



National Training on Digital Technologies for Disaster Risk Management

Background

Asia and the Pacific is among the world's most disaster-impacted regions, and the number of disasters caused by the 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 (ICTs) 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 Nepal, APCICT, in partnership with the National Disaster Risk Reduction and Management Authority and collaboration with the Geoinformatics Center/Asian Institute of Technology and ITC-University of Twente will conduct training from 7-9 February 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; and
- 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

Mr. Lorant Czarán, United Nations Office for Outer Space Affairs

Mr. Syams Nashrullah, Program Officer, Geoinformatics Center, Asian Institute of Technology

Mr. Anish Ratna Shakya, Research Associate, Geoinformatics Center, Asian Institute of Technology

Participants' profiles

The training is open to government officials from ministries and departments responsible for disaster management, and potential trainers.

Modality

The training will be organized at the Kashi Hall, Kathmandu Marriott Hotel and learning materials will be stored in the CANVAS platform.

Certification

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

For information, please contact:

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Tentative Programme

DAY-1 (Tuesday), 7 FEBRUARY	
9:30-10:00 (30 min)	Registration
10:00 - 10:30 (30 min)	Opening <ul style="list-style-type: none"> • Welcome remarks by Mr. Anil Pokhrel, Chief Executive, NDRRMA. • Remarks by Mr. Kiyoung Ko, Director, APCICT Group Photo
10:30 - 10:50 (20 min)	Coffee break
10:50 - 12:30 (06:05 - 07:45, NL) (1 hr 10 min)	Session 1: Introduction to ICT for Disaster Risk Management (Cees van W.) <ul style="list-style-type: none"> • Introduction to the course and learning objectives • Introduction lecture and applications of ICT for DRM
12:30 - 13:30 (1 hr)	Lunch break
13:30 - 14:40 (1.10 hr)	Session 2: Data necessary for Disaster Risk Management (Lorant C.) <ul style="list-style-type: none"> • Satellite remote sensing and recent trends in space technologies • Sendai Framework and role of space-based information
14:40 - 15:00 (20 min)	Coffee break
15:00 - 16:30 (09:45 - 11:45, NL) (1 hr 30 min)	Session 3 (Part I): ICT for Risk Assessment & Visualisation (Cees van W.) <ul style="list-style-type: none"> • 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

DAY-2 (Wednesday), 8 FEBRUARY	
10:00 - 11:00 (1 hr)	Session 3 (Part II) ICT for Risk Assessment & Visualisation (Anish S.) <ul style="list-style-type: none"> • Demo of Risk Changes • Demo of data retrieval from internet
11:00 - 11:20 (20 min)	Coffee Break
11:20 - 12:30 (1 hr 10 min)	Session 4: National presentations and discussions <i>This session will listen to participants on Nepal's disaster risk, disaster risk management practices, and challenges.</i> [NDRRMA to identify topics and presenters for this session.]
12:30 - 13:30 (1 hr)	Lunch break
13:30 - 15:00 (1 hr 30 min)	Session 5: ICT for Mitigation & Prevention (Anish S.) <ul style="list-style-type: none"> • What is disaster mitigation and prevention? • Risk perception, communication, and evaluation • Risk reduction alternatives and possible future scenarios • Decision support system
15:00 - 15:20 (20 min)	Coffee Break
15:20 - 16:30 (1 hr 10 min)	Session 6: ICT for Disaster Preparedness (Manzul H.) <ul style="list-style-type: none"> • Forecasting system • Monitoring system • Warning system

DAY-3 (Thursday), 9 FEBRUARY

10:00 - 11:40 (40 min)	Session 7: ICT for Disaster Response (Syams N.) <ul style="list-style-type: none">• What is disaster response• Use of ICT for disaster response• Remote sensing-based disaster response• Flood mapping using SAR data
10:40 - 11:00 (20 min)	Coffee break
11:00 - 12:30 (06:15 - 07:45, NL) (1 hr 30 min)	Session 8: ICT for Disaster Recovery (Cees van W.) <ul style="list-style-type: none">• What is disaster recovery• Build Back Better / Resilience• Monitoring disaster recovery• Collaborative mapping• Wenchuan earthquake atlas• Recovery/reconstruction monitoring
12:30 - 13:30	Lunch break
13:30 - 14:00	Closing and End of Workshop Evaluation
14:00 - 14:30	Coffee and Departure