only to a limited extent, without attention being given to other policy instruments at the national and international levels (which tend to lie outside the focus of enthusiasm of the neopopulist approach). Second-best policies, if well implemented, are better than “perfect” policies that are poorly implemented.

Summary

The neopopulist approach derives out of a political reaction and opposition to big business, the authoritarian state, and dispossession through capitalist expansion and technological change. In policy terms, the approach seeks to remould the interface between the majority of society (small farmers, pastoralists, petty traders, artisans, and so on) and the state. This is done by acknowledging their own agendas and their own technical knowledge, adapting plans to local conditions, and facilitating conservation through dialogue and participatory action. This paradigm has become the new conventional wisdom, particularly in international discourse, although there are still important lags in the succession from the state-led authoritarian “classic” predecessor. The profound reorientation of scientists and other development professionals, which is necessary following the purely intellectual change in approach, takes time. However, this paradigm too has to be explored and thought through “on the ground” where, as the commentary above indicates, there are emerging contradictions and problems in converting a new idea into successful conservation practice. Also, it is being challenged by the resurrection of the neoliberal approach, outlined next.

The “neoliberal economic” approach

This focuses on economic benefits and costs of biodiversity erosion and management. It emphasizes the central role of the market in regulating the use of natural resources and a more limited role for the state, which retreats from intervention to fulfil the roles of standard setting and “refereeing” the proper functioning of markets. The state should remove “perverse” incentives that encourage non-sustainable use of resources, and encourage instead the internalization of environmental costs. Partly this approach has come about from a deeper understanding of the limitations of real-world bureaucracies and the degree of control the state and its functionaries have over its citizens; and partly from the resurrection of a pricist counter-revolution and the dominance of economics in policy making.

Theories

The economic approach to environmental management as set out by such writers as Pearce et al. (1992) is based upon two economic theories—the Meade-Pigou approach to externalities through regulation (standard setting, command and control) and through taxes and subsidies, and the Coase-based approach on the internalization of externalities through the establishment of property rights. These may occur at both the local level (for example, village forests or ranges with implications for local biodiversity) and at the international level (with implications for global biodiversity and global warming). Both are developed in the economic literature on biodiversity. There are also other economic theories regarding institutional development of property rights (after Hayarin and Ruttan 1985) where resource degradation occurs from the undervaluation of those resources because they are shared. According to these and other writers of the neoliberal approach, private property rights will be developed in the case of divisible and definable resources, collective property for indivisible resources, and state property for those not readily privatizable (for example, air and some water bodies). Incentives hold the key to all these developments:

The main priority world-wide is to establish incentives, regulations and safeguards that lead to proper allocation of resources for environmental maintenance and energy conservation. (World Bank 1991:151)

Critical questions

It is beyond the scope of this chapter to provide a critique of this approach,²¹ but a number of questions about policy can nevertheless be raised. First, as with any monodisciplinary approach, other considerations that have been analysed by political science and anthropology are not well integrated (although there are economic approaches to “political” issues, such as the consideration of transaction costs, game theory and collective action, to name a few). There are many reasons, however—more usually captured by other social sciences—that may inhibit market-efficient behaviour. There may be rent seeking, regulatory capture on the part of governments, and a range of structurally conditioned agendas of consultants, international agencies and NGOs, which all produce second-best outcomes. It is a huge assumption that institutional development will necessarily evolve in a benign and environmentally friendly manner. In so many

²¹ See Jacobs 1994; Redclift and Sage 1994; and Brown and Moran 1993 for a discussion.

cases, market-led competition does not lead to efficient outcomes. Also, there may be collusion between state employees, and policy makers, business, NGO and elite interests.

Second, in conditions of great scientific uncertainty and insufficient information about the future actions of other parties, it has proved difficult to broker the preconditions for a global market for biodiversity. Negotiations have also implied the transfer of very large sums of money, and the size of the GEF bears witness to national political pressures acting upon country negotiators. There are also similar institutional and political difficulties in the fair regulation of markets at the state and local level.

Third, there are formidable practical and technical problems in executing the preconditions for a proper valuation of biodiversity and the satisfactory operation of a market that reflects those values (as discussed in the very first section). The tasks called for are, first, to estimate the benefits of biodiversity, and although a start has been made conceptually, there is a growing awareness that pricing captures only some values (for a variety of conceptual and data-related reasons).²² The second task is actually to capture these benefits. It is one thing for economists to calculate what the benefits should be—if the markets existed and people responded to them; it is quite another for resources to be created from these hypothetical values that few can grasp and recognize—let alone pay for. Education at all levels, international pressure and pump-priming funds are some of the perennial suggestions for the creation of a properly functioning market made at international seminars. The third task is the distribution of benefits. These comprise simple compensatory benefits for resettlement, alternative livelihoods, rents, and the much more important and complex issue of markets for environmental benefits of biodiversity and conservation in general. Clearly, this task is one of the most problematic due to a lack of institutional capacity for implementation. While there are neoliberal theories concerning the conditions of appropriate institutional innovations for environmental management, there remain important questions about the past record for the formation of such institutions, as well as the grounds for optimism for future ones. The fourth task is to identify who the beneficiaries of conservation should be. The fifth and final task is to see that benefits (through whatever institutional delivery mechanism) actually get to the owners of the resources that represent biodiversity.

Conclusion

The initial identification and definition of the biodiversity problem came from natural scientists in the North. The problem has a complex scientific basis, and definition, measurement and understanding of processes are marked by lack of empirical data, and are subject to the individual discretion of scientists themselves. This is not specific to scientific research on biodiversity, although the degree of disagreement and “talking past each other” is related to the complexity of the research field and the variety of understandings about the subject. Other issues such as sustainability suffer from similar problems.

²² See WWF 1993 for a review.

Table 15.5 Three conservation paradigms

Variable	Classic	Populist	Neoliberal
Peasant behaviour	Ignorant, irrational, traditional	Virtuous, rational community-minded	Rational, egocentric
Diagnosis of environmental problem	Environmental solutions	Sociopolitical solutions	Economic solutions
Immediate causes of environmental problems	Mismanagement by users	Mismanagement by state, capitalists, transnational corporations, big business	Poor government policies and bureaucratic rules and regulations
Structural causes of degradation	Overpopulation, backwardness, lack of foresight, ignorance	Resource distribution, inappropriate technologies	Inappropriate property rights, institutions, prices, and rapid population growth
Institutional prescription	Top-down centralized decision making	Bottom-up participation	"Market" policies, property rights, resource pricing, self-targeting safety nets
Academic discipline; profession	Science; bureaucrat	Sociology; activist, NGOs	Economics; development professional
Gender orientation	Gender blind	Virtuous but victimized women	Gender myopia
Research framework	Systematic empiricism	Rapid/participant rural appraisal, community as unit of analysis	Methodological individualism
Orientation to market	Not considered	Exploitation	Pareto optimality and externalities
Model of peasant society	Conservative, paternalistic	Egalitarian	Democratic/liberal
View of collective action	Deficient	Essential and unproblematic	Conditional rationality; political entrepreneurs
Technology	"Fortress conservation"	Agronomic techniques of conservation	Not specified

Source: Biot et al. 1995

Unfortunately, it is easier to add up ways in which the concept of biodiversity can be misused than it is to present a simple solution to the extremely complex problem of measuring and maintaining biological diversity. The public is unclear on the concept and scientists cannot give a simple answer (Rodda 1993).

The privileging of certain species, ecosystems and habitats for conservation over others is not—and cannot be expected to be—done on scientific grounds alone. Biodiversity is interpreted in different ways by different actors outside scientific professions as well. Many actors have a fragmentary and contingent interest in the issue of biodiversity (for example, a specific ecosystem or a short-list of species of plant or fish). Others are involved in biodiversity through promoting symbols of conservation (for example, single issue campaigns in the North), while still others may campaign for the preservation of their livelihoods in the face of forest clearance, dam construction and flooding, or (ironically) the creation of a national park.

Therefore it may be useful for policy makers, international opinion-formers and decision makers to:

- Accept that biodiversity is the stuff of politics. It is an arena of competing interests and ideas of actors with which any conservation has to deal.
- Accept a plurality of definitions, but define them carefully and understand where they are coming from by attributing them to those involved.

- Be prepared to link biodiversity with other issues, while at the same time acknowledging that there are other issues involved that intersect with (some of) the aims of biodiversity conservation, but that may not share the same final goals. Human rights, particularly of indigenous people; income distribution; rights to clean water, education, shelter, etc.; and human welfare are all related to biodiversity and its various values, but these other pressing issues have agendas and goals other than those of biodiversity conservation.

The issue of biodiversity comprises a number of discourses at the global, regional, national and local levels. At each, different but intersecting definitions and meanings of biodiversity circulate, and are linked to the “projects” of other actors. At the global level, the main policy issue from the scientific view is thus the conservation of global biodiversity and the governance of the global commons. However, in the negotiation of international agreements, persistent inequalities in wealth and the control and use of biodiversity resources between the North and South invade the scientific agenda with political concerns. At the local level, the discourse may consist of a struggle between agriculturalists squatting illegally in the forest, forest dwellers and the state with interests in foreign exchange from timber exports—each of which values and uses differently the resources that collectively contribute to biodiversity. These discourses, although referring to the same physical resources, attach very different meanings to those resources, and are understood in a unique way by the different actors. There are two main implications. First, since “biodiversity” means many things to many people, it has become a bandwagon, and the rigour and precision of debates have been eroded. Some policy makers may believe that they are conserving biodiversity, while others would not recognize that they were doing that at all. Some see a national park, a warden sees theft, the displaced see dispossession—the point is that biodiversity conservation may be all of these.

Second, although to some degree the local levels of biodiversity conservation contribute to conservation at higher levels (regional and global) in an additive manner, they involve different actors and concerns. Partly, this has to be accepted, and advocacy for conservation pursued at a variety of levels. However, this disjuncture also causes serious problems of implementation (conceived at the international level but implemented on the ground). Some of these problems can be eased by adopting decentralized, flexible, locally politically negotiated programmes. However, the call for participatory conservation has to be realistically appraised.

There are currently three main paradigms for environmental conservation—the classic/authoritarian, the neopopulist and the neoliberal. Strategy and policy statements usually tend to use the language of more than one, although one will dominate. At present the debate at the international conservation level reflects a shift away from the classic to the neoliberal and populist approaches. In terms of biodiversity conservation the two most opposed and mutually exclusionary are the classic and neopopulist. There is presently a strong call for a new professionalism and a new approach to conservation, which takes more account of the distribution of the costs of conservation. It is also recommended that local knowledge and expertise (both technical and political) to manage natural resources must be accessed and harnessed through participatory programmes. This new conventional wisdom has gained credence even against vested personal, institutional and professional interests among international policy makers and development professionals worldwide. But the full implications of the populist approach are becoming increasingly evident, leading to detectable backlash against it. The assumptions of community and consensus in the practice of participatory conservation

are far from being problem-free. A plurality of understandings along with a variety of competing interests (some of them decidedly anti-conservationist) begs the question of whether negotiations between outside agencies and local people can be equal. The former have their scientific agendas, and the latter have all sorts of contingent interests in biodiversity conservation. The usual case is that there is disagreement between the two parties and also between local people themselves. How far can, or should, the outside agency push its own agenda? It is helpful for conservation agencies to consider “advanced” participation as a best case situation, but also own up to their own agenda and become environmental brokers between actors who are well understood by the agency.

The economic approach to environmental conservation takes a very different perspective from that summarized above. The conceptual problems of measuring the value of biodiversity, and the political reality of appropriating it, still remain formidable obstacles to the realization of efficiently functioning markets for biodiversity. While the removal of “perverse” incentives to degrade the environment may be possible at the national level, the operation of market signals that reflect the true value of conserving biodiversity at the local level may be a distant reality.

There are strong pragmatic and political grounds for paying detailed attention to the impacts of biodiversity erosion and conservation upon human welfare, particularly in cases where conservation efforts affect local people directly. Pragmatically, coerced and enforced conservation tends to fail in the long run. Politically, the abuse of human rights and the accentuation of inequalities are related to environmental degradation, and conservation efforts must address these issues, too, not exacerbate them.

Bibliography

- Abel, N.O.J. 1993. *What's in a Number? The Carrying Capacity Controversy on the Communal Rangelands of Southern Africa*, Monograph No. 14 (parts I and II). School of Development Studies, University of East Anglia, Norwich.
- Abel, N.O.J. and P.M. Blaikie. 1990. *Land Degradation, Stocking Rates and Conservation Policies in the Communal Rangelands of Botswana and Zimbabwe*. Pastoral Development Network Paper 29a. Overseas Development Institute, London.
- . 1988. *Managing Common Property Resources in Rural Development: The Case of Zimbabwe and Botswana—A Report to the Overseas Development Administration*. Overseas Development Group, University of East Anglia, Norwich. Mimeo.
- . 1986. “Elephants, people, parks and development: The case of the Luangwa Valley, Zambia.” *Environmental Management*, Vol. 10. No. 6, pp. 735–751.
- Adams, W.M. 1990. *Green Development: Environment and Sustainability in the Third World*. Routledge, London.
- Agarwal, B. 1990. “Social security and the family: Coping with seasonality and calamity in rural India.” *Journal of Peasant Studies*, Vol. 17, No. 3, pp. 341–412.
- . 1986. *Cold Hearths and Barren Slopes: The Woodfuel Crisis in the Third World*. Allied Publishers and Zed Press, New Delhi and London.
- Alpert, P. 1993. “Conserving biodiversity in Cameroon.” *Ambio*, Vol. 22, No. 1, pp. 44–53.
- Anderson, B. 1983. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso, London.
- Anderson, D. and R. Grove (eds.). 1987. *Conservation in Africa: People, Policies and Practice*. Cambridge University Press, Cambridge.
- Bahro, R. 1984. *From Red to Green: Interviews with New Left Review*. Verso, London.
- Baker, P.R. 1981. *Environmental Degradation in Kenya: Social Crisis or Environmental Crisis?* Discussion Paper No. 82. School of Development Studies, University of East Anglia, Norwich.
- Barnett, A. 1992. “Vanishing worlds of temperate forests.” *New Scientist*, 7 November.
- Barr, B.M. 1988. “Perspectives on deforestation in the USSR.” In J.F. Richards and R.P. Tucker (eds.), *World Deforestation in the Twentieth Century*. Duke University Press, Durham, North Carolina.

- Barrow, E. 1991. "Building on local knowledge: The challenge of agroforestry for pastoral areas." *Agroforestry Today*, Vol. 3, No. 4, pp. 4–7.
- Barstow, R. 1991. "Whales are uniquely special." *Why Whales?* Whale and Dolphin Conservation Society, Bath.
- Bauer, P.T. 1976. *Dissent on Development: Studies and Debates in Development Economics*. Weidenfeld and Nicolson, London.
- Beard, J. 1991. "Woodland soil yields a multitude of insect species." *New Scientist*, Vol. 131, No. 1784, p. 18.
- Behnke, R. and I. Scoones. 1993. *Rethinking Range Ecology: Implications for Rangeland Management in Africa*. Dryland Networks Programme. International Institute for Environment and Development, London.
- Biot, Y., P.M. Blaikie, C. Jackson, and R. Palmer-Jones. 1995. *Rethinking Research on Land Degradation in Developing Countries*. World Bank Discussion Paper No. 289. World Bank, Washington DC.
- Birkes, F. (ed.). 1989. *Common Property Resources: Ecology and Community-Based Sustainable Development*. Bellhaven Press, London.
- Blaikie, P.M. 1994. *Political Ecology in the 1990s: An Evolving View of Nature and Society*, CASID Distinguished Speaker Series No. 13. Center for Advanced Study of International Development, Michigan State University.
- . 1985. *The Political Economy of Soil Erosion in Developing Countries*. Longman Scientific and Technical Publishers, Harlow.
- Blaikie, P.M., J. Cameron and D. Seddon. 1980. *Nepal in Crisis: Growth and Stagnation at the Periphery*. Clarendon Press, Oxford.
- Blaikie, P.M., T. Cannon, I. Davis and B. Wisner. 1994. *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. Routledge, London.
- Blaikie, P.M., J.C. Harriss and A. Pain. 1992. "The management and use of common property resources in Tamil Nadu, India." In D.W. Bromley (ed.), *Making the Commons Work: Theory, Practice and Policy*. ICS Press, San Francisco.
- . 1985. *Public Policy and the Utilisation of Common Property Resources in Tamil Nadu, India: A Report to the Overseas Development Administration*. Overseas Development Administration, London. Mimeo.
- Bookchin, M. 1982. *The Ecology of Freedom: The Emergence and Dissolution of Hierarchy*. Cheshire Books, Palo Alto CA.
- . 1980. *Toward an Ecological Society*. Black Rose Books, Montreal.
- Brandon, K.E. and M. Wells. 1992. "Planning for people and parks." *World Development*, Vol. 20, No. 4, pp. 557–570.
- Brockway, L.H. 1979. *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*. Academic Press, Waltham MA.
- Bromley, D.W. (ed.). 1992. *Making the Commons Work: Theory, Practice and Policy*. ICS Press, San Francisco.
- Brown, K. 1994. *Conservation or Development in Nepal's Terai? Resolving Land Use Conflicts in Asia's Last Land Frontier*. CSERGE Working Paper GEC 94–23. University of East Anglia and University College, Norwich and London.
- Brown, K. and D. Moran. 1993. *Valuing Biodiversity: The Scope and Limitations of Economic Analysis*. CSERGE Working Paper GEC 93–09. University of East Anglia and University College, Norwich and London.
- Brown, M. and A. Singer (eds.). 1991. *Buffer Zone Management in Africa*. Report of the Workshop held at Mweya Lodge, Queen Elizabeth National Park, Uganda, 5–11 October. PVO-NGO/NRMS Project, Washington DC.
- Brown, M. and B. Wyckoff-Baird. 1992. *Designing Integrated Conservation and Development Projects*, WWF (Biodiversity Support Programme)/The Nature Conservancy/WRI, Washington DC.
- Carlton-Ray, G. 1988. "Ecological diversity in coastal zones and oceans." In E.O. Wilson (ed.), *Biodiversity*. National Academy Press, Washington DC.
- Carnegie Commission. 1992. *International Research and Assessment: Proposals for Better Organisation and Decision-Making*. Carnegie Commission on Science, Technology and Government, London.
- Caulfield, R.A. 1993. *Greenlanders, Whales and Whaling: Conflict and Marginalization in an Arctic Resource Régime*. School of Development Studies, University of East Anglia, Norwich.
- Chambers, R. 1993. *Challenging the Professions: Frontiers for Rural Development*. Intermediate Technology Publications, London.
- . 1992. *Rural Appraisal: Rapid, Relaxed and Participatory*. Discussion Paper No. 331. Institute of Development Studies, University of Sussex, Brighton.
- . 1983. *Rural Development: Putting the Last First*. Longman, Harlow.
- Chatterjee, P. and M. Finger. 1994. *The Earth Brokers*. Routledge, London.
- Clark, C. 1973. "Profit maximisation and the extinction of animal species." *Journal of Political Economy*, Vol. 81, No. 4, pp. 950–961.
- Clay, E.J. and B.P. Schaffer (eds.). 1984. *Room for Manoeuvre: An Exploration of Public Policy Planning and Agricultural and Rural Development*. Heinemann, London.
- CNPPA (Commission on National Parks and Protected Areas). 1992. *Parks for Life: Report of the IVth World Congress on National Parks and Protected Areas* (Caracas, 10–21 February). IUCN/WWF International, Gland.

