

**Pacific Sub-regional Training on Digital Technologies for Disaster Risk Management**

*2-4 December 2023*

# **Background**

# Asia and the Pacific are among the world’s most disaster-impacted regions, and the number of disasters caused by natural hazards in the region has increased drastically in recent years. According to UNDRR’s Global Assessment on Risk 2019, the risk is systemic, and crises are cascading. Information and communication technologies have tremendous potential in disaster risk management due to their ability to instantly and continuously facilitate the rapid flow of information in real-time. The use of ICTs during all phases of disaster risk management presents substantial opportunities to reduce disaster risks, enhance resilience, and facilitate inclusive preparedness and response.

# The full potential of ICTs, however, can only be realized if individuals and institutions have the capacity to integrate and utilize them appropriately. To address the need to build capacities in disaster risk management, APCICT/ESCAP has developed an Academy Module on “ICT for Disaster Risk Management” to equip the policymakers and civil servants at the national and local government levels with the essential knowledge and skills to understand the overall framework of disaster risk management and the practical use of ICTs in disaster mitigation and preventions, preparedness, response and recovery.

In an effort to strengthen the capacities of government officials from ministries and departments responsible for disaster risk management in the Pacific sub-region, APCICT/ESCAP in partnership with UNOSSA and in collaboration with the Geoinformatics Center/Asian Institute of Technology and ITC-University of Twente will conduct training from 2-4 December 2023.

**Objectives**

By the end of the training, participants will:

* Be familiar with DRM and its associated terminologies, including the linkages between the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals;
* Be able to identify the data necessary for DRM, such as remote sensing data, digital elevation data, thematic data and historical disaster data;
* Understand how risk information can be used for selecting appropriate disaster risk mitigation and prevention measures at various levels and for making decisions by considering likely future risk scenarios;

# Be aware of the freely available satellite-based resources and products for emergency mapping, mobile apps for reporting disaster incidents, and robots for search and rescue operations;

# Know the ways in which ICTs can be used to support disaster recovery, including post-disaster building damage assessment and post-disaster recovery monitoring;

# Recognize the role of ICTs in addressing issues related to gender inequality in DRM

# **Resource Persons**

Prof. Cees van Westen, Department of Earth System Analysis (ITC), University of Twente
Dr. Manzul Hazarika, Director, Geoinformatics Center, Asian Institute of Technology

# **Participants’ profiles**

The training is open to participants from the Pacific Island countries.

# **Modality**

# The training materials will be stored in the CANVAS platform.

# **Certification**

A certification of completion will be issued to participants who meet the evaluation criteria.

**For information, please contact:**

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**Tentative Programme**

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| **DAY-1** |
| **9:00-09:30****(30 min)** | **Registration** |
| **09:30 - 10:00****(30 min)** | **Opening*** Remarks by Mr. Kiyoung Ko, Director, APCICT
* Mr. Lorant Czaran, Chief, Vienna Branch, UN-SPIDER Programme UNOOSA.
* Dr. Manzul Hazarika, Director, Geoinformatics Center, AIT.

**Group Photo**  |
| **10:00 - 10:30****(30 min)** | **Session 1:** Course introduction **(Lorant C.)**Lecture on Principles of satellite remote sensing, recent trends in space technologies etc. |
| **10:30 - 11:00****(30 min)** | **Coffee break** |
| **11:10 - 12:30****(1 hr 30 min)** | **Session 2: DRR termologies, Sendai Framework and role of space-based information (Lorant C.)*** Introduction to Sendai Framework.
* Space-based information and their role in disaster management
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| **12:30 - 13:30****(1.00 hr)** | **Lunch break** |
| **13:30 - 14:30****(1.00 hr)** | **Session 3: Introduction to ICT for Disaster Risk Management (Manzul H.)*** Introduction to the course and learning objectives.
* Introduction lecture and applications of ICT for DRM
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| **14:30 - 15:00****(30 min)** | **Coffee break**  |
| **15:00 – 16:30** **(1 hr 30 min)** | **Session 4: ICT for Risk Assessment & Visualisation (Cees van W.)*** What is risk? Basic components, hazard, exposure vulnerability
* Hazard characteristics & complications
* Hazard interactions
* Elements-at-risk
* Vulnerability
* Loss and risk assessment
* Different methods for estimation risk
* Scale of risk assessment
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| **DAY-2** |
| **09:30 - 10:30****(1.00 hr)** | **Session 8: Data necessary for Disaster Risk Management (Manzul H.)*** Remote sensing and other data requirements
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| **10:30 - 11:00****(30 min)** | **Coffee Break** |
| **11:00 - 12:30****(1.50 hrs)** | **Session 6: Group activity - RiskChanges practical (Syams N.)*** Introduction to RiskChanges
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| **12:30 - 13:30****(1.00 hr)** | **Lunch break** |
| **13:30 - 14:30****(1.00 hr)** | **Session 7: Group activity - RiskChanges practical (Syams N.)*** Current risk assessment
 |
| **14:30 - 15:00****(30 min)** | **Coffee break**  |
| **15:00 - 16:30****(1 hr 30 min)** | **Session 7: Group activity - RiskChanges practical (Syams N.)*** Future scenarios and risk assessment
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| **DAY-3** |
| **09:30 - 10:30****(1.00 hr)** | **Session 8: Group activity - RiskChanges practical (Syams N.)**Risk reduction alternatives and risk assessment |
| **10:30 – 11:00** **(30 min)** | **Coffee break** |
| **11:00 – 12:30****(1.5 hrs)** | **Session 9: ICT for Disaster Response (Syams)** * What is disaster response?
* Use of ICT for disaster response
* Remote sensing-based disaster response
* Flood mapping using SAR data
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| **12:30 - 13:30** | **Lunch break** |
| **13:30 - 14:30****(1 hr)** | **Session 9: ICT for Disaster Preparedness (Manzul H.)** * What is disaster preparedness?
* Early warning Systems
* Drill
 |
| **14:30 - 15:00** **(30 min)** | **Coffee break** |
| **15:00 – 16:00****(1 hr)** | **Session 10: ICT for Disaster Recovery (Cees)*** What is disaster recovery?
* Build Back Better / Resilience
* Monitoring disaster recovery
* Collaborative mapping
* Wenchuan earthquake atlas
* Recovery/reconstruction monitoring
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| **16:00 - 16:30** **(30 min)** | **Closing and End of Workshop Evaluation**  |