- Colchester, M. 1994. *Salvaging Nature: Indigenous Peoples, Protected Areas and Biodiversity Conservation*. Discussion Paper No. 55. UNRISD, Geneva.
- . 1993. "Slave and enclave: Towards a political ecology of equatorial Africa." *The Ecologist*, Vol. 23, No. 25, pp. 166–173.
- . 1992. *Sustaining the Forests: The Community-Based Approach in South and South-East Asia*. Discussion Paper No. 35. UNRISD, Geneva.
- . 1991. "Guatemala: The clamour for land and the fate of the forests." *The Ecologist*, Vol. 21, No. 4, pp. 177–182.
- Cooper, D., R. Vellve and H. Hobbelin (eds.). 1992. *Growing Biodiversity: Genetic Resources and Local Food Security*. Intermediate Technology Publications, London.
- Croll, E. and D. Parkin (eds.). 1992. *Bush Base, Forest Farm: Culture, Environment and Development*. Routledge, London.
- Crucible Group. 1994. *People, Plants and Patents: The Impact of Intellectual Property on Trade, Plant Biodiversity, and Rural Society*. International Development Research Centre, Ottawa.
- Cunningham, A.B. 1993. *Ethics, Ethnobiological Research and Biodiversity*. WWF International, Gland.
- Dafour, D.L. 1987. "Insects as food: A case study from the northwest Amazon." *American Anthropologist*, No. 89, No. 2, pp. 383–397.
- Daly, H. and J.B. Cobb. 1990. *For the Common Good: Redirecting the Economy toward Community, the Environment and a Sustainable Future*. Green Print, London.
- Dasgupta, P. and G. Heal. 1979. *Economic Theory and Exhaustible Resources*. Cambridge University Press, Cambridge.
- De Waal, A. 1989. *Famine that Kills: Darfur, Sudan, 1984–1985*. Clarendon Press, Oxford.
- Doubleday, N.C. 1992. "Indigenous subsistence whaling in Canada." *Report of the Symposium on the Utilization of Marine Living Resources for Subsistence*, (Taiji, Japan, 21–23 January).
- Douglas, M. and A. Wildavsky. 1982. *Risk and Culture*. University of California Press, Berkeley CA.
- Dudley, N. 1995. *Targets for Forest Conservation*. WWF International, Gland. Mimeo.
- . 1992. *Forests in Trouble: A Review of the Status of Forests Worldwide*. WWF International, Gland.
- Dudley, N., J.-P. Jeanrenaud and F. Sullivan. 1995. *Bad Harvest? The Timber Trade and the Degradation of the World's Forests*. Earthscan, London.
- Dudley, N. and S. Stolton. 1994. *The Timber Trade in Russia*. Equilibrium, Bristol.
- Eckersley, R. 1992. *Environmentalism and Political Theory: Towards an Ecocentric Approach*. State University of Albany Press, Albany NY.
- Einarsson, N. 1993. "All animals are equal but some are cetaceans: Conservation and culture conflict." In K. Milton, *Environmentalism: The View from Anthropology*. ASA Monographs 32. Routledge, London.
- Ellis, S. 1994. "Of elephants and men: Politics and nature conservation in South Africa." *Journal of Southern African Studies*, Vol. 20, No. 1, pp. 53–69.
- Fairhead, J. and M. Leach. 1992. *Declarations of Difference*. Paper presented at the IIED/IDS Workshop on Beyond Farmer First: Rural People's Knowledge, Institute of Development Studies, University of Sussex, Brighton, United Kingdom, 27–29 October.
- Falconer, J. 1990. *Non-Timber Forest Products in Ghana's Forest Zone: A Pilot Study*. Paper presented at the Conférence sur la conservation et l'utilisation rationnelle de la forêt dense d'Afrique Centrale et de l'Ouest." African Development Bank, IUCN and the World Bank, Abidjan, Côte d'Ivoire, 5–9 November.
- and C.R.S. Koppell. 1990. *The Major Significance of Minor Forest Products: The Local Use and Value of Forests in the West Africa Humid Forest Zone*. Community Forest Note 6. FAO, Rome.
- FAO (Food and Agriculture Organization of the United Nations). 1991. *Forest Products Yearbook, 1989*, FAO, Rome.
- . 1987. *Restoring the Balance: Women and Forest Resources*. FAO, Rome.
- FAO/UNDP (Food and Agriculture Organization of the United Nations/United Nations Development Programme). 1988. *Tropical Forestry Action Plan: Joint Inter-agency Planning and Review Mission for the Forestry Sector, Cameroon*, 3 volumes, FAO, Rome.
- Friberg, M. and B. Hettne. 1985. "The greening of the world: Towards a non-deterministic model of global processes." In H. Addo et al., *Development as Social Transformation: Reflections on the Global Problematique*. Westview Press/United Nations University, Boulder CO.
- FSC (Forest Stewardship Council). 1994. *Forest Stewardship Principles and Criteria for Natural Forest Management*. FSC, Oaxaca.
- Gadgil, M. 1993. *Significance of Biodiversity for Ecosystems and Human Existence*, in proceedings of the Norway/UNEP Expert Conference on Biodiversity, University of Trondheim, Norway, 24–28 May.
- Gadsby, E.L. and P.D. Jenkins. 1992. *Report on Wildlife and Hunting in the Proposed Etinde Forest Reserve*. Limbe Botanic Garden and Rainforest Conservation Project Consultants for the Government of Cameroon, Yaoundé.
- GEF (Global Environment Facility). 1993. *Socio-Cultural Analysis of Biodiversity Conservation: Interim Guidelines for Design of Participation Plans Using Socio-Cultural Profiles*. Global Environment Facility/ World Bank, Washington DC. Mimeo.

- Ghimire, K. 1992. *Forest or Farm? The Politics of Poverty and Land Hunger in Nepal*. Oxford University Press, New Delhi.
- . 1991. *Parks and People: Livelihood Issues in National Parks Management in Thailand and Madagascar*. Discussion Paper No. 29. UNRISD, Geneva.
- Gilges, K. 1992. *Bioreserves: Land-Use Surrounding National Parks in Savannah Africa*. MSc Thesis, Oxford Forestry Institute, Oxford. Mimeo.
- Gomez-Pompa, A. and A. Kaus. 1992. "Taming the wilderness myth." *Bioscience*, Vol. 42, No. 4, pp. 271–279.
- Gordon, D. 1993. "Russia Far East update." *Taiga News: Newsletter on Boreal Forests*, No. 5. Taiga Rescue Network, Jokkmokk.
- Government of Cameroon. 1991. *Elephant Conservation Plan, Cameroon*. Ministry of Tourism, Yaoundé. Mimeo.
- Greenpeace. 1993. *Quick Cash for Old-Growth: The Looting of Russia's Forests*. Greenpeace International Forests Campaign, Amsterdam.
- . 1992a. *So Remorseless a Havoc: The Case for a Permanent Commercial Whaling Ban*. Greenpeace, London.
- . 1992b. *The Whale Killers*. Greenpeace, London.
- Grigoryev, A. 1993. "Russia's new Forestry Act: Leaving the door wide-open for ruthless exploitation." *Taiga News: Newsletter on Boreal Forests*, No. 5. Taiga Rescue Network, Jokkmokk.
- . 1992. "Status report of the forest situation in Russia." *Taiga News: Newsletter on Boreal Forests*, No. 2. Taiga Rescue Network, Jokkmokk.
- Grove, R. 1990. "Threatened islands, threatened earth: Early professional science and the historical origins of global environmental concerns." In D.J.R. Angell (ed.), *Sustaining Earth: Response to Environmental Threats*. Macmillan, London.
- . 1987. "Early themes in African conservation: The Cape in the nineteenth century." In D. Anderson and R. Grove (eds.), *op. cit.*
- Grubb, M., M. Koch, A. Munson, F. Sullivan and K. Thomson. 1993. *The Earth Summit Agreements: A Guide and Assessment*. Earthscan, London.
- Hales, D. 1989. "Changing concepts of national parks." In D. Western and M. Pearl (eds.), *Conservation for the Twenty-First Century*. Oxford University Press, Oxford.
- Hayarin, Y. and V.W. Ruttan. 1985. *Agricultural Development: An International Perspective*. Johns Hopkins University Press, Baltimore MD.
- Hoffmann-Kuehnel, M. 1989. "Africa's women farmers utilize local knowledge." *ILEIA Newsletter*, December.
- Horta, K. 1991. "The last big rush for the green gold." *The Ecologist*, Vol. 21, No. 3, pp. 142–147.
- Hough, J. 1988. "Obstacles to effective management of conflicts between national parks and surrounding communities in developing countries." *Environmental Conservation*, Vol. 15, No. 2, pp. 129–136.
- Hunter, M.L., R.K. Hitchcock, and B. Wyckoff-Baird. 1990. "Women and wildlife in Southern Africa." *Conservation Biology*, Vol. 4, No. 4, pp. 448–451.
- Hurst, P. 1990. *Rainforest Politics: Ecological Destruction in South-East Asia*. Zed Books, London.
- Infield, M. 1988. *Hunting, Trapping and Fishing in Villages with and on the Periphery of the Korup National Park*. Report to WWF-UK, Godalming.
- Inskipp, C. 1992. *Biodiversity*. Data Support for Education Sheet No. 25. WWF-UK, Godalming, Surrey.
- IUCN (World Conservation Union). 1994. *A Guide to the Convention on Biological Diversity*. IUCN, Gland.
- . 1990. *Biodiversity in Sub-Saharan Africa and its Islands: Conservation, Management and Sustainable Use*. Occasional Papers of the IUCN Species Survival Commission No. 6. IUCN, Gland.
- . 1980. *World Conservation Strategy: Living Resource Conservation for Sustainable Development*. IUCN, Gland.
- IUCN/UNEP/WWF (The World Conservation Union / United Nations Environment Programme / World Wide Fund for Nature). 1991. *Caring for the Earth: A Strategy for Sustainable Living*. IUCN/UNEP/WWF, Gland.
- IWGIA (The International Work Group for Indigenous Affairs). 1991. *Arctic Environment: Indigenous Perspectives*. Document 69. IWGIA, Copenhagen.
- Jackson, C. 1994. "Gender analysis and environmentalisms." In M. Redclift and T. Benton (eds.), *Social Theory and the Global Environment*. Routledge, London.
- Jacobs, M. 1994. "The limits of neo-classicism: Towards an institutional economics." In M. Redclift and T. Benton (eds.), *Social Theory and the Global Environment*. Routledge, London.
- Jain, R. 1995. "Analysis." *Down to Earth*, 28 February.
- Jeanrenaud, J.-P. 1995. *Pulp and Paper: A Threat to Sustainable Forest Management?* Paper presented at the Third Global Conference on Paper and the Environment, London, 26–28 March. WWF International, Gland.
- and F. Sullivan. 1993. *The Inevitability of Timber Certification*. WWF-UK, Godalming, Surrey.

- Jeanrenaud, S. 1993. *Community-Based Conservation: Some Background Themes*, mimeo, School of Development Studies, University of East Anglia, Norwich.
- . 1992. *The Conservation Development Face: A Background Paper*. Paper submitted to WWF-UK, Godalming.
- . 1991. *A Study of Forest Use, Agricultural Practices, and Perceptions of the Rainforest: Etinde Rainforest, S.W. Cameroon*. Report submitted to the Overseas Development Administration, London.
- Jodha, N.S. 1991. *Rural Common Property Resources: A Growing Crisis*. Gatekeeper Series No. 24. IIED, London.
- Keating, M. 1993. *The Earth Summit's Agenda for Change: A Plain Language Version of Agenda 21 and the Other Rio Agreements*. Centre for our Common Future, Geneva.
- Kiss, A. (ed.). 1991. *Living with Wildlife: Wildlife Resource Management with Local Participation in Africa*. World Bank, Washington DC.
- Ki-Zerbo, J. 1981. "Women and the energy crisis in the Sahel." *Unasyva*, No. 33, pp. 5–10.
- Komarov, B. 1981. *The Destruction of Nature in the Soviet Union*. Pluto Press, London.
- Lattin, J.D. 1990. "Arthropod diversity in northwest old growth forests." *Wings: Essays in Insect Conservation*. Xerxes Society, Portland OR.
- Leach, M. and J. Fairhead. 1994. *The Forest Islands of Kissidougou: Social Dynamics Environmental Change in West Africa's Forest-Savannah Mosaic*. Report to ESCOR of the Overseas Development Administration, London.
- Lee, S. 1993. *Biodiversity*. Tree Plantation Review Study No. 6. Shell International Petroleum Company Ltd. and WWF-UK, Godalming, Surrey.
- Lohmann, L. 1991. "Who defends biological diversity?" *The Ecologist*, Vol. 21, No. 1, pp. 5–13.
- Long, N. and A. Long. 1992. *Battlefields of Knowledge: The Interlocking of Theory and Practice in Social Science Research and Development*. Routledge, London.
- Lyster, S. 1985. *International Whaling Law*. Grotius Publications Ltd., Cambridge.
- Machlis, G.E. 1992. "The contribution of sociology to biodiversity research and management." *Biological Conservation*, Vol. 62, No. 3, pp. 161–171.
- Machlis, G.E., and D.L. Tichnell. 1985. *The State of the World's Parks: An International Assessment of Resource Management, Policy and Research*. Westview Press, Boulder CO.
- Mackenzie, J.M. 1987. "Chivalry, social Darwinism, and ritualised killing: The hunting ethos in Central Africa up to 1914." In D. Anderson and R. Grove (eds.). op. cit.
- MacKinnon, J.M. 1986. *Managing Protected Areas in the Tropics*. IUCN, Gland.
- Mann, C. 1991. "Extinction: Are ecologists crying wolf?" *Science*, Vol. 253, No. 5021, pp. 736–738.
- Marks, S. 1990. "The political economy of logging: The Barnett inquiry into corruption in the Papua New Guinea timber industry." *The Ecologist*, Vol. 20, No. 5, pp. 174–181.
- . 1984. *The Imperial Lion: Human Dimensions of Wildlife Management in Africa*. Bowker, Epping.
- Marshall, G. 1994. *WWF's Global Priorities to the Year 2000*. WWF International, Gland.
- Martin, C. 1995. *Restructuring and Community Participation*. Memorandum to all WWF national offices and chief executive officers. WWF International, Gland, 2 March.
- Marx, M. 1994. "Mitsubishi: Giant of the Timber Trade." *Tiaga News: Newsletter on Boreal Forests*, No. 9. Tiaga Rescue Network, Jokkmokk.
- Maundu, P. 1987. "The importance of gathered fruits and medicinal plants in Kakuyuni and Kathama Areas of Machakos." In K.K. Wachiira (ed.), *Women's Use of Off-Farm and Boundary Lands: Agroforestry Potentials*. Final report. International Centre for Research in Agroforestry, Nairobi.
- McGlathlon, M.E., P. Goldsmith and C. Fox. 1986. "Undomesticated animals and plants." In A. Hansen and D.E. McMillan (eds.), *Food in Sub-Saharan Africa*. Lynne Rienner Publishers, Boulder CO.
- McKibben, B. 1990. *The End of Nature*. Viking, London.
- McNeely, J.A. 1988. *Economics and Biological Diversity: Developing and Using Incentives to Conserve Biological Resources*. IUCN, Gland.
- Milton, K. (ed.). 1993. *Environmentalism: The View from Anthropology*. ASA Monographs 32. Routledge, London.
- Morris, D. and I. Ahmed. 1992. *The Carbohydrate Economy*. Institute for Local Self-Reliance, Washington DC.
- Mshigenio, K.E. 1990. "Foreword." *Proceedings of the International Conference on Traditional Medicinal Plants*, Arusha, Tanzania, 18-23 February. Ministry of Health, Dar es Salaam.
- Myers, N. 1988. "Threatened biotas: 'Hot spots' in tropical forests." *The Environmentalist*, Vol. 8, No. 3, pp. 187–208.
- . 1979. *The Sinking Ark: A Look at the Problem of Disappearing Species*. Pergamon, New York.
- Nagrobahman, G.D. and S. Sambrani. 1983. "Women's drudgery in firewood collection." *Economic and Political Weekly*, Vol. 28, Nos. 1–2, pp. 33–38.

- Nash, R. 1970. "The American invention of national parks." *American Quarterly*, Vol. 22, No. 3, pp. 726–735.
- Ndjatsana, M.M. 1993. *Analyse de la situation du secteur forestier du Cameroun: La politique forestière*. Mimeo.
- Norse, E. 1993. "Global marine biodiversity." *Proceedings of the Norway/UNEP Conference on Biodiversity*, Trondheim, Norway, 24–28 May.
- Obam, A. 1992. *Conservation et mise en valeur des forêts au Cameroun*. National Printing Press, Yaoundé.
- ODI (Overseas Development Institute). 1993. *Patenting Plants: The Implications for Developing Countries*. ODI Briefing Paper, London. November.
- ONADEF. 1990. *Introductory Public Relations Document*. ONADEF (National Forestry Development Agency), Yaoundé.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, Cambridge.
- Pearce, D.W. 1993. *Measuring Sustainable Development*, Blueprint 3. Earthscan, London.
- . 1991. "Economics and the environment." *Economics*, Vol. 27, Part 1, No. 3, pp. 4–8.
- Pearce, D.W., D. Moran and E. Fripp. 1992. *The Economic Value of Biological and Cultural Diversity*. IUCN, Gland.
- Peluso, N.L. 1993. "Coercing conservation? The politics of state resource control." *Global Environmental Change*, Vol. 3, No. 2, June, pp. 199–217.
- Petrof, D. 1992. "Siberian forests under threat." *The Ecologist*, Vol. 22, No. 6, pp. 267–270.
- Pimbert, M. 1993. *Protected Areas, Species of Special Concern and WWF*. WWF International, Gland.
- Pimbert, M., and J.N. Pretty. 1994. *Parks, People and Professionals: Putting "Participation" into Protected Area Management*. Discussion Paper No. 57. UNRISD/IIED/WWF, Geneva.
- Plotkin, M. 1988. "The outlook for new agricultural and industrial products from the tropics." In E.O. Wilson (ed.), *Biodiversity*. National Academy Press, Washington DC.
- Prescott-Allen, R. 1986. *National Conservation Strategies and Biological Diversity*. Report to IUCN, Gland.
- Rabinovitch-Vin, A. 1991. "Continuous human use as a tool for species richness in protected areas of Israel." In W.P. West and S.R. Brechin (eds.), op. cit.
- Redclift, M. and C. Sage (eds.). 1994. *Strategies for Sustainable Development: Local Agendas for the Southern Hemisphere*. John Wiley and Son, Chichester.
- Reid, W.V. 1993. *Biodiversity Prospecting: Using Genetic Resources for Sustainable Development*. World Resources Institute, Washington DC.
- . 1992. "How many species will there be?" In T.C. Whitmore and J.A. Sayer (eds.) *Tropical Deforestation and Species Extinction*. Chapman and Hall, London.
- Repetto, R. and Gillis, M. (eds.). 1988. *Public Policies and the Misuse of Forest Resources*. Cambridge University Press, Cambridge.
- Robinson, P. and I. Thompson. 1989. *Fodder Trees, Nurseries and their Central Role in the Hill-Farming Systems of Nepal*. Social Forestry Network Paper 9a. Overseas Development Institute, London.
- Rocheleau, D.E. 1991. "Gender, ecology, and the science of survival: Stories and lessons from Kenya." *Agriculture and Human Values*, Vol. 8, No. 1, pp. 156–165.
- Rocheleau, D., K. Wachira, L. Malaret. 1989. "Local knowledge for agroforestry and native plants." In R. Chambers, A. Pacey and L. Thrupp (eds.), *Farmer First*. Intermediate Technology Publications, London.
- Rodda, A. (ed.). 1994. *Women and the Environment*. Zed Books, London.
- Rodda, G.H. 1993. "How to lie with biodiversity." *Conservation Biology*, Vol. 7, No. 4, pp. 1959–1960
- Rosencratz, A. 1991. "And cutting down Siberia." *Washington Post*, 18 August.
- Runte, A. 1979. *National Parks: The American Experience*. University of Nebraska Press, Lincoln, NE.
- Russell, S. 1993. *A History of WWF*. WWF International, Gland.
- Sachs, W. 1994. "The blue planet: An ambiguous modern icon." *The Ecologist*, Vol. 24, No. 5, pp. 170–175.
- Scoones, I. 1992. *The Hidden Harvest: Wild Foods and Agricultural Systems*. IIED, London.
- Scott, A. and D. Gordon. 1992. "The Russian timber rush." *The Amicus Journal*, Vol. 14, No. 3, p. 15.
- Seddon, D., P. Blaikie and J. Cameron. 1979. *Peasants and Workers in Nepal*. Aris and Philip, Warminster.
- Shiva, V. 1993a. *Cultivating Biodiversity: From Reports to Action*, in proceedings of the Norway/UNEP Expert Conference on Biodiversity, University of Trondheim, Norway, 24–28 May.
- . 1993b. *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*. Zed Books, London.
- . 1990. "Biodiversity, biotechnology and profit: The need for a people's plan to protect biological diversity." *The Ecologist*, Vol. 20, No. 2, pp. 44–47.

- . 1989a. *Staying Alive: Women, Ecology, and Development*. Zed Books, London.
- . 1989b. "The myth of miracle seeds." *ILEIA Newsletter*, December, pp. 7–8.
- Shiva, V., and I. Dankelman. 1992. "Women and biological diversity: Lessons from the Indian Himalaya." In D. Cooper, R. Vellve and H. Hobbelink (eds.), *Growing Biodiversity: Genetic Resources and Local Food Security*. Intermediate Technology Publications, London.
- Shiva, V., and R. Holla-Bhar. 1993. "Intellectual piracy and the neem tree." *The Ecologist*, Vol. 23, No. 6, pp. 223–227.
- Simmons, I.G. 1993. *Interpreting Nature: Cultural Constructions of the Environment*. Routledge, London.
- Spence, M. 1975. "Blue whales and applied control theory." In H. Gottinger (ed.) *System Approaches and Environmental Problems*. Vandenhoeck, Göttingen.
- Swanson, T.M. 1992a. *The Economics of a Biodiversity Convention*, CSERGE Working Paper GEC 92-08. University of East Anglia and University College, Norwich and London.
- . 1992b. *The Global Conversion Process: The Fundamental Forces Underlying Losses of Biological Diversity*. CSERGE Working Paper GEC 92–41. University of East Anglia and University College, Norwich and London.
- . 1992c. *The Global Biodiversity Problem: Optimal Policy and the Global Conversion Process*. CSERGE Working Paper GEC 92–42. University of East Anglia and University College, Norwich and London.
- Tchamba, M., C.S. Wanzie, Y. Bello and S. Gartlam. 1991. *Elephant Conservation Plan, Cameroon*. Ministère de Tourisme, Directeur de la Faune et des Parcs, Yaoundé, Cameroon.
- Thomas, D.W. 1989. *Korup Ethnobotany Survey*. Final report to WWF-UK, Godalming.
- Tickell, O. 1995. "Animal passions." *The Guardian*, 1 February, p. 5.
- UNDP (United Nations Development Programme). 1993. *Human Development Report 1993: People's Participation*. Oxford University Press, New York.
- UNEP (United Nations Environment Programme) 1992. *Environment and Sustainable Development for Cameroon*. Report of the multidisciplinary and multi-institutional mission on the environment, Yaoundé. Mimeo.
- UNESCO. 1991. *Gestion des ressources et des réserves de la biosphère et éducation relative à l'environnement*, Paris.
- United Nations. 1987. *Our Common Future: Report of the World Commission on Environment and Development*. Oxford University Press, Oxford.
- Vogel, J.H. 1994. *Genes for Sale: Privatisation as a Conservation Policy*. Oxford University Press, Oxford.
- Wanjohi, B. 1987. "Women's groups, gathered plants and their agroforestry potentials in the Kathama Area." In K.K. Wachiira (ed.), *Women's Use of Off-Farm and Boundary Lands: Agroforestry Potentials*. Final report. International Centre for Research in Agroforestry, Nairobi.
- WCMC (World Conservation Monitoring Centre). 1992. *Global Biodiversity: Status of the Earth's Living Resources*. Chapman and Hall, London.
- Wells, M., K. Brandon and L. Hannah. 1992. *People and Parks: Linking Protected Area Management with Local Communities*. World Bank/WWF-US/USAID, Washington DC.
- Wenzel, G. 1991. *Animal Rights, Human Rights: Ecology, Economy and Ideology in the Canadian Arctic*. Belhaven Press, London.
- West, W.P. and S.R. Brechin (eds.). 1991. *Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation*. University of Arizona Press, Tucson AZ.
- Western, D. 1989. "Population, resources and environment in the twenty-first century." In D. Western and M. Pearl (eds.), *Conservation for the Twenty-First Century*. Oxford University Press, Oxford.
- Wilson, E.O. 1993. "Planet dearth." *The Guardian*, 3 September.
- . (ed.). 1988. *Biodiversity*. National Academy Press, Washington DC.
- Witte, J. 1992. "Deforestation in Zaire." *The Ecologist*. Vol. 22, No. 6.
- World Bank. 1992a. *World Development Report 1992: Development and the Environment*. Oxford University Press, New York.
- . 1992b. *Trends in Developing Economies*. World Bank, Washington DC.
- . 1991. *World Development Report 1991: The Challenge of Development*. Oxford University Press, New York.
- WRI (World Resources Institute). 1990. *World Resources 1990–1991*. Oxford University Press, New York.
- . 1985. *Tropical Forests: A Call for Action*. WRI, Washington DC.
- WRI/IUCN/UNEP. 1992. *Global Biodiversity Strategy. Guidelines for Action to Save, Study, and Use Earth's Biotic Wealth Sustainably and Equitably*. WRI/IUCN/UNEP, Washington DC.
- WWF. 1993a. *The Diversity of Life*. Banson, London.
- . 1993b. *Economic Analysis of Conservation Initiatives*. WWF International, Gland.
- WWF-US. 1993. *Conserving Russia's Biological Diversity: An Analytical Framework and Initial Investment Portfolio*. WWF-US, Washington DC.

Chapter 16

Corporate Environmentalism in the South: Assessing the Limits and Prospects¹

*Peter Utting*²

(2002)

Introduction

The other chapters in *The Greening of Business in Developing Countries* presented varying perspectives on the topic. On balance, what do they tell us about present-day reality and future prospects for the greening of business in developing countries? This concluding chapter begins by summarizing some of the concerns that have been raised regarding the scope and substance of “corporate environmentalism”. It then briefly highlights certain aspects related to regulatory frameworks, policy instruments, partnerships and pressures that may serve to promote corporate environmental responsibility, and considers whether there are forces in place that might promote a pattern of corporate environmentalism that is conducive to sustainable development.

By focusing on the political and structural underpinnings of corporate environmentalism, it is argued that certain developments may be prompting some companies, in both the North and the South, to adopt improvements in environmental management systems. Increased corporate responsiveness to environmental concerns can be expected given the way in which power in democratic and “civil” societies is contested and the nature of restructuring that is taking place in global production networks and industrial organization. Corporate environmentalism, within this context, is seen as more than an opportunistic response to so-called “win-win” situations or a reactive response to civil society and regulatory pressures. Rather, certain political, institutional, technological and economic conditions have coalesced in the era of globalization to favour a more

¹ Originally published as the final chapter in *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*, edited by Peter Utting (UNRISD and Zed Books, 2002). UNRISD is grateful to Zed Books for permission to reproduce this work here.

² At the time of writing, Peter Utting was Deputy Director at UNRISD.

proactive response, particularly among transnational corporations (TNCs). It is argued, however, that this process is very uneven and contradictory. It is restricted to just a few technological and managerial innovations, product sectors and countries, and remains highly questionable from the broader perspective of sustainable development.

The Limits to Corporate Greening

The overall picture that emerges from the first ten chapters of *The Greening of Business in Developing Countries* is one of incipient progress in terms of a range of initiatives associated with improved environmental management—including the adoption of cleaner technology, codes of conduct, environmental policies, certification, audits and reporting. It is easy, however, to be lulled into a false sense of optimism by examples of company X doing this and company Y doing that. As several authors have suggested, there remain serious quantitative and qualitative limits to corporate environmentalism in developing countries. Various concerns have emerged, notably the piecemeal nature of the innovations and reforms; the inflated claims associated with corporate responsibility; and the assertion that the dominant strategy or model of economic growth continues to be that of “business as usual”.

Even taking the case of countries where we might expect more progress, the situation is not particularly inspiring. From Costa Rica—a country that has gained international recognition for initiatives associated with environmental protection—Pratt and Fintel (2002) report that only one-third of large companies have an environmental policy. Internationally, it is clear that an increasing number of companies and business and industry associations have developed codes of conduct and guiding principles but the proportion of companies adopting them is still relatively small in most countries. One OECD inventory listed 233 codes of conduct (OECD 1999).³ This figure pales beside the fact that, according to UNCTAD, there were some 60,000 TNCs in the world by the early 2000s (UNCTAD 1999).

If the adoption of codes still has a long way to go, their substance and implementation may leave even more to be desired. One analysis of the content of 145 codes that deal with environmental aspects (Gordon and Miyake 2000), reveals that specific commitments related to aspects of environmental stewardship are cited by only a relatively small percentage of codes (generally between one-fifth and one-third). The two most frequently cited commitments were somewhat obvious or vague, namely “comply with laws” (67 per cent of codes) and “openness to community concerns” (40 per cent). In contrast, the two least cited commitments related to more concrete aspects—namely “measurable objectives” (17.9 per cent) and “transfer of technology” (9.2 per cent).⁴

Codes very often remain at the level of lofty principles and well-intentioned policy statements that are not effectively implemented (Kolk et al. 1999). An UNCTAD review of the guidelines set by 26 world industry associations for their member firms found that “most...do not ask the signatories to commit to the principles or activities they recommend...[and] only a handful require any kind of compliance by members” (UNCTAD 1996:7). Employees and consumers are often unaware of the existence of

³ Another OECD study analysed 246 codes (Gordon and Miyake 2000).

⁴ In actual fact the least cited commitment (0 per cent) was that of adherence to the “polluter pays” principle.

company codes, and firms frequently fail to specify the nature of sanctions for non-compliance (Jeffcott and Yanz 2000). Where workers know that a code exists, they often lack the education necessary to understand specific provisions, and have not received relevant training. Where they are aware of abuses, they may not know how to channel their grievances. Of particular concern is the fact that effective company self-assessment or independent verification of compliance with codes is rarely practised (Dommen 1999; ILO 1999; UNCTAD 1996).

Another area in which progress has been evident but weak is environmental reporting. A 1994 study by UNEP of 100 “pioneering companies” found that the reports of almost two-thirds of the firms (64 per cent) ranged from “green glossies” to annual reports that were more text than figures. Only 5 per cent contained meaningful performance data, while none amounted to “sustainable development reporting”.⁵ “Whatever companies may call their reports, and however many times they mention sustainable development in the text, very little work is being done in this area as yet” (UNEP 1994:67). A follow-up study carried out in 1997, which also focused on 100 companies, noted important areas of progress with most of the surveyed companies providing some useful data (UNEP and SustainAbility 1997). There was, however, “little evidence...of real efforts to develop and plot progress against sustainability indicators” and only one company had approached the highest category of reporting standards.

The incipient character of corporate management reform is also apparent in relation to environmental certification. In Mexico, where close integration with the US market and the existence of environmental commissions associated with the North American Free Trade Agreement (NAFTA) might be expected to encourage improved corporate environmental management, Barkin (2002) reports that only a handful of firms qualified for ISO certification of environmental management systems.⁶ This is one of the most important international initiatives related to environmental certification. Between 1995 and the end of 1999, 14,106 certifications had been awarded worldwide. However, only 14 per cent of these were in developing countries, primarily in Asia. While the number of ISO 14000 certifications awarded annually is increasing in developing countries (they currently exist in 47 countries), only 733 new certifications were issued in 1999. This compares poorly with the ISO certifications related to quality management systems (ISO 9000), of which more than 22,000 were issued in developing countries in 1999 (ISO 2000).

Before arriving at the conclusion that little has been done, it is important to remember that corporate environmentalism, particularly in developing countries, is a fairly recent phenomenon, having emerged, essentially, during the past decade. It may be unrealistic, therefore, to expect significant progress within such a short timeframe. Given the fact that it is in its early days, it is perhaps more relevant to ask what sort of enabling environment is being established—in terms of policies, institutions, partnerships and pressures—that might encourage business to improve its environmental performance. We will return to this question later.

⁵ Sustainable development reporting is “based on the extensive use of quantitative methods (such as life-cycle analysis and mass balances) and on strong links with industry-wide and national sustainable development reporting against pre-agreed targets” (UNEP 1994:8).

⁶ The so-called 14000 series of the International Organization for Standardization (ISO), which relates to standards for environmental management, established in 1996.

While progress to date has been somewhat limited, several authors have noted that corporate rhetoric often suggests that innovation and change have been impressive. The survey findings reported by Pratt and Fintel in the second chapter, for example, indicate that there is a fairly sharp gap between business rhetoric and practice in Costa Rica. This gap is also highlighted by Rodríguez and Camacho in the third chapter and by Carrere in the fourth, who take to task two of the most publicized “success stories” in the literature on corporate responsibility—namely the Costa Rican bioprospecting activities of the giant US pharmaceutical company, Merck & Co., and the Brazilian operations of the pulp and paper company, Aracruz Cellulose. In the first chapter, Barkin also notes several cases of “greenwash”⁷ in Mexico.

In Central America, independent research and NGO monitoring have recently revealed other cases of inflated claims or double standards in two of the industries—chemicals and forestry—commonly associated with initiatives in environmental management. Evaluating a high-profile project promoted by the international pesticide industry in Guatemala,⁸ the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers’ Associations (IUF) found that, although certain indicators of project performance looked impressive, there were some serious shortcomings in project design and implementation. On the positive side, a third of a million farmers, housewives, students and others had received training in pesticide use between 1991 and 1994, but training methods were found to be weak. More intensive, longer term training, and consideration of more appropriate technologies associated, for example, with Integrated Pest Management were absent, as were participatory training methods. Furthermore, waged agricultural workers—the bulk of pesticide users—were not included in the project, a fact that seriously undermined the claim of the pesticide industry that it aimed to extend product stewardship along the entire supplier-user chain. As training targeted primarily the farmer-customers of the pesticide companies, and ignored alternative methods of pest control, the industry was vulnerable to the charge that the project was an effective marketing strategy (Hurst 1999). The concerns revealed through this type of inquiry highlight the value of independent evaluation and the need to include third-party verification in voluntary initiatives by business.

In the forestry industry, there are some signs of support for the principle of independent verification. But various doubts have arisen concerning the verification process. One problem concerns the gap between the image of forestry certification—as a process that is well under way—and the facts concerning certified areas. In Costa Rica, where the logging industry has supported the principle of promoting sustainable forestry through certification, only 25,000 hectares, managed by seven entities, have been certified (FSC 1999). This represents 5 per cent of the approximately half a million hectares of forest outside protected areas.⁹ When IIED (International Institute for Environment and Development) published its extensive report on the world’s pulp and paper industry in

⁷ “Greenwash” refers to the attempt by corporations to hide the unpleasant environmental facts of their activities by adopting an environmental discourse or specific policies and practices that appear to be environment-friendly but that do little, if anything, to change the relationship of business to the environment. Instances of greenwash have been well documented—see, for example, Greer and Bruno 1996.

⁸ The international pesticide industry, jolted by the events and fall-out from the 1984 Bhopal disaster in India, has taken several important initiatives under its Responsible Care programme and the Safe Use projects in Guatemala, Kenya and Thailand.

⁹ Based on 1996 estimates of forest area and protected areas in *World Development Indicators 1999* (World Bank 1999).

1996, it noted that the nearly six million hectares of forests that had been certified accounted for just 0.5 per cent of global trade (IIED 1996:62). By early 1999 the area certified by FSC-accredited bodies had risen to 15 million hectares (one-quarter of which were in developing countries) but this still represented less than 1 per cent of the world's forests outside protected areas.¹⁰

Another concern relates to the quality of the verification process. Even leaving aside the important criticisms of some environmentalists that what is being labelled "sustainable logging" can still cause serious environmental damage (Colchester 1990; World Rainforest Movement 1999), other concerns have arisen. A study of a certified teak plantation company in Costa Rica, for example, revealed that its operations did not comply with several FSC principles and criteria. It notes, for example, the ongoing use of highly toxic pesticides, banned in many countries, and the dangerous way they were used by workers who had not received the necessary training and protective clothing. The study also notes that certain well-known international conservation NGOs were supporting false claims about the company's management practices and environmental and economic performance (Romeijn 1999).

This study cautions against taking for granted the degree of autonomy of the verifiers, the rigour of their methods and the substance of their benchmarks or goals. These need to be periodically scrutinized. As one activist/researcher turned independent verifier once confided to this author: "Look at me. Having had to work so closely with CEOs, I'm beginning to look and sound like one. At some point a new generation of NGOs will probably have to come along to check on people like me".

Another major criticism of environmental certification relates to the fact that what is evaluated is environmental management, not environmental performance:¹¹ "Does your company have an environmental policy?" and not "To what extent has your company reduced its emissions or use of energy?" The relationship between improved environmental management and performance is not always as apparent as one might think. As Levy has pointed out in a study of Northern TNCs with facilities in the United States, it may be "surprisingly weak" (Levy 1995:57). Larger companies, in particular, were found to be strong on policy but weak on actual performance or outcomes.¹²

Perhaps the most inflated claim of all relates not to environmental protection per se but to the idea, often projected by companies, that they are promoting "sustainable development". Many companies, corporate foundations and business associations liberally apply the label "sustainable development" to initiatives or activities that in practice amount to fairly minor interventions to improve environmental management systems or eco-efficiency. Despite its title, the WBCSD (World Business Council for Sustainable Development) has, until recently, channelled its energies toward the promotion of eco-efficiency. Similarly, several UN-business partnerships that carry the sustainable development label focus narrowly on environmental or eco-efficiency aspects,¹³ or even the formulation of investment laws in least-developed countries.¹⁴

¹⁰ Based on data from FSC 1999; FAO 1997 and World Bank 1998.

¹¹ This criticism has been levelled, in particular, at ISO 14001 (Krut and Gleckman 1998), and has emerged more generally in the literature on corporate social responsibility (Ramachandra et al. 1997).

¹² Levy (1997:60) suggests two possible explanations: the fact that larger firms have more power to resist the introduction of costly environmental investments and bureaucratic inertia.

¹³ A UN publication on cleaner technology transfer to developing countries, for example, is entitled *Business and the UN: Partners in Sustainable Development* (United Nations 1999).

Many companies focus narrowly on one particular aspect of corporate responsibility—for example, environmental protection—and ignore others such as labour standards. As Carrere points out in the fourth chapter of *The Greening of Business* volume, some companies claim to promote sustainable development through initiatives associated with corporate environmentalism but they often ignore key social and political dimensions of the concept, such as empowerment or indigenous rights. In relation to environmental certification, some international trade unions are concerned that such instruments might legitimize the activities of companies that continue to abuse certain basic rights. The International Federation of Building and Wood Workers (IFBWW) called for the inclusion of additional social criteria related to ILO core labour standards in forest certification (BMZ 1999:31). Similarly, the IUF is highly critical of banana companies, like Chiquita Brands International, that have adopted the ECO-OK label, which, inter alia, commits a company to reduce its applications of toxic pesticides. According to union organizations and officials, Chiquita not only continues to pursue environmentally damaging practices but also restricts basic rights associated with the freedom of association of workers in countries such as Costa Rica (personal communication with SITRAP official;¹⁵ IUF 1998).

As noted in the introduction to *The Greening of Business* and in the chapter by Welford, the concept of sustainable development involves far more than environmental protection. Any strategy that merits the sustainable development label would need to be multifaceted and to demonstrate a degree of progress in areas of corporate policy and practice related not only to environmental and economic aspects but also, inter alia, to labour standards and community relations. Very few companies have attempted to adopt such a comprehensive strategy.

Apart from ignoring crucial dimensions of sustainable development, certain aspects of corporate environmentalism may actually reinforce the patterns of growth, industrial production, consumption and North-South relations that underpin “unsustainable” development. The eco-efficiency approach, which has been championed by organizations such as the World Business Council for Sustainable Development, has been criticized for actually reinforcing the dominant growth model. According to Welford, eco-efficiency implies:

that solutions can be found which will allow the rich North to consume more and more whilst using fewer and fewer natural resources...It adds an environmental dimension to the traditional growth path but does not allow that dimension to radically change the path. Perhaps more importantly, the ecomodernist trend has been subtly designed to reinforce the growth trend, justify the power of private capital, promote globalization and ignore the social dimensions of sustainable development. (Welford 2002:143–144)

Hawken et al. argue that:

narrowly focused eco-efficiency could be a disaster for the environment by overwhelming resource savings with even larger growth in the production of the wrong products, produced by the wrong processes, from the wrong materials, in the wrong place, at the wrong scale, and delivered using the wrong business models. (Hawken et al. 1999:x)

¹⁴ This was an activity encouraged by UNDP’s partnership with big business, the Global Sustainable Development Facility, until its demise in 2000.

¹⁵ Communication with Doris Calvo (Head of the Women’s Section, SITRAP), April 1999.

Certain features of corporate environmentalism may work against development in other ways as well. In relation to specific tools such as eco-labelling, there is concern that it could harm developing countries by acting as a non-tariff barrier to trade (Markandya 1997). According to Dawkins (1995:5-6):

eco-labelling could exacerbate current global trends by which developing countries' share of international markets shrinks and, within all countries, small businesses' share of both national and international markets shrinks unless eco-labelling schemes are accompanied by aggressive affirmative policies to facilitate the participation of small firms and developing country exporters.

A study of the international horticultural sector (UNCTAD and SGS 1998), suggests that more environmentally friendly forms of production could emerge. Achieving this, however, requires substantial investments, access to information and managerial expertise, which are beyond the reach of many smaller producers. The upshot "is that supermarkets and importers are focusing on fewer, larger, better-organized and more sophisticated growers, processors and exporters". Such a process tends to crowd out or restrict entry to smaller producers (UNCTAD and SGS 1998:7) although some niche markets—for example, for organically produced crops—are supplied by small farmers.

In relation to both corporate environmental and social responsibility, there are concerns that many firms (notably small and medium-sized enterprises) in developing countries will find it extremely difficult to raise standards. ISO certification, for example, can prove costly—generally between US\$5,000 and US\$20,000 for the first-time audit and consultation for establishing an environmental management system, assuming local auditors are available, plus an annual cost of US\$4,000 to US\$5,000. These costs will increase considerably if international auditors are used (Clapp 1998).

Many firms find it difficult to comply with new standards being set by the transnational or large retailers they supply. A complaint of some suppliers in developing countries is that, while higher standards are being imposed on them, the basic terms of their contracts—price paid, quantities delivered and delivery dates—remain as tight, if not tighter, than ever. In short they are being asked to do more with less. They also receive little managerial training and advice as to how to comply.¹⁶ Presumably the notion of corporate responsibility in such contexts must extend beyond the elevation of standards to facilitating a supplier's ability to comply. Furthermore, compliance with the standards should not exacerbate some other feature of "maldevelopment", for example, when attempts to ban child labour push the families affected further into poverty or the children themselves into more abusive forms of work (Mayne 1999).

Initiatives associated with corporate environmentalism rarely encourage consumers to adopt very different consumption patterns that would significantly reduce environmental degradation. The IUF case study, referred to above, showed that in the field of chemical use and training, for example, attention was being focused on using conventional pesticides in less health-threatening ways, not on promoting alternative methods of pest control. More generally, the choice that consumers are offered tends to be between like products that vary only slightly in the degree to which they have an impact on the environment; consumers are not encouraged to reassess their lifestyles and patterns of consumption (West 1995:19). Similarly, when oil companies such as Shell go out of their way to promote "multi-stakeholder" dialogues to discuss specific initiatives,

¹⁶ I am grateful to Lin Wang, a consultant at the ILO, for these observations.

the discussion is more likely to centre on how a particular project should be implemented than on whether it should go ahead (Rowell 1999).

Not seeing the forest for the trees

When assessing trends associated with corporate environmental responsibility, it is important to be able to stand back from the anecdotes and case studies of “best practice” or “greenwash” and retain a sense of perspective regarding the bigger picture, that is, the broader trends associated with patterns of investment, industrial location, production processes and macroeconomic policy. Several chapters in *The Greening of Business* remind us that we should not lose sight of the forest for the trees by remaining fixated on specific events at the level of the firm. We need to step back and place what is happening in relation to corporate environmentalism in the broader context of trends in the national or world economy and political economy.

But here too the picture is very mixed. Several authors have highlighted different structural aspects constraining corporate responsibility. In their chapters, Carrere and Welford highlight the fundamental constraints on corporate environmental and social responsibility that derive from the logic of capitalist production and, in particular, the quest for profitability, which puts pressure on firms to cut or externalize costs and seek locations with weak labour and environmental regulations. Such pressures may well be escalating in the harshly competitive environment associated with economic globalization and liberalization. Through mergers and acquisitions, downsizing, outsourcing, the feminization and informalization of employment, and the lure of largely deregulated havens, such as Export Processing Zones, many corporations are shifting production to sites and systems with lower environmental and social standards.

In the case of the pulp industry in Brazil, Carrere’s chapter in *The Greening of Business* suggests that this contradiction may be even more acute during the early phases of corporate activity, when companies attempt to obtain quick returns on large-scale investments by externalizing as many costs as possible. He shows how power structures reinforce this possibility. Not only did the large corporations he examines use political and economic power to obtain subsidies from government, but they also had the coercive power of the state on their side when the externalities generated local opposition. Moreover, Carrere highlights another structural problem—that of scale. Even companies that are firmly committed to the goal of environmental responsibility and sustainable development are unlikely to realize these goals when the inherently large scale of their operations means that large-scale environmental impacts are inevitable. The choice, he argues, should not be between a very destructive and a less destructive corporation; he should also have the choice to promote an economic system based on smaller scale enterprises more in tune with the local culture and the environment.

In *The Greening of Business*, Barkin suggests that although many firms in Mexico are now taking steps to improve their environmental management systems—and institutions are emerging to facilitate this—the economic system as a whole in Mexico continues to demonstrate very perverse characteristics. Patterns of investment are such that polluting industries are expanding. Furthermore, trends in industrial location suggest that firms are being established or moving to areas of the country where planning and regulation are weak. As has been pointed out elsewhere, in relation to India, the process of competitive deregulation to attract investment involves not only countries but also regions or states within countries (Jha 1999).

In their chapter, Pratt and Fintel reveal how institutional structures, associated in particular with macroeconomic policy, constrain corporate environmental responsibility in Central America. Firms are less likely to adopt environmental improvements when, for example, the financial services sector imposes high interest rates and short lending terms. These can act as a disincentive to adopting the type of long-term business planning horizon that is often required for environmental management. Other policies of this sector—for example, recommendations regarding the use of certain technical packages—may encourage agricultural producers to use outdated and environmentally damaging technologies. Similarly, the fiscal system discriminates against the importation and adoption of clean technology and undervalues the use of natural resources.

These broader trends associated with the evolving nature of capitalist production, economic liberalization and macroeconomic policy raise serious concerns for corporate environmentalism. But, as indicated in the introduction to *The Greening of Business*, the proponents of ecological modernization generally argue that certain processes commonly associated with globalization may serve to facilitate some aspects of corporate environmentalism. Foreign direct investment and networks controlled by TNCs, for example, may act as conduits for the diffusion of cleaner technologies and improved environmental management systems; “win-win” situations—where environmentally friendly business practices can also be good for profitability and competitiveness—are thought to be ubiquitous; and global civil society activism and networking is keeping TNCs in the spotlight and forcing the pace of environmental management reform. As Flaherty and Rappaport (1997) observe, “companies may attempt to run but they can no longer hide”. Later in this chapter we turn to the question of whether these contexts and “drivers” of corporate environmentalism are likely to improve the environmental performance of business in the South significantly.

Promoting Corporate Environmentalism in Developing Countries

Best practice and replication

A central issue addressed in *The Greening of Business* concerns the question of how best to promote corporate environmentalism in developing countries. Much of the literature in this field is concerned with identifying “best practices”. Once the knowledge of what works is available, it is often assumed that the technical and managerial innovations associated with best practices can be replicated in different countries.

Documenting and disseminating information on what has worked for one company or country is of course important, particularly in a relatively new field. Many CEOs and company managers are willing to take steps to improve their environmental record but are uncertain of what to do.¹⁷ “Best practice” information can assist them in this regard. It has been observed that TNCs and large companies, in particular, may be in a good position to take advantage of such information given the scope for knowledge and technology transfer and intrafirm learning within their structures, which derives partly from sophisticated networks of communication (Levy 1995:63).

¹⁷ This point emerged during discussions at the UNRISD/UNA workshop on “Business Responsibility for Environmental Protection in Developing Countries”, Heredia, Costa Rica, 22–24 September 1997.

There are, however, some serious problems with the “best practice” approach. First, it can be fairly short-sighted. It is common, for example, to focus narrowly on one particular practice and conveniently ignore other aspects of corporate policy and behaviour that have negative environmental or social implications. Furthermore, as seen earlier, the benefits attributed to a particular best practice are often exaggerated, and the fact that best practices may quickly unravel as circumstances change is often ignored. Second, the analysis of the factors underpinning best practice can be very limited in the sense that technical, managerial and financial aspects tend to be emphasized while certain key institutional and political aspects are often ignored. Third, best practice literature often recycles the same cases, which are relatively few in number. Several of these concerns are highlighted in the critical assessment that Rodríguez and Camacho, and Carrere undertake in their chapters of two of the classic cases in the best practice literature.

Other concerns also emerge in relation to the issue of the replication of best practices. It is often assumed that what needs to be done is to transfer to the South technology, management systems and policies that are perceived to be successful in the richer industrialized countries. Sometimes this transfer might take place from one developing country to another. The contributions to *The Greening of Business* by Hanks and by Rodríguez and Camacho introduce a note of caution regarding the issue of replication.

In his analysis of the potential of negotiated agreements and their adoption in South Africa, Hanks concludes that a number of benefits could derive from such policies. But he also identifies some of the limits to replication in what are very different institutional contexts of developing countries. He argues that co-regulation tends to work best when there is a high level of environmental awareness in both government and industry, mutual trust between the various parties, high-quality information flows, political independence of relevant state authorities from industry, and some threat of punitive state sanctions as well as peer, community and consumer pressures. At least some of these conditions are often lacking in developing countries.

Rodríguez and Camacho’s chapter also refers to the issue of replication in their analysis of the Merck-INBio agreement, which has been hailed as a “model” in the field of bioprospecting. They show how this model developed in a context that is probably not found in too many countries. Costa Rica, for example, has an extensive system of reasonably well-administered protected areas that are extremely rich in biodiversity, a fairly strong research and scientific community and infrastructure, and large NGOs such as INBio that have a reasonably strong bargaining position. Their analysis questions whether this model can be easily reproduced in other countries.

Government regulation and social pressures

The proponents of corporate self-regulation and ecological modernization generally suggest that there are a number of sound business reasons why companies adopt measures to improve environmental management, notably the potential for cost reduction and the possibility of gaining competitive advantage and market share. But enlightened self-interest appears to confront serious limits both in terms of its diffusion throughout the business community and its ability to translate into meaningful changes in corporate environmental performance. For this reason several of the chapters in *The Greening of Business* have looked at the types of regulatory regimes and social pressures that promote corporate environmental responsibility. More specifically, they have looked at how governments and NGOs should interact with the business community.

Authors of some of the chapters in *The Greening of Business* who have worked in or closely with business and business associations have highlighted the need for pragmatism and dialogue. They suggest that firms are limited in what they can take on at any one time in terms of environmental and social responsibility. While there may be much goodwill among corporate executives, many remain unconvinced of the need for major change and lack the necessary know-how regarding how to improve environmental management systems in a cost-effective way. Accordingly, feasible priorities and targets need to be set and practical information and training are also essential. Hanks argues that in many situations it makes sense to adopt an incremental approach, focusing initially on more obvious “win-win” solutions where environmental management can also have a positive spin-off in terms of profits, company image and market share.

It has also been argued, however, that corporate environmental and social responsibility must ultimately derive from a political process. Whether governments and corporations act to promote sustainable development is not simply a technical issue of know-how, resource availability, “win-win” situations or even greater environmental awareness on the part of key decision makers. All of the above may contribute to generating the political will needed for reform, but political will also stems from a social process involving power struggles between different actors and stakeholders. In this context, the emergence of “consumer power”, the capacity of environmental and human rights NGOs and international NGO networks to organize and mobilize, trade union pressures and the role of certain national and multilateral institutions calling for stricter environmental standards constitutes a political context that is essential for promoting corporate environmental responsibility. This mix of regulatory and social pressures clearly goes beyond the “new model” of pollution control in developing countries proposed by organizations like the World Bank (2000) and based on market-based instruments, voluntary initiatives and “informal regulation”.

Much of the discussion of these issues has centred on the role of policy and partnership initiatives involving certain forms of “co-regulation”. Various authors in *The Greening of Business* see these as potentially more constructive than attempts either by governments to police the business community or by companies to regulate themselves. Two forms of co-regulation have been highlighted. The first, explored by Hanks, involves “negotiated agreements” between government and business associations to promote, for example, emissions control, recycling, environmental impact assessments, eco-audits and reporting. The second, examined in the ninth and tenth chapters by Bendell and Murphy involves “civil regulation”, through which NGOs and other civil society groups and organizations exert pressure on business via various forms of confrontation and collaboration. Business-NGO partnerships have expanded rapidly during the past decade, providing a mechanism through which NGOs can exert influence and provide advice and technical assistance, as well as specific services associated with auditing, reporting, certification and monitoring.

While several authors in *The Greening of Business* stress the importance of co-regulation, they are also aware of its limits, particularly in the developing world. In many such countries, consumer power and public environmental awareness may be relatively weak, state regulatory authorities may lack independence as well as human and financial resources, business may not be obliged to disclose basic information, and NGOs may be relatively few in number or lack the capacity to monitor corporate activities. Bendell and Murphy also point out that civil regulation has mainly been driven by Northern NGOs, whose legitimacy and capacity to

promote corporate environmentalism in the South are likely to be compromised unless there is a stronger input from Southern civil society organizations.

Another concern prompted by the civil regulation model is that it revolves increasingly around partnerships between business and NGOs that provide services (such as certification, audits, advice on technology or management systems). Such relationships may not only compromise the autonomy and critical edge of NGOs but also lead to a failure to question such fundamentals of unsustainable development as certain patterns of economic growth and consumption or inequalitarian structures of power and income distribution. In view of these and other concerns, Hansen's chapter emphasizes the ongoing and prominent role that international and government regulation and policy should play in promoting corporate environmental responsibility: setting minimum industry-wide standards, providing incentives and support services for improving environmental management systems, and ensuring public disclosure and freedom of information. Both the Pratt and Fintel chapter and the Welford chapter also stress the importance of fiscal reforms to reduce or eliminate certain types of subsidies that underpin environmentally destructive resource management practices and consumption patterns. While some of the discussion has emphasized the poor performance of many governments in establishing appropriate policy frameworks and enforcing basic environmental laws, it is also apparent from corporate surveys that government regulation is one of the main drivers of improvements in corporate environmental management.¹⁸ It has been noted that, whether enforced or not, government regulations can have a powerful symbolic value—the mere presence or threat of regulations appears to act as a powerful trigger of corporate environmental responsibility (UNRISD/UNA 1998).¹⁹

Research from other parts of the world also casts doubt on the assumption commonly held by proponents of ecological modernization that environmental management reform can derive primarily from corporate self-regulation and voluntary initiatives as opposed to mandatory regulations. In their analysis of Malaysia and Singapore, Perry and Singh point out the limitations of voluntary initiatives and suggest that, for the present, such initiatives cannot be seen as an effective substitute for government regulation. Referring elsewhere to specific market-based instruments and voluntary initiatives in East Asia such as environmental taxes, lifecycle assessment, ISO 14001 and environmental reporting, they argue that:

each of these alternatives has shortcomings that do not reduce the need to pursue environmental improvement through traditional methods...Many of the problems alleged to limit the effectiveness of command and control regulation in East Asia are also present within market-based and voluntary initiatives and these approaches suffer other limitations as well. (Perry and Singh forthcoming)

Others have pointed to a potentially dangerous trade-off between voluntary initiatives and government regulation. In Argentina and Mexico, for example, governments have come under pressure from business to relax environmental regulations for those firms that have obtained ISO 14000 certification (Clapp 1998:310). Such forms of "regulatory relief" could weaken rather than strengthen the regulatory framework (Clapp 1998:310).

¹⁸ See Hanks chapter in *The Greening of Business*; Hansen 1999; Rappaport and Flaherty 1990.

¹⁹ This point was made by Harris Gleckman at the UNRISD/UNA workshop "Business Responsibility for Environmental Protection in Developing Countries", Heredia, Costa Rica, 22-24 September 1997.

Political and Structural Determinants

Focusing on a few case studies of “best practices” or “greenwash” is often the methodology used to construct an empirical case for corporate environmentalism as either a meaningful new departure or a sham. What is disturbing about much of the literature in this field is the tendency to generalize about corporate behaviour and trends across very different product sectors and local and national contexts. The “best practice” or “win-win” literature tends to imply that the lead that has been taken by a few companies will almost inevitably be followed by others, once information flows improve and the right combination of carrots and sticks emerges. The greenwash literature suggests that business is fundamentally resistant to change along the lines needed to forge a new relationship to the environment. If it changes, it does so reactively and reluctantly, primarily under civil society or government pressure (Greer and Bruno 1996).

Part of the problem with these two camps is the tendency to generalize from a few anecdotes and case studies, and/or from some notion of the innate logic of capitalist production, which is perceived as either conducive or inimical to improvements in environmental management. Just taking the case of TNCs and their affiliates—let alone the many other firms that exist—the urge to generalize seems somewhat unusual, knowing that there are approximately half a million TNC affiliates operating in what are often extremely varied sectoral, national and local settings.²⁰

A key question that needs to be asked is not so much whether business is innately amenable or resistant to change, but whether or not there are forces in place that might promote a pattern of corporate environmentalism that is less destructive of the environment and conducive to sustainable development. To answer this question, it is useful to refer to two bodies of theory related to power and corporate strategy in the context of globalization. In contrast to certain strands of ecological modernization theory, which tend to highlight the technological and managerial drivers of corporate environmentalism, this analysis suggests that it has important political and structural underpinnings.

The politics of corporate environmentalism

In chapter 10, Bendell and Murphy ask: “What is corporate environmentalism, *really?*” Citing Levy (1997), they argue that it is less about efficiency, profits and competitive advantage or concern for the environment than it is about politics. Referring to Gramsci’s (1971) concept of “hegemony”,²¹ they argue that corporate elites seek to accommodate threats to their dominance that derive from civil society organizations and movements as well as regulatory institutions.

The correlation of social forces, then, is a crucial determinant of whether or not business will respond to social and environmental issues. The considerable growth of civil society organizations, networks and movements concerned with issues of corporate responsibility and accountability suggests that business is being forced to change. What Broad and Cavanagh (1999) call the “corporate accountability movement” is targeting both specific corporations—for example, Nestlé, Shell, Nike, Philip Morris, Monsanto,

²⁰ The *World Investment Report 1999* indicates that there were some 59,902 parent firms with 508,239 foreign affiliates (UNCTAD 1999:6) located primarily in developing and transitional economies.

²¹ This concept explains how the dominance of ruling groups in industrialized societies is increasingly achieved less on the basis of coercion and more through a broader representation of opposing values and interests (Laclau and Mouffe 1985).

Rio Tinto and Gap—and specific types or sectors of industry with a heavy presence or impact in developing countries, such as apparel, chemicals, footwear, mining, toys and the *maquila* factories.

In the struggle for hegemony, then, elites must take on board some of the concerns and values of a broader range of social groups or, in contemporary parlance, “stakeholders”. But the corporate response should not be seen simply as a reaction to pressure and the threat of regulation. Gramsci’s analysis of power reveals that the struggle for hegemony is also a proactive cultural phenomenon whereby dominant groups seek to secure their position not only by accommodating oppositional values but also by exercising moral, cultural and intellectual leadership (Bennett 1986). They do this primarily through the institutions of civil society—by building up a system of alliances through which the interests of a broader range of social groups are represented (Utting 1992).²²

What is often ignored in the analysis of the role of civil society in development is that when civil society is constituted and expands—that is, when individuals associate and organize in “private” or “voluntary” institutions—it becomes a force for change not only “from below” but also “from above”. Elite groups can themselves form “voluntary” organizations or seek to work closely with others through various forms of collaboration and partnership. This leadership role is very apparent in the field of corporate environmental responsibility and, more specifically, in the eco-efficiency model actively promoted by business associations such as the World Business Council for Sustainable Development. It is also apparent in the way organizations such as the International Organization for Standardization (ISO) and global corporations are increasingly influencing policy making at the international level related to environmental and development issues (Krut and Gleckman 1998; Dawkins 1995) and entering into partnerships with the United Nations system. The latest manifestation of this partnership approach is the Global Compact, formally launched in July 2000 with the support of 44 corporations, five business associations and nine labour and civil society organizations.

At various historical junctures, big business has not only responded to pressure but also taken the lead in terms of institutional reform. In this respect it is useful to examine the wave of “corporate social responsibility” associated with certain firms and industries early in this century. The idea that corporations were responsible for more than just the financial “bottom line”, gained in prominence in the United States when big industrialists such as Ford and Carnegie not only engaged in corporate charity but also took some steps to improve the conditions of workers. This was a period when certain sectors of big business restructured both the way they organized production and marketing, and the nature of their relations with various stakeholders. Gramsci referred to this dual phenomenon of technological and social change as “Fordism”:²³ new methods of organizing industrial production (for example, the assembly line) were combined with new relations with workers (higher wages, lower hours, education programmes), consumers (through advertising and credit) and the communities where companies were located. Transforming such relations was crucial in overcoming certain social limits to growth, related for example to absenteeism, sickness, strikes, social unrest, mistrust of big business and weak consumer demand (partly linked to low wages). As

²² The contemporary phenomenon of “partnerships” for development can, to some extent, be viewed from this perspective.

²³ See Gramsci 1971.

Clarke (1992:19) points out, the new production system, based on the interdependence of tasks, was highly vulnerable to breakdown if any one task was interrupted. A healthy and motivated workforce could partially reduce this vulnerability.

Backing this process of change were certain forms of state intervention that promoted social reforms and sought to curb the powers of big business through anti-trust legislation. But corporate social responsibility at this time confronted serious limits and remained very restricted in terms of the nature of the reforms as well as the industrial sectors and countries involved. The process of scaling up and deepening corporate social responsibility would require the strengthening of trade unions and the institution of collective bargaining. Indeed, it could be argued that it required a more fundamental change in the correlation of social forces, which included the weakening of big business. It was not until this occurred—notably in Europe and Japan after the Second World War—and the “welfare state” had emerged (Gallin 1999), that features associated with corporate social responsibility became much more generalized in the industrialized countries. However, the weakness of the labour movement and the welfare state in many developing countries, as well as the nature of the international division of labour and industrial organization, imposed limits on the spread of corporate social responsibility in much of the South.

As this example demonstrates, corporate social responsibility made sense in the context of changes that were taking place in the way certain sectors of business were being reorganized technologically and institutionally. But its scaling up also depended on a political process involving various forms of workers’ resistance,²⁴ civil society activism, regulatory pressures and broader changes in the correlation of social forces. When analysing the drivers of corporate responsibility—whether social or environmental—it is important to bear in mind both the structural and the political determinants of change. As Jessop, citing Gramsci, points out, the outcomes of struggle “must also be congruent with the changing technical and material conditions for capitalist accumulation” (Jessop 1990:191). A combination of trends and circumstances, therefore, coalesced to produce a shift in the social relations that characterized certain industrial sectors.

Contemporary trends associated with the greening of business appear to exhibit certain parallels with corporate social responsibility. Like the latter, corporate environmentalism makes sense both as a political strategy or response to social pressures and in the context of changing patterns of industrial organization. And, like the early experience of corporate social responsibility, its scaling up confronts serious limits. Social movements demanding corporate accountability and corporate environmental responsibility have gathered force, particularly in the past decade. As Murphy and Bendell point out in chapter 9 of *The Greening of Business* “through the politics of both pressure and engagement, NGOs are creating the new agenda for business, as much as companies themselves”. Civil society groups and movements, however, are often limited in their capacity to exert pressure, particularly on a sustained basis. Of the many issues associated with corporate irresponsibility that activist groups are concerned with at any one point in time, only a few can be addressed with sufficient momentum and force to make a large corporation pause, take notice and respond in some shape or form. There is also the strategic problem of knowing where to intervene in the system and with which actors to engage and ally. Considerable effort can be wasted by intervening in the wrong places.

²⁴ See Clarke 1992:20–21.

The analysis of global commodity chains reveals the presence of multiple actors in any product sector, some of which are far more powerful and capable than others in terms of being able to influence the process of environmental management reform (von Moltke et al. 1998). The example of the NGO campaign to reduce the production and consumption of tropical timber not sourced from sustainably managed forests suggests that, for many years, attempts to influence logging companies, consumers and governments had limited effect. It was not until a very small group of European wood-product retailers was targeted that things started to happen, given their strategic location in the chain and ability to exert pressures both downstream and upstream, on producers and consumers respectively.²⁵

Social pressures that partly drive corporate environmentalism can also be accommodated and deflated through “incorporation” or co-option. Several forms of business-NGO partnership may have the effect of diluting activist pressures (Currah 1999). Many NGOs and activists have shifted tactics, reducing or abandoning more confrontational forms of activism and cooperating with business to provide technical assistance and services. There are concerns that closer NGO relations with business are being driven as much, if not more, by funding as by political considerations, and that they may involve a trade-off with the political pressures that are a crucial driver of corporate responsibility.

The organization and mobilization of grassroots groups and reform-oriented NGOs in much of the South are often constrained by what might be called the priorities of everyday life and survival, as well as the lack of resources for organizing and the denial of human rights such as freedom of association and information. In addition, as Murphy and Bendell point out in chapter 9 of *The Greening of Business*, the global civil regulation agenda is being shaped primarily by Northern NGOs, many of which lack both an integrated vision of environmental and development issues and the legitimacy to lobby and negotiate on behalf of Southern groups and communities.

In view of limitations such as these, which affect the role of the NGO sector as an agent of change, it is important for NGOs to construct alliances with other sectors of civil society, in particular trade unions. Historically, some of the major gains in the development of responsible capitalism have been the result of trade union pressure and agreements reached through collective bargaining. The environmental movement needs to enlist the firm support of the labour movement.

Globalization has thrown up major new challenges and opportunities for the labour movement. In the words of one former leader, if new trade union structures are needed to deal with the growing power of TNCs and international forces, so also are alliances with other sectors of civil society, in order to build a broad-based social movement that can shape the path of development more effectively (Gallin 1999). In countries such as Brazil, Korea and South Africa, there are signs that some union organizations are working more closely with community and other groups to build such a movement (Gallin 1999). However, there are still numerous tensions that restrict the possibility of building such a broad-based movement.

To assess the scope for corporate environmentalism in today’s world, it is important to examine not only the politics of environmentalism and the strength of civil society activism, but also whether changing forms of production and investment facilitate or

²⁵ I am grateful to Jean-Paul Jeanrenaud at WWF International for these observations.

hinder the greening of business. When certain trends associated with globalization and contemporary patterns of production and industrial organization are analysed, there emerges a structural explanation for corporate responsiveness to environmental issues and related stakeholder concerns. However, as with the early experience of corporate social responsibility, the response by big business has been extremely partial and uneven.

Contemporary structural change

There are several drivers of corporate environmentalism associated with globalization and the way firms are responding to compete both nationally and internationally. As noted in the introduction and by Welford in chapter 6, many companies are using improvements in environmental management as a strategy to gain competitiveness. Some writers have argued that in a context where global competition is reducing the scope for differentiating products in the marketplace on the basis of price and quality, so-called lead companies are attempting to maintain or gain competitive advantage through other product or company features associated with environmental and social responsibility (Flaherty and Rappaport 1997).

A key question that needs to be asked is not only whether instruments associated with the greening of business are congruent with the strategy of individual firms to gain competitive advantage, and possibly reduce costs, but also whether they have a structural basis in terms of the changes that are occurring in the international division of labour, global production networks and in patterns of industrial organization and foreign direct investment (FDI). While there is much debate about the nature of contemporary changes in the global economic system, certain structural developments appear to be conducive to corporate environmental responsibility and eco-efficiency in some sectors. Such developments relate to so-called “flexible specialization”,²⁶ “global commodity chains” (Gereffi et al. 1994), export orientation, and what has been referred to as “the thicker institutional network of international production including subcontracting, joint ventures and strategic alliances” (Kozul-Wright and Rowthorn 1998:6). Various aspects associated with these models seem particularly relevant for explaining why some firms are adopting certain features of corporate environmentalism.

In a context where flexibility and innovation have become particularly important for competitiveness in certain sectors (Porter and van der Linde 1995), companies are not only attempting to respond to new market opportunities that derive from more segmented demand and discriminating buyers in the North (Gereffi 1994:218), but also actively trying to create and expand such markets (Hirst and Zeitlin 1991).²⁷ Markets for environmental goods and services are highly relevant in this regard, including, for example, eco-labelled products, organically produced foods, biological food products (grown using fewer chemicals), recycling-friendly packaging, nature or ecotourism, environmental auditing and certification services, and cleaner technology. Trends associated with flexibility and innovation also have important technological implications.

²⁶ Flexible specialization has been defined as “the manufacture of a wide and changing array of customized products using flexible, general-purpose machinery and skilled, adaptable workers” (Hirst and Zeitlin 1991:2). It is to be distinguished from mass production, which involves “the manufacture of standardized products in high volumes using special-purpose machinery and predominantly unskilled labour” (Hirst and Zeitlin 1991:2).

²⁷ The rapid increase in advertising spending, particularly notable in Asia and Latin America during the past decade, partly reflects such efforts. Conservative estimates put global advertising spending at US\$435 billion per annum, with all forms of marketing estimated at nearer US\$1 trillion (UNDP 1998:63).

The development of cleaner technology, for example, is to some extent facilitated by the mindset, skills and other resources associated with the active process of technological innovation that characterizes the flexible specialization model.

Models of industrial organization associated with flexible specialization and global commodity chains also require different relations between firms as well as between firms and their stakeholders. With the shift toward specialization and the production of customized products, as well as the increased sourcing of manufactured products from developing countries, Northern companies rely increasingly on networking and subcontracting. New relations based on cooperation and trust are to some extent a feature of such models (Hirst and Zeitlin 1991). Certain aspects of corporate environmentalism associated, for example, with certification, auditing and reporting are instruments that can play an important role in the development of collaborative relations between the numerous firms that make up a network or commodity chain.

The increasing global reach of many firms, new patterns of industrial organization and the information technology revolution mean that companies today must interact with and be more responsive to the concerns and demands of a variety of different stakeholders (Wilson 2000). The protection of company reputation and brand-name image has become a key managerial concern for firms in certain product sectors (Nelson 1997). To minimize or avoid any tarnishing of reputations, some companies are not only attempting to respond to environmental concerns related to their business activities but also engaging new forms of risk management by trying to anticipate where the next problem or threat might come from, and take preventive action (Schwartz and Gibb 1999).²⁸

These patterns of industrial production and organization are extending to the South (Evans 1998; Gereffi et al. 1994). Gereffi (1994:211) shows how “diversified industrialization” is spreading to many developing countries with export-oriented development strategies. He identifies two ideal types of global commodity chains, both involving complex organizational forms in which a relatively small group of “core corporations” manage to “make sure all the pieces...come together as an integrated whole” (Gereffi 1994:218). So-called “producer-driven commodity chains”—characteristic of car, computer and electrical machinery manufacturing—are controlled by TNCs. They involve complex backward and forward linkages with considerable international subcontracting of components (Gereffi 1994:216). “Buyer-driven commodity chains”—characteristic of labour-intensive consumer goods industries—rely heavily on specification contracting, with independent companies in developing countries making finished goods (clothing, footwear, toys) according to specifications supplied by large retailers and brand-name companies (Nike, Reebok) in the North (Gereffi 1994:216). Such models have some important implications for the analysis of corporate environmentalism in the South. They reveal not only the way in which certain manufacturing enterprises in developing countries are being drawn into production and marketing chains controlled by large Northern corporations, but also how the smooth functioning of these chains requires attention to issues of stakeholder management and corporate social and environmental responsibility throughout the production chain.

²⁸ This point was stressed by several participants (notably those currently or previously connected with large oil companies) at an UNCTAD workshop on corporate social responsibility, attended by the author of the present chapter (20 May 1999).

Structural developments such as these suggest that the increasing attention to environmental issues on the part of large corporations in the North may filter down in some form to certain developing countries. This can take place in various ways, for example through the standards and specifications imposed by such corporations on affiliates and suppliers, through pressures they exert on national and international standard-setting and regulatory institutions, and also through the so-called “demonstration” effect of TNC involvement in developing countries. As Wilkins observes, TNCs transfer more than capital, goods and personnel; they also “carry...with them a package of business attributes, including...processes, marketing methods, trade names, skills, technology and, most importantly, management” (1998:95).

As developing countries open up their economies and become more export-oriented, domestic firms are having to respond to new pressures associated with consumer demand and regulations in the North. The survey findings presented by Pratt and Fintel in chapter 2 of *The Greening of Business* show how leading firms in Costa Rica, which are producing for the export market, are more likely to have improved some aspects of their environmental management systems than those producing for the domestic market. Similarly, they note a strong “parent company effect”: firms, owned to a considerable extent by international capital, particularly those producing for the export market, had more environmental policies, plans and procedures than domestic firms, partly due to the need to comply with “headquarter guidelines”. In their survey of foreign-owned TNCs in Singapore, Perry and Singh also identify compliance with standards set by corporate headquarters as the most important motivation for voluntary environmental initiatives by affiliates. Another survey of TNC affiliates in Asia suggests the presence of “an internal regulatory structure within the TNC network” with some TNC headquarters having a “hands on approach to environmental management at affiliates”. While TNC supplier and subcontractor environmental linkages were less developed, they were expected to be “increasingly emphasized in the future” (Hansen 1999:26).

This influence is particularly evident in the field of environmental certification. Such instruments are becoming increasingly important in the context of contemporary models of global industrial organization, given the triple role they can perform. They can facilitate the construction of cooperative relations between firms in order to ensure certain standards; they serve to defend core corporations from risks associated with the exposure of bad environmental or social practice among affiliates and suppliers; and they can also protect niche markets from both free riders and new entrants.²⁹

While the ISO 14000 environmental management certification system is of recent origin and is taking off slowly in developing countries, it is expected to expand fairly rapidly. According to UNCTAD, “There is no question that ISO 14000 will have a major role in the standardization of corporate environmental management systems in TNCs and their affiliates and subcontractors and suppliers worldwide” (1996:86).³⁰

The growing importance of certification is apparent in the case of the horticulture sector in developing countries, which is linked to the export market. In a context where fewer and fewer larger companies are controlling the horticultural trade, such firms are

²⁹ For example, the Costa Rican Certification for Sustainable Tourism Programme, created by the Costa Rican Tourism Board (ICT), is an attempt to ensure that mass tourism—which takes advantage of the country’s green image—will not damage the ecotourism market (von Moltke et al. 1998:261).

³⁰ It is interesting to note that ISO 9000 certification related to quality management standards increased from nearly 28,000 to 226,000 certificates in just five years from January 1993 to December 1997 (ISO 1998:9).

imposing stricter standards on suppliers. As a recent United Nations report observes, “Led by the supermarket sector, extremely high standards and accountability are demanded of exporters and growers in terms of chemical usage [and] food hygiene standards” (UNCTAD and SGS 1998). But from the analysis in the report it is also clear that tools associated with quality and environmental certification and auditing are also important in the framework of new inter-firm relations based on cooperation and trust:

Increasingly, importers, distributors and end users, especially in developed countries, are looking for sources of supply that will not ‘simply trade products, but act as a partner in a strategic alliance, in order to ensure consistent, high quality, technical and environmentally safe products at competitive...prices’³¹...In many ways, strategic alliance is an ‘attitude of mind’ rather than a physical action. The need to develop partnerships can be characterised by the recognition of the inter-linkages in the horticultural production, processing and distribution chain. Each ‘player’ in the chain must rely on the others if [it] is to operate efficiently. (UNCTAD and SGS 1998:77)

From the perspective of our analysis of both the drivers and the scope of corporate environmentalism in the South, it is important to note two important qualifiers identified in the UNCTAD/SGS analysis, which also apply to several product sectors associated with the new international division of labour. The first is that strategic alliances in general—and instruments associated with certification in particular—are being promoted by TNCs or large retailers in the North not simply to develop more efficient procurement, production and marketing systems but also in response to both stricter food safety legislation in the rich industrialized countries³² and changing consumer preferences and concerns associated with environmental and ethical issues (UNCTAD and SGS 1998:3–4). The second is that the process by which certain instruments of environmental management are “disseminated” to the South, through the networks controlled by TNCs and large retailers such as supermarkets, is very uneven. Only some product sectors, types of enterprise and developing countries are involved.

The above analysis of political and structural dimensions suggests that corporate environmentalism amounts to far more than a response to the “win-win” opportunities and technological and managerial innovations emphasized by many proponents of ecological modernization theory. It is also apparent that corporate environmentalism is more than simply a “greenwash” or “accommodation” strategy, or a defensive reaction to civil society pressure. The political analysis indicates that social pressures are indeed a key driver of corporate environmentalism; it also suggests that some elite groups in contemporary democratic societies not only respond to pressure but may also take a leadership role by proactively addressing broader societal concerns. Furthermore, from the analysis of business restructuring in the context of globalization it emerges that certain features of corporate environmentalism may be conducive to the smooth functioning of contemporary production and marketing systems.

Perhaps what needs to be asked is not so much whether big business can take on board a green agenda but what sort of environmentalism is being espoused, and on what scale. The analysis of the political and structural underpinnings of corporate environmentalism indicates that it is likely to be a very uneven phenomenon in both sectoral and geographical terms. Developments associated with flexible specialization and

³¹ No citation provided in UNCTAD and SGS 1998.

³² The retail and processing sector, for example, must be able to trace the origins of their products and show “due diligence” over the use of agrochemicals and in food hygiene standards (UNCTAD and SGS 1998:6).

global commodity chains affect some product sectors and countries far more than others. Furthermore, each commodity chain can assume very different characteristics in terms of the actors, market conditions and pressures that shape the possibilities of improvements in environmental management. This is brought out clearly in the analysis of four commodity chains carried out by von Moltke et al. (1998). Examining the cases of copper in Zambia, semi-conductors in the Philippines, cotton in Pakistan and ecotourism in Costa Rica, these authors show how the environmental response throughout the chain and the prospects for promoting sustainable development are likely to vary considerably, depending on such aspects as the distribution of power among different actors in the chain, their (related) ability to capture rents and to finance environmental improvements,³³ the degree of integration and dispersion of the chain³⁴ and the type of environmental problem involved.³⁵

This type of analysis provides a more nuanced perspective of the possibilities of environmental management reform in different sectors. It suggests that it is not enough simply to categorize developing economies in terms of two sectors with very different potentials for improving environmental management: a modern export-oriented sector more prone to innovation and the adoption of cleaner technology versus a more polluting and less resource-efficient, domestic-oriented sector (Wehrmeyer and Mulugetta 1999).

The assumption that export-led growth and the rapid increase in foreign direct investment in a number of developing countries, which has occurred since the 1980s, provide contexts conducive to corporate environmentalism in the South needs to be handled with care. As noted above, the capacity and willingness of firms to introduce environmental management reforms is likely to vary considerably by firm, sector and country. While doubts have been cast on the "pollution havens hypothesis" (UNCTAD 1999), which claims that firms will move to less developed countries to benefit from weaker environmental regulations, a recent WWF study provides evidence that "certain resource and pollution intensive industries have a locational preference for areas of low environmental standards" (Mabey and McNally 1999:5). Furthermore, this report suggests that while policy competition to attract FDI may not produce an overt race to the bottom, it may have a "chilling effect on regulation and its enforcement... There are many examples of where competition for FDI has been cited as a reason for not introducing new environmental regulations or taxes" (Mabey and McNally 1999:5).

Much of the debate about the environmental impact of FDI has also ignored issues of scale. A report from Latin America (Schatan 1999) shows that the environmental situation has indeed deteriorated in those countries that have attracted most FDI. It points out that this is due not to a reorientation of the production structure toward more polluting industries but to the sheer growth of the export sector for manufactures.

The above analysis suggests that corporate environmentalism in the South is likely to remain highly restrictive, in relation to both the actual content of environmentalism

³³ It is observed in relation to some product chains that it is often larger (mainly Northern-based) companies higher up the chain that have this ability, rather than smaller downstream producers in developing countries. In the case of the ecotourism chain in Costa Rica, it was found that a significant proportion of revenues do accrue to local providers of goods and services (von Moltke et al. 1998:20).

³⁴ In the cotton chain, for example, it is observed that the presence of many small producers greatly complicates the flow of information and finances necessary for improved environmental management, whereas this is far easier in the more integrated semi-conductor chain (von Moltke et al. 1998:22-23).

³⁵ Waste issues related to industrial processes, for example, are often far more manageable than environmental problems related to natural resource extraction (von Moltke et al. 1998:22).

(scale and type of environmental management improvements and concrete impacts) and the contribution of corporate environmentalism to sustainable development. The minimalist agenda associated with improvements in environmental management may be partly due to various constraints that restrict the capacity of business to respond—constraints associated, for example, with lack of information and know-how, limited investment resources for clean technology and altering production processes, the relatively high costs of certification and auditing, the difficulties in quantifying the benefits of environmental management, the limited size of niche markets for certain environmental goods and services, organizational inertia or lack of incentives for innovation.³⁶ It is also due to the structural and political dimensions noted above. Just a few types of instruments or innovations might suffice to keep the system functioning smoothly. Also, the social pressures that partly drive corporate environmentalism can often be accommodated and deflated through partial responses, co-option or so-called “institutional capture”, which enables business interests to exert considerable influence over the decision-making processes of standard-setting and regulatory institutions.³⁷

There is also the problem of “Northern capture”. Some of the major voluntary initiatives associated with the promotion of corporate environmental responsibility in the South have essentially been designed by Northern actors. Business-NGO partnerships, which attempt to modify the way corporations operate in the South, involve primarily Northern NGOs. As Bendell and Murphy point out in chapter 10 of *The Greening of Business*, some Northern NGOs claim to speak on behalf of Southern interests, but fail to involve Southern NGOs effectively in their decision-making and consultation processes. Northern corporations, often acting through business and industry associations, are becoming increasingly influential in international decision making on environmental and social standards. There is considerable concern that the new forms of global environmental governance associated with hybrid private-public regimes (Clapp 1998)—or what Bendell and Murphy refer to as “global private regulation”, such as ISO 14000—are being dominated by Northern interests (Krut and Gleckman 1998). As Clapp observes, we are witnessing a shift from a system of environmental governance, based on state-based regimes such as international treaties and national government regulation, to one in which private economic actors are increasingly influential and decision making is taking place or originates in the richer industrialized countries. In such a context, “developing countries may be losing some of their voice in this realm” (Clapp 1998:312). If some of the contradictions, noted above, between corporate environmentalism and development or sustainable development are to be resolved, it is important that the relevant decision-making processes are democratized.

The nature of the political process underpinning corporate management reform is also likely to result in piecemeal reforms. As indicated above, corporations are quite capable of and increasingly adept at responding to certain concerns of environmentalists, consumers or development activists, in order to dim or deflect the spotlight on their activities. This can be seen in the recent strategies of certain large oil companies such as Shell and BP. It is often possible to do this through very selective management reforms,

³⁶ Levy 1997:132–133; Porter and van der Linde 1995:127; Dawkins 1995:2.

³⁷ In their analysis of eco-labelling and certification, various authors highlight the dangers which can arise when international institutions responsible for standard setting are unduly influenced by Northern business interests and lack the balanced participation necessary for effective policy making in the broader public interest (see, for example, Dawkins 1995; Krut and Gleckman 1998).

such as the introduction of a code of conduct, and/or through green advertising and multistakeholder dialogues. The chemical industry's Responsible Care programme has been somewhat successful in this regard.

In a report prepared for the World Summit for Social Development, UNRISD (1995) pointed out that international business cannot be expected to author its own regulation: "this is the job of good governance"—a process in which multiple actors at local, national and international levels must intervene and take responsibility. Similarly, the *Human Development Report 1998* (UNDP 1998) suggests that the task of changing production technologies and consumption patterns in a way that is conducive to sustainable development will not be achieved by business or technological solutions alone. Also crucial are government policies and regulations, strong public action related to consumer education and the protection of consumer rights, the strengthening of international mechanisms and global instruments to tackle environmental issues, building stronger alliances among social movements, and community and civil society initiatives.

In the absence of stronger forms of regulation and more concerted civil society pressure, the process of greening business in developing countries will remain lukewarm. TNCs and other "core corporations" in global commodity chains, as well as business and industry associations, will continue to promote certain features of corporate environmentalism in developing countries. As we have seen, however, the initiatives involved are likely to constitute a fairly minimalist and uneven agenda that is fraught with contradictions. By facilitating the smooth functioning of production and marketing processes, enhancing competitiveness and diluting alternative agendas for change, such initiatives may be more conducive to economic growth and the legitimization of big business than to sustainable development.

References

- Barkin, D. 2002. "The greening of business in Mexico." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Bendell, J. and D.F. Murphy. 2002. "Towards civil regulation: NGOs and the politics of corporate environmentalism." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Bennett, T. 1986. "Introduction: Popular Culture and "the Turn to Gramsci." In T. Bennett, C. Mercer and J. Woollacott (eds.), *Popular Culture and Social Relations*. Open University Press, Milton Keynes.
- BMZ (Federal Ministry for Economic Cooperation and Development). 1999. "Certification to save the world's forests." *D+C*, No. 2.
- Broad, R. and J. Cavanagh. 1999. "The corporate accountability movement: Lessons and opportunities." *The Fletcher Forum of World Affairs*, Vol. 23, No. 2, pp. 151–169.
- Carrere, R. 2002. "The environmental and social effects of corporate environmentalism in the Brazilian pulp industry." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London..
- Clapp, J. 1998. "The privatization of global environmental governance: ISO 14000 and the developing world." *Global Governance*, Vol. 4, No. 3, July-September, pp. 295–316.
- Clarke, S. 1992. "What in the f...s name is Fordism?" In N. Gilbert, R. Burrows and A. Pollert (eds.), *Fordism and Flexibility: Divisions and Change*. Macmillan, London.
- Colchester, M. 1990. "The international tropical timber organization: Kill or cure for the rainforests?" *The Ecologist*, Vol. 20, No. 5, pp. 166–173.
- Currah, K. 1999. *Activating the Self-Correcting Mechanism of Civil Society*. World Vision, Milton Keynes. Mimeo.
- Dawkins, K. 1995. *Ecolabelling: Consumers' Right-to-Know or Restrictive Business Practice?* Institute for Agriculture and Trade Policy, Minneapolis MN.
- Dommen, E. 1999. "Pertinence et limites des codes éthiques." *Reflets et perspectives de la vie économique*, Vol. 38, No. 3, pp. 41–51.

- Evans, P. 1998. "Transnational corporations and Third World states: From the old internationalization to the new." In R. Kozul-Wright and B. Rowthorn (eds.), *Transnational Corporations and the Global Economy*. Macmillan, London.
- Flaherty, M. and A. Rappaport. 1997. "Corporate environmentalism: From rhetoric to results." Paper presented at the UNRISD/UNA workshop on Business Responsibility for Environmental Protection in Developing Countries, Heredia, Costa Rica, 22–24 September.
- FSC (Forest Stewardship Council). 1999. Available at www.fscoax.org.
- Freeman, R.E. 1984. *Strategic Management: A Stakeholder Approach*. Pitman, Boston MA.
- Gallin, D. 1999. "Organized labour as a global social force." Paper presented at IR Workshop, Washington DC, 20 February.
- Gereffi, G. 1994. "Capitalism, development and global commodity chains." In L. Sklair (ed.), *Capitalism and Development*. Routledge, London.
- Gereffi, G., M. Korzeniewicz and R.P. Korzeniewicz. 1994. "Introduction: Global commodity chains." In G. Gereffi and M. Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*. Greenwood Press, London.
- Gordon, K. and M. Miyake. 2000. *Deciphering Codes of Corporate Conduct: A Review of their Contents*. Working Papers on International Investment, No. 99/2. OECD, Paris.
- Gramsci, A. 1971. "Americanism and Fordism." *Prison Notebooks*. Lawrence and Wishart, London.
- Greer, J. and K. Bruno. 1996. *Greenwash: The Reality behind Corporate Environmentalism*. Third World Network, Penang.
- Hanks, J. 2002. "Promoting corporate environmental responsibility: What role for 'self-regulatory' and 'co-regulatory' policy instruments in South Africa." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Hansen, M. 2002. "Environmental regulation of transnational corporations: Needs and prospects." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- . 1999. *Environmental Management in Transnational Corporations in Asia: Does Foreign Ownership Make a Difference? Preliminary Results of a Survey of Environmental Management Practices in 154 TNCs*. Occasional Paper No. 11, CBS/UNCTAD Cross Border Environmental Management Project. Copenhagen Business School, Copenhagen.
- Hawken, P., A. Lovins and L.H. Lovins. 1999. *Natural Capitalism: Creating the Next Industrial Revolution*. Earthscan, London.
- Hirst, P. and J. Zeitlin. 1991. "Flexible specialisation versus post-Fordism: Theory, evidence and policy implications." *Economy and Society*, Vol. 20, No. 1, pp. 1–56.
- Hurst, P. 1999. *The Global Pesticide Industry's "Safe Use and Handling" Training Project in Guatemala*. International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Association, Geneva.
- IIED (International Institute for Environment and Development). 1996. "Towards a Sustainable Paper Cycle." *A Changing Future for Paper*. IIED/WBCSD, London/Geneva.
- ILO (International Labour Organization). 1999. *Voluntary Initiatives Affecting Training and Education on Safety, Health and Environment in the Chemical Industries*. Sectoral Activities Programme, ILO, Geneva.
- ISO (International Organization for Standardization). 2000. *The ISO Survey of ISO 9000 and ISO 14000 Certificates: Ninth Cycle—1999*. Available at www.iso.ch (accessed in February 2014).
- . 1998. *The ISO Survey of ISO 9000 and ISO 14000 Certificates: Seventh Cycle—1997*. ISO, Geneva.
- IUF (International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations). 1998. "International banana conference explores routes towards a sustainable banana economy." *IUF News Bulletin*, Nos. 3–4.
- Jeffcott, B. and L. Yanz. 2000. *Codes of Conduct, Government Regulation and Worker Organizing*. ETAG Discussion Paper No. 1. Maquila Solidarity Network, Toronto.
- Jessop, B. 1990. "Regulation theories in retrospect and prospect." *Economy and Society*, Vol. 19, No. 2, pp. 153–216.
- Jha, V. 1999. *Investment Liberalization and Environmental Protection: Conflicts and Compatibilities in the Case of India*. Occasional Paper, CBS/UNCTAD Cross Border Environmental Management in Transitional Corporations Project. Copenhagen Business School, Copenhagen.
- Kolk, A., R. van Tulder and C. Welters. 1999. "International codes of conduct and corporate social responsibility: Can transnational corporations regulate themselves?" *Transnational Corporations*, Vol. 8, No. 1, pp. 143–180.
- Kolodner, E. 1994. *Transnational Corporations: Impediments or Catalysts of Social Development?* Occasional Paper No. 5. UNRISD, Geneva.
- Korten, D.C. 1995. *When Corporations Rule the World*. Kumarian Press, West Hartford CT.
- Kozul-Wright, R. and B. Rowthorn. 1998. "Introduction: Transnational corporations and the global economy." In R. Kozul-Wright and B. Rowthorn (eds.), *Transnational Corporations and the Global Economy*. Macmillan, London.
- Krut, R. and H. Gleckman. 1998. *ISO 14001: A Missed Opportunity for Sustainable Global Industrial Development*. Earthscan, London.
- Laclau, E. and C. Mouffe. 1985. *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. Verso, London.
- Levy, D.L. 1997. "Environmental management as political sustainability." *Organization and Environment*, Vol. 10, No. 2, pp. 126–147.

- . 1995. "The environmental practices and performance of transnational corporations." *Transnational Corporations*, Vol. 4, No. 1, pp. 44–67.
- Mabey, N. and R. McNally. 1999. *Foreign Direct Investment and the Environment: From Pollution Havens to Sustainable Development*. WWF–UK, London.
- Markandya A. 1997. "Eco-labelling: An introduction and review" In S. Zarrilli, V. Jha and R. Vossenaar (eds.), *Eco-Labelling and International Trade*. Macmillan, London.
- Mayne, R. 1999. "Regulating TNCs: The role of voluntary and governmental approaches." In S. Picciotto and R. Mayne (eds.), *Regulating International Business: Beyond Liberalization*. Macmillan, London.
- Murphy, D.F. and J. Bendell. 2002. "New partnerships for sustainable development: The changing nature of business-NGO relations." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- OECD (Organisation for Economic Co-operation and Development). 1999. *Codes of Corporate Conduct: An Inventory*. OECD, Paris.
- Perry, M. and S. Singh. (forthcoming). "Environmental policy in East Asia: The importance of regulation." In C. Briffett and J. Obbard (eds.), *Environmental Assessment in East Asia*.
- . 2002. "Corporate environmental responsibility in Singapore and Malaysia: The potential and limits of voluntary initiatives." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Porter, M.E. and C. van der Linde. 1995. "Green and competitive: Ending the stalemate." *Harvard Business Review* (September–October), pp. 120–134.
- Pratt, L. and E.D. Fintel. 2002. "Environmental management as an indicator of business responsibility in Central America." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Ramachandra, P., R. Ramani, G. Ramgopal, C. Ranganathaiah and M. Hopkins. 1997. "Defining indicators to assess socially responsible enterprises." *Futures*, Vol. 29, No. 7, pp. 581–603.
- Rappaport, A. and M. Flaherty. 1990. *Corporate Responses to Environmental Challenges: Initiatives by Multinational Management*. Quorum, New York.
- Rodríguez, S. and M.A. Camacho. 2002. "Bioprospecting in Costa Rica: Facing new dimensions of social and environmental responsibility." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Romeijn, P. 1999. *Green Gold: On Variations of Truth in Plantation Forestry*, Treebook No. 2. Treemail Publishers, Heelsum.
- Rowell, A. 1999. "Greenwash goes legit." *Guardian*, 21 July, p. 5.
Available at <http://www.andyrowell.com/articles/greenwash.html> (accessed in February 2014).
- Schatan, C. 1999. *Contaminación industrial en los países latinoamericanos pre y post reformas económicas*. Serie Medio Ambiente y Desarrollo No. 22. CEPAL, Santiago.
- Schwartz, P. and B. Gibb. 1999. *When Good Companies Do Bad Things: Responsibility and Risk in the Age of Globalization*. John Wiley, New York.
- UN DESA (United Nations Department of Economic and Social Affairs). 1999. *Business and the UN: Partners in Sustainable Development*. United Nations, New York.
- UNCTAD (United Nations Conference on Trade and Development). 1999. *World Investment Report: Foreign Direct Investment and the Challenge of Development*, UNCTAD, Geneva.
- . 1998. *World Investment Report 1998: Trends and Determinants*. UNCTAD, Geneva.
- . 1996. *Self-Regulation of Environmental Management: Guidelines Set by World Industry Associations for their Members' Firms—An Update, 1996–2003*. UNCTAD, Geneva.
- UNCTAD and SGS (Société générale de surveillance SA). 1998. *International Market Access Information: Horticultural Sector*. United Nations, Geneva.
- UNDP (United Nations Development Programme). 1998. "Introduction: Changing today's consumption patterns—for tomorrow's human development." *Human Development Report 1998: Consumption for Human Development*. Oxford University Press, Oxford.
- UNEP (United Nations Environment Programme). 1998. "Voluntary initiatives for responsible entrepreneurship: A question and answer guide." *Industry and Environment*, Vol. 21, Nos. 1–2, pp. 4–9.
- . 1994. *Company Environmental Reporting: A Measure of the Progress of Business and Industry towards Sustainable Development*. Industry and Environment Technical Report No. 24. UNEP/SustainAbility, London.
- UNEP and SustainAbility. 1997. *Engaging Stakeholders: The 1997 Benchmark Survey—The Third International Progress Report on Company Environmental Reporting*. UNEP/SustainAbility, London.
- UNRISD (United Nations Research Institute for Social Development). 1995. *States of Disarray: The Social Effects of Globalization*. UNRISD, Geneva.

REVISITING SUSTAINABLE DEVELOPMENT

- UNRISD and UNA (Universidad Nacional de Costa Rica). 1998. *Business Responsibility for Environmental Protection in Developing Countries*. Report of the International Workshop, Heredia, Costa Rica, 22–24 September 1997. UNRISD, Geneva.
- Utting, P. (ed.) 2002. *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- Utting, P. 1992. *Economic Reform and Third-World Socialism: A Political Economy of Food Policy in Post-Revolutionary Societies*. Macmillan, London.
- von Moltke, K., O.J. Kuik and N.M. van der Grijp. 1998. *Global Product Chains: Northern Consumers, Southern Producers and Sustainability*. Environment and Trade series No. 15. UNEP, Geneva.
- Wehrmeyer, W. and Y. Mulugetta. 1999. *Growing Pains: Environmental Management in Developing Countries*. Greenleaf Publishing, Sheffield.
- Welford, R. 2002. "Disturbing development: Conflicts between corporate environmentalism, the International Economic Order and sustainability." In P. Utting (ed.), *The Greening of Business in Developing Countries: Rhetoric, Reality and Prospects*. Zed Books, London.
- West, K. 1995. "Ecolabels: The industrialization of environmental standards." *The Ecologist*, Vol. 25, No. 1, pp. 16–20.
- Wilkins, M. 1998. "Multinational Corporations: An Historical Account." In R. Kozul-Wright and B. Rowthorn (eds.), *Transnational Corporations and the Global Economy*. Macmillan, London..
- Wilson, I. 2000. *The New Rules of Corporate Conduct: Rewriting the Social Charter*. Quorum Books, Westport CT.
- World Bank. 1999. *World Development Indicators 1999*. World Bank, Washington DC.
- World Rainforest Movement. 1999. *Tree Plantations: Impacts and Struggles*. World Rainforest Movement, Montevideo.

Chapter 17

Unsustainable Development: The Philippine Experience¹

Karina Constantino-David²

(2004)

High rates of urbanization in the South have led to unsustainable development in the region's cities and towns. Following the development paradigm of the North, the form of development that is taking place is "parasitic" in that it excludes the poor and is inappropriate to the situations faced in the South. For countries of the South, participation in the global market has also proved disastrous. Sustainable development aims to counterpoise economic growth with environmental concerns, but it remains to be seen whether this is possible. This chapter highlights the need to be aware of a country's "carrying" and "caring" capacity, and argues that work toward sustainable development needs to start with the poor.

The experience in the Philippines epitomizes these concerns, especially as regards the high rate of urbanization in Metro Manila, where environmental problems and lack of services have led to a deterioration in the quality of life. This deterioration is the responsibility of five overlapping power groups—the state, business, the church, the media and international aid agencies. These tend to follow the Northern development paradigm, which places the South in a vulnerable position and forces Southern governments to act against their countries' best interests. A new development paradigm is desperately needed that will avoid the mistakes of the past and improve future prospects for the poor and the environment.

In 1960, less than 50 per cent of the world's 19 megacities were in developing countries. Today, more than 80 per cent of its 60 megacities are in the South. In just four decades the world's cities have grown to spectacular proportions. New cities are also developing at an alarming rate. While the presence of modern amenities marks cities, a

¹ Originally published as chapter 5 in *From Unsustainable to Inclusive Cities*, edited by David Westendorff (UNRISD, 2004).

² At the time of writing, Karina Constantino-David was Professor of Community Development at the University of the Philippines

large segment of the urban population barely has the basic necessities for survival. The urban poor, residing on the perimeters of the rich ghettos, eke out a living in the midst of affluence, scavenge from the remains of our cities' consumerist lifestyle and are systematically excluded from urban development.

We have known for decades of the spread of urbanization and its concomitant ills. But governments chose to prioritize "development" even when countries of the North were already exhibiting the negative characteristics of unplanned growth. We set our sights on emulating the patterns of more developed countries, blindly importing and transplanting images of cities from more affluent parts of the globe into what were essentially underdeveloped nations.

Parasitic Development

The problem with the concept of development is that it implies movement toward a goal. So far this movement has focused primarily on economic growth—the hope and the promise were that the benefits of growth would "trickle down" to the poor. Toward the second half of the 1980s, the concept of sustainable development was introduced. Sustainable development was meant to correct the flaws of developmental thinking by mitigating the effects of economic growth with longer term goals. But it kept us essentially on the same development path, except that the importance of the environment we share has come to the fore.

However, even with the grudging acceptance of the need for sustainable development by governments and multilateral agencies, the realities have not changed for the masses in the South. We have a parasitic form of development that blindly assumes that human and natural resources are inexhaustible. It sacrifices the poor and the environment at the altar of the market and its promise of economic growth.

Economic growth, and consequent patterns of consumption, cannot be equated with an improvement in quality of life. In fact, while the pursuit of economic growth has produced increases in trade, investment and output in general, it has also resulted in widening disparities and inequalities among people and nations. The transactional and utilitarian nature of the market has further disempowered large numbers of people and marginalized their environments.

The unquestioned development paradigm and the rush to compete in the global market have had disastrous results. While cities have grown, attracting foreign investment, rural areas have stagnated. Finding no way out of poverty, rural folk migrate to the cities in search of paid work. These migrants swell the ranks of the urban poor, engaging in low-paid contractual jobs, surviving through the informal economy and residing in informal settlements. The irony is that low pay is an essential prerequisite for attracting foreign investment to an underdeveloped country. Our cities develop quite literally at the expense of the poor and the environment.

The reasons for poverty are complex. The primary causes are of a political, economic, structural and social nature, abetted by a lack of political resolve and erroneous attitudes regarding public policy and the deployment of resources:

- On an individual level, people are handicapped by the lack of access to resources and to the opportunities to gain skills or make a decent living.
- On the societal plane, major causes are inequalities in the distribution of resources, services and power. These inequalities may be institutionalized in terms of land, capital, infrastructure, markets, credit, education, information and advisory services.

The same is true for the provision of social services: education, health, clean water and sanitation. Inequality of services leaves rural areas worse off, so that it comes as no surprise that an estimated 77 per cent of the developing world's poor live in rural zones. Yet the urban poor are mired in even worse conditions (ICPQL 1996:22).

A more appropriate direction would be toward a sustainable improvement in the quality of life. This would allow us to focus on the needs of the poor and the environment in each country without compromising the ability of future generations to meet their own needs. The needs of the present must be viewed from the perspective of the poor—those who have been abused most by the current development track. The goal of sustainable improvement in the quality of life allows countries and sectors to define directions that can accommodate subjectivity and cultural diversity in an ever-ascending spiral.

The sustainable improvement in the quality of life, as proposed by the Independent Commission on Population and Quality of Life (ICPQL 1996), requires us to respect the limits of the globe's "carrying capacity", while at the same time acting on our "caring capacity"—that is, taking responsibility for the needs of people and the environment. The antithesis of care is power and control, abuse and aggression. In taking a new path we must recognize that the continued parasitism of society on the misery of the poor and the degradation of the environment will inevitably become the basis for the breakdown of our cities.

Patterns of Parasitism in Philippine Cities

The population of the Philippines is 51 per cent urban, roughly 38 million people or 6.5 million families. The country has one of the highest rates of urban growth in the developing world, at 5.1 per cent annually over the past four decades. This has been due to a high birth rate of approximately 2.3 per cent per annum, rural-to-urban migration, and the reclassification of rural areas as urban due to their increasing population densities. It is significant to note that while rural-to-urban migration is still a major source of an increasing urban population, especially in newer cities, second- and third-generation migrants, in areas like Metro Manila, are now greater in number. Migration is testimony of the continuing poverty in the countryside that forces the poor to seek their survival in the cities.

Of the urban population, approximately 10 million live in Metro Manila, which has an annual growth rate of 3.3 per cent. This area accounts for more than 30 per cent of the gross national product, but at least 3.5 million people can be categorized as urban poor—10,000 families live along the Pasig River alone, 32,000 families along the major tributaries, 45,000 families beside the railroad tracks, and the rest in pockets of urban decay that range from a handful of families to slums of tens of thousands of people.

The "brown" environment has long been abused—by air, noise and water pollution, inadequate waste disposal and congestion. The carrying capacity—or the maximum sustainable load that humankind can impose on the environment before it loses its capacity to support human activity—is in peril. According to WHO/UNEP (1992), Manila is one of the most polluted cities in the world, and most of the air pollution (suspended particulate matter, carbon monoxide and lead) is a product of motorized transport emissions, especially from diesel engines. Industries release massive amounts of sulphur dioxide into the atmosphere, and domestic and industrial waste is indiscriminately dumped into the city's waterways and streets. In addition, environmental degradation is a

cause of various natural disasters that occur more and more frequently—flooding, landslides and other earth movements, and the extinction of wildlife.

Even as we strain the carrying capacity of the metropolis, the inadequacy of our own caring capacity is obvious. Metro Manila, where economic activities are centred, is home to the best of urban amenities in both the business districts and the rich areas, but security services are booming, protecting these sectors from the assaults of those who have far less. Tertiary health care and education are concentrated in the metropolis, but the primary health services accessible to the urban poor pale in comparison to those available in rural areas: there is one primary health unit for every 10,000 people in the countryside against one for every 50,000 people in the urban centres. Even though primary and secondary education may be of a slightly higher quality in cities, the 1:50 teacher to pupil ratio makes basic education unsatisfactory. At the college level, the scene is dominated by private universities, which overcharge for substandard education. The seats of government, media and the church are also situated in Metro Manila. But basic needs remain unmet.

Despite respectable economic growth and the proliferation of urban amenities, the quality of life in Metro Manila has deteriorated; adherence to the laws of globalization means that economic growth has been achieved on the backs of the poor and at the expense of the environment. Unless drastic steps are taken, this very model is likely to discourage much sought-after foreign investment. Inevitably, the general quality of life will deteriorate further and even the few who benefit from this kind of parasitic development will end up with less than they have today.

The Actors and Factors that Make or Break Cities

No amount of dreaming can result in an alternative future as long as the major actors and factors that make or break a city remain unchanged. In the case of Metro Manila and other urban areas in the Philippines, these fall into two distinct categories: those who wield power and those who are powerless.

The five distinct but overlapping power groups referred to above—the state, business, the church, the media and international aid agencies—share responsibility for the deteriorating quality of life in Philippine cities. The model of development that underpins their actions is economic development through global competitiveness, with foreign investment as the engine of growth. But while sustainable development, equity and pro-poor rhetoric are standard fare, there have been but minimal improvements in the lives of the urban poor—secure shelter, sanitation, potable water and pollution remain grave problems.

In the Philippines, the Joseph Estrada administration, hounded by inefficiency and corruption, doggedly pursued the same economic thrust as previous governments, despite the pro-poor campaign line that ushered it into power.³ The poor, who overwhelmingly put their faith in President Estrada, were buoyed by initial promises. The business community and the dominant church nervously awaited clear directions on economic policy, fearful of growing cronyism and flip-flopping decisions. The news media exposés of the inadequacies of the government ranged from the banal to the sublime. Foreign

³ The writing of this chapter was completed prior to the campaign to impeach President Estrada.

agencies like the International Monetary Fund (IMF) balked at what seemed to be a partial declaration of autonomy by some government economic managers—as, for example, the insistence that interest rates be lowered.

But while charges of graft and mismanagement remained until President Estrada was removed from office, the economic direction settled back into the same development paradigm. In the Housing and Urban Development Department, which I headed for 15 months (1 July 1998 to 5 October 1999), the following radical changes in policy were undertaken:

- situating shelter within a broader national urban policy framework;
- earmarking 80 per cent of departmental budgetary allocations to housing for the poor;
- expanding options for the lowest-income households through efficient rental markets;
- strengthening co-operative housing and the Community Mortgage Programme⁴
- reforming housing finance;
- localizing and decentralizing urban and shelter policy, with an emphasis on ecological balance;
- ensuring effective participation of the poor; and
- redefining public and private sector roles to ensure a better distribution of responsibilities and risks.

These changes were met with angry protests from a portion of the real estate business sector whose short-term interests were threatened. First, an emphasis on housing for the poor meant less profit. The profit margin in socialized housing is small considering that the ceiling for a house and lot package stands at 180,000 pesos (US\$3,800). Second, the old programme involved minimal risks for developers. This is because the former Unified Home Lending Programme was designed in such a way that developers would build and market housing projects, package mortgage papers and pass this on to government, which only did desktop assessment. Developers got paid for the whole amount leaving the state with all the collection functions. Third, government-run pension funds were mandated to provide developmental loans and mortgages at below market interest rates, resulting ultimately in losses to the ordinary pension fund members. The new programme, on the other hand, was an attempt to create a more viable housing finance system that entailed a transparent subsidy programme for the poor. But for low-cost and economic housing, a policy environment was to be created with funds from the banking sector through a strengthened primary mortgage market and the setting-up of a secondary mortgage market. This meant that projects would have to undergo more professional assessment and therefore take on the standard risks of the market. It also meant a reduction of the opportunities for corruption, because most decisions on which projects should be funded would have been taken out of the hands of the bureaucracy.

While most of the top-level government decision makers, as well as foreign aid agencies, welcomed these policy shifts, they were diffident about confronting the self-interested groups. It was more comfortable for government functionaries to keep away from the fray, while foreign aid agencies refused to take a proactive stance by hiding

⁴ The Community Mortgage Programme is an innovative system whereby informal settlers—with the assistance of an intermediary, called an originator—negotiate with the landowner. Once an agreement has been reached between the parties, the land is mortgaged to the government, the landowner is paid in full and the settlers are required to reimburse the government over a period of 25 years at 6 per cent interest. For a fuller description and assessment of this programme, see the article by Berner (2001).

behind the convenient policy of “non-interference”—though they were willing to voice their frustrations in private. Only a section of the World Bank took the bold step of immediately suspending negotiations for a major housing programme. Since the early 1990s the World Bank had taken a critical stance regarding past government housing policies. The radical policy revisions described above, especially in the field of housing finance, were basically consistent with the Bank’s perspectives. As such, the Housing Finance Technical Assistance grant-loan package was in the final stages of approval at the time of my resignation from the cabinet. In the final analysis, however, the political will for change gave way to the temptations of corruption and image building. Instead of pushing for policy changes, the lucrative practices of the old system, marked by bribery and other forms of graft, were re-established. Instead of viewing these policy changes as a legacy for a more sustainable housing system focused on the needs of the poor, government returned to using housing as a political tool, inaugurating projects to enhance the administration’s political image even if this resulted in a further drain on government coffers.

The church, which has always stood for the rights of the downtrodden, continued with its worn-out advocacy of issues like family planning. It did not actively take up the cudgels for a reformed housing sector—perhaps because it was not equipped to keep up with the debates on the policy front. The media, on the other hand, highlighted the mud-slinging in the debate and at times heightened the fears of the poor through irresponsible reporting. Information about the changes was relegated to the inside pages of newspapers, while broadcast media often chose to adopt a sensationalist stance.

A large part of civil society—NGOs, people’s organizations, academia, ideologically left-wing blocs and other voluntary organizations—was powerless in the face of these attempts to protect the status quo and resist the reforms. First, the micro-perspective of the poor allowed them to view the changes only within the limited framework of their immediate needs. Second, NGOs could not keep up with the policy debates—especially those that were systemic rather than concrete in nature. Third, some ideological blocs could not wean themselves away from their consistent opposition to anything emanating from government. Fourth, academics did not seem to take much interest in either policy or research. Finally, there was a yawning gap between civil society demands (which were either very concrete or supremely conceptual) and the day-to-day requisites of change.

Pasig River Rehabilitation

The case of the Pasig River Rehabilitation Commission provides a concrete illustration. The Pasig River is the major waterway of Metro Manila; it is a 27-kilometre stretch with dozens of tributaries that used to be the centre of economic, transportation and cultural activity. Today the river is dead. It is the dumping ground for domestic and industrial waste, the largest septic tank in the country. On its banks, on stilts in the river and underneath the bridges that traverse it are 10,000 informal settler families. Every administration for the past 40 years has tried to revive the river, and each has failed. The Estrada government decided to embark on an ambitious but attainable programme to resurrect the river (dredging, revetment walls, minimizing water pollution, etc.), relocate the settlers within the 10-metre easement, restore it as a viable means of alternative transportation and create open spaces along the banks.

The determination to achieve what others had miserably failed to do meant creating a commission composed of cabinet members that would orchestrate the entire programme. Apart from government resources, the Danish International Development Agency (DANIDA) and the Asian Development Bank (ADB) provided support. A crucial element was dealing with the settlers. Past attempts had resulted in protests, forcible and inhumane relocation to distant sites and, ultimately, the return of about 50 per cent of the people.

The commission began work in January 1999. A Housing and Resettlement Group (HRG), which I chaired, was immediately established. It included representatives from each of the affected local government units and representatives of the informal settlers and their NGO counterparts. The HRG arrived at a consensus on a framework governing resettlement, revalidated a 1977 family census, agreed on uniform parameters for relocation, identified appropriate sites, scheduled each area for resettlement over a two-year period, and set up a monthly bulletin to provide accurate information to each of the communities. Among the innovations introduced were the following:

- Voluntary relocation: communities were provided with a choice of sites.
- Whole communities were brought to the sites before making their decision.
- Priority to in-city, then near-city relocation.
- To ensure transparency, the private sector was asked to submit already developed potential resettlement sites. Apart from the technical evaluations, the prospective resident had the final decision on the site.
- The settlers were given the option to submit their own resettlement plans.
- Every effort was made to ensure basic amenities and facilities—utilities, transportation, schools, health clinics and employment were present in each of the resettlement areas.
- Local Government Units (LGUs) were encouraged to keep the settlers within their boundaries or to contribute a set amount to the receiving LGUs if the settlers could not be accommodated in the city.
- A graduated lease-purchase scheme was set up, starting at less than US\$10 a month.

Despite what seemed like a slow start because of the participatory nature of the process, almost 2,000 families had moved into new homes of their choice within 10 months. These were medium-rise buildings along a major highway and terraced houses in the periphery of Metro Manila. Relocation was voluntary, there were no acrimonious protests, and the cost of the sites was 15 per cent to 35 per cent lower than the market value. In one site where the schools were not completely in place, relocation was limited to only those families that could be accommodated—even though 2,000 more houses were ready for occupancy.

In hindsight, we could have done better. One major problem was the funds. The processing time for ADB meant that funds were only available by the year 2000. And yet President Estrada demanded action based on an extremely tight schedule. At the same time, some communities, wanting to ensure getting the site of their choice, proposed moving even while the schools were still being built. Within six months of my resignation, there was already restiveness in both the relocated communities and the communities still to be resettled. The new housing head effectively disbanded the HRG. The poor no longer have access to decision makers. During our term, there were regular meetings where the highest government officials would sit in dialogue with the poor. Although the HRG still meets on occasion, it is attended by government subalterns who do not have any decision-making powers. The identified sites for the Pasig River resettlers

have become areas for other communities that have been forcibly relocated, the promised facilities have not been completed and the people no longer have a say about the sites to which they would be transferred.

Not all the problems throughout this process came from government and foreign agencies. Academia was completely absent, when it could have provided much needed assistance through research and fresh insights. Some Left-wing ideological blocs attempted to derail the process by raking up all sorts of fears—that homes would be demolished without consultation, that families would be thrown into places where there were no livelihood opportunities, that people would be forced to live in substandard housing, that they would be made to pay exorbitant rates, and so on. The media aggravated the situation by prominently featuring such accusations. The participatory nature of the HRG, however, helped leaders of the urban poor and NGOs to contain disinformation because the leaders themselves were part of the decision-making body. Although it was well worth it, the process was at times tedious and repetitive due to some extreme initial demands (for example on-site relocation with free land) and a lack of understanding of the complexities of resettlement.

The Role of Foreign Aid Agencies—The Seven Deadly Sins

The noble rationale for foreign aid is altruism—the responsibility of more developed countries to assist those with less. But in reality, much foreign assistance has degenerated into expressions of power and control. The dividing line between aid and business has been blurred. It is the reproduction of old colonial relations framed within a hypocritical rhetoric of democracy and philanthropy.

Foreign aid agencies undeniably promote economic development as their highest priority. Some espouse it openly while others hide behind the platitudes of sustainable development. Countries of the South that are in desperate need of funds are thus placed in the ironic situation of having to thank lenders and donors for funds that ensure the South develops according to the paradigms of the North. This integrates them into a global order in which poor countries, like the poor within them, are powerless.

The identification of projects and programmes is largely left in the hands of the “giver”, with the recipient having the illusory option to accept or reject. Countries of the South are in a double bind, with a choice over short-term gains for long-term pains, or short-term pains for long-term gains. Within democratic political systems each administration invariably chooses the former, if only for political survival. In the final analysis, it is the poor and the environment that suffer.

But beyond the basic issues of the development model that underpins foreign aid are practical realities that make the relation between givers and takers more onerous. In the 15 months I spent in government, there were invariably many occasions to deal with various aid agencies in a number of different programmes. The negative experiences with them can be summarized into seven deadly sins, as follows.

Project pushers: The ideal relationship between aid agencies and government should be one where governments identify their priorities and approach aid agencies for support. In reality, due to budgeting and planning cycles, most projects start at the initiative of the aid agencies. For example, even before bilateral consultations with governments take place, project titles and relative budgetary allocations are already on the drawing board. The government has the choice of influencing the specifics of projects or simply rejecting

the project outright. For developing countries, the former is the usual outcome. The project cycle begins with a mission or a concept paper, it then moves to technical assistance, usually by means of grants, which appear entirely altruistic. The agenda, however, is largely set by the aid agency. The technical assistance phase is generally contracted out to consultants hired and paid for by the aid agency—usually international firms. Since the technical assistance phase is generally a grant, it becomes easy to accept. But the result of the grant is a larger project that then needs a loan to fund it. By this time the country is committed to the project, and therefore to the loan that follows.

Parasitic expertise: A lot of money is spent on hiring foreign consultants who tap local expertise instead of establishing collaboration on an equal footing. And yet, much of the paperwork generated by foreign consultants is simply a re-hash of previous studies and plans. In many instances, government officials need to spend hours in briefing sessions in order to produce instant foreign experts on the Philippines, who are paid by the day more than we earn in a month.

Cultural blinders: Many foreign aid personnel and consultants regard the South as a homogeneous entity, perhaps believing in the infallibility of their expertise and the uniform nature of their subjects. Countries of the South are, therefore, forced to face an aid bureaucracy that is bereft of insight into our own uniqueness, which is grounded in centuries of history. For example, during the Pasig River Rehabilitation Programme, ADB insisted that the people could not afford the cost of the relocation site, based on the income survey we had conducted. We explained that the urban poor, based on previous research, generally understated their incomes, on purpose or because the informal nature of their income forced them to divulge only the minimum they receive rather than an average of fluctuating incomes. One of the consultants thought that this was easy to verify through payslips or taxes, which were not available precisely because they were informal settlers who generated income from the informal sector.

Insensitive conditionalities: Because projects must run according to predetermined schedules and patterns, it is the poor and/or the environment that are ultimately sacrificed. Such as the structural adjustment programmes that insist on bitter pills, which compromise the quality of life of the poor, some urban projects dismiss the needs of the poor in order to meet demands of foreign funders. In one road-building project that required the relocation of hundreds of poor urban families, the donor insisted on clearing all settlers by a particular date, or else the funds would not be released. Because this was an infrastructure project, the donor was not concerned with the relocation of the poor. In order to meet the deadline, homes were forcibly demolished and families relocated to a subhuman site, without basic facilities and livelihood opportunities, in time for the visit of the foreign donor.

Negative acculturation: Because most foreign aid agencies work through and with governments, these agencies have learned to work the system. Instead of insisting on professional relations, they have learned the arts of patronage and pulling strings in the background. A group of foreign consultants who were planning an urban poor programme came to see me about their mission. From the beginning of the meeting they seemed bent on simply going through the motions of consultation. As I was relatively uncooperative as well, they finally said that what they were looking for was a champion for urban development. I told them that my office was the highest policy-making body for

housing and urban development. They agreed that this was so on paper, but also admitted that they had already spoken to the brother-in-law of the President because they knew that the Philippines operated more on such relations than on the formal channels as laid down by law. I was understandably incensed and dismissed them immediately. (Six hours later, they begged to see me once again, apologizing for the error of their ways.)

Direction without risk: Foreign aid agencies have the luxury of imposing projects while shielding themselves from any risks. On the financial side, loan repayments are, after all, guaranteed. On the human side, it is not they who will suffer the consequences. On the political side, foreign aid agencies hardly earn the wrath of those whose lives are negatively affected, since it is the in-country government that takes the flak. Because aid-givers have no accountability for the failures and the misery that may result from such projects, NGOs and urban poor organizations have learned to protest, not only to government but also to the aid agencies themselves. It is now standard practice to insist that donors take responsibility for their actions. Some headway has also been made to link up to civil society groups in the donor countries so that they can pressure aid agencies in their own countries.

There are certainly many cases in aid programmes where these sins are avoided. I have had the benefit of working directly with people from foreign aid agencies who have undeniably had the best interests of the Philippines at heart. While there is much that can be done to reform foreign aid, however, it is still the countries of the South that must bear the burden of change.

The Challenges Ahead

A shift in our development paradigm is urgently needed. I do not refer to earth-shaking upheavals, but to resurrecting the importance of the rights of people and the environment. In our frenzy toward economic development, our macroeconomic policies and the short-term nature of political decision making have strained the carrying capacity of the earth and forgotten our caring capacity for the rights and needs of the poor. But beyond the platitudes that regularly mark our public statements, there are practical initiatives that can be introduced or strengthened.

Most governments have highly centralized systems for deciding on national policies, allocating resources and implementing programmes. Although we can all hope for national governance that is more responsive to the rights of the poor and the environment, we also know that the pressures of the dominant development paradigm are stronger at this level. Moreover, the specific realities on the ground are more distant from national agencies, despite the presence of local structures. Consistent with a bottom-up approach—and because of the growing complexity of urban life—decentralization to the local government level has the greatest potential to turn the situation around. This requires that central government lay down the general directions, policies and regulatory framework, while local government units play a more proactive role in planning and implementation.

Here are a few actions that local governments could undertake immediately:

Minimum quality of life indicators: Social policies are the visible expressions of a caring government. We can start by creating measurable and verifiable parameters for non-negotiable minimum quality of life standards for each of our cities. Indicators must be formulated with the active participation of civil society; those that are able to measure outcomes can serve as a social contract between local authorities and their constituencies because they relate to concrete action and defined accountabilities. For example, from baseline data on existing realities, quantifiable targets for the improvement of minimum quality of life indicators on housing, potable water, sanitation systems, welfare, employment, education and health can be regularly monitored. Instead of the rhetoric of promises, it is a challenge to responsible local officials to submit themselves to a regular rating based upon clear indicators of performance. But more than this, minimum quality of life indicators with a defined timetable can lay the bases for ensuring that the poor and the environment are given the highest priority in governance.

Learning from the poor: Expertise very often takes on an unconscious arrogance. Most public policy is formed without the participation of the poor. Many of our political leaders and technocrats unfortunately perceive the engagement of the poor as messy. On the other hand, civil society organizations tend to romanticize the poor, believing they have all the answers. Social policy can only be effective if decision makers draw from the wealth of knowledge and skills of the technical experts as well as from the poor. In the final analysis, a participatory process is the best guarantee of success.

Maximizing innovative initiatives: We do not need to re-invent the wheel. There are many innovative initiatives that can be strengthened and mainstreamed. The Sustainable Cities Programme of the United Nations Human Settlements Programme (UN-Habitat) and the United Nations Environment Programme (UNEP), and the City Development Strategies of the World Bank—although implemented in only a few areas—have had some positive results, especially in the area of community participation. In the Philippines, the Community Mortgage Programme, which allows informal settlements to negotiate with landowners and purchase the land on which they live, has accomplished significant results. More than 100,000 families have benefited, with repayment rates significantly higher than is the case for the usual low-cost housing packages. Various micro-enterprise initiatives and cooperative movements in Asia have also shown that, given the opportunity, the poor can manage their own economic development. In the field of health and education, many NGO-initiated programmes are testimonies to successful alternative interventions. It is also worth emphasizing that all the successes can be traced back to the level of organization found in urban poor communities. Organizing and the accompanying increase in knowledge, attitudes and skills of the urban poor is the base upon which poverty can most effectively be overcome.

Making the market work: In this era of globalization, it is naive to dream of poverty eradication without addressing the market. Business and finance have long been viewed as the antithesis of poverty. But, in much the same way as we have learned that we all share a finite earth, the corporate sector has also come to accept the reality that massive poverty is not good for business. The past few decades have seen a slowly emerging trend whereby more business conglomerates have moved from an almost total lack of concern, to charitable endeavours, to involvement in social issues and self-imposed quality of life standards. Governments must speed up this development by providing the atmosphere that would encourage access of the poor to the market. This can be done through

enhancements like guarantees of, and incentives for, credit to the poor, as well as through transparent subsidies so the poor can afford the market.

Focusing on newly emerging cities: Although our megacities have developed into monstrosities due to lack of planning and simple neglect, we have the opportunity to avoid the same mistakes in the newer cities. Dramatic technological advances—especially in mass-transit and electronic communication systems—make it possible to create centres of governance, business and culture that need not be congested within tightly confined geographic areas. It is therefore imperative that local authorities in newly emerging cities muster the political will to anticipate the future and plan their cities beyond their terms of office.

Today those who are in a position to lead can either repeat the mistakes of the past or help to shape a better future. I am confident that local authorities, with the effective participation of business and civil society, can make a difference for the poor and for our environment. With the assistance of multilateral institutions along with urban researchers, all it takes is the political will to go against the grain of tradition and the daring to care for the poor, the environment and the future.

References

- Berner, E. 2001. "Learning from informal markets: Innovative approaches to land and housing provision." *Development in Practice*, Vol. 11, Nos. 2–3, pp. 292–307.
- ICPQL (Independent Commission on Population and Quality of Life). 1996. *Caring for the Future: Report of the Independent Commission on Population and Quality of Life*. Oxford University Press, Oxford.
- WHO/UNEP (World Health Organization/United Nations Environment Programme). 1992. *Urban Air Pollution in Megacities of the World*. Blackwell Publishers, Oxford.



UNRISD

United Nations Research Institute for Social Development