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United Nations Institute for Training and Research

Unitar Online Catalogue

9th International Training Course on GIS for Disaster Risk Management

□□ :	Course
□□ :	Bangkok, Thailand
□□ :	21 10□ 2013 to 1 11□ 2013
□□ :	2 Weeks
□□□□ :	Satellite Imagery and Analysis
□□ :	http://www.adpc.net/2012/gateway.asp?frame=Aha&DocID=298
□□ :	US\$0.00
□□□□ email:	unosat@unitar.org
□□ :	Asian Disaster Preparedness Center



Rapid population growth and urbanization combined with extreme climatic events are causing a rapid increase in vulnerability of communities exposed to hazardous events. As a result, disasters are taking an increasingly heavy toll on life and property. Unplanned growth, both in urban and non-urban areas, calls for adequate preparation to reduce the impact of disasters. This creates a need to utilize disaster risk information during planning for effective coping mechanisms

for disaster risk reduction.

Disaster risk information is spatial in nature and Geographic Information Systems (GIS) play an important role in disaster risk assessment and management. For this, there is a significant need to create awareness among the disaster management professionals regarding the importance of GIS usage.



The main aim of this course is to provide an overview of the use of spatial information in disaster risk management. The course not only reveals what spatial data is and how it is collected, but also emphasizes the use of such spatial data during pre- and post-disaster management, such as during early warning, hazard, vulnerability and risk assessment, damage assessment, as well as in the design of risk reduction measures. The course ultimately hopes that scientific advancement can be utilized for better disaster risk reduction practices.



Upon completion of the course, the participants will be able to:

- Describe and utilize spatial data, GIS and remote sensing in disaster risk assessment and management
- Utilize existing sources of historical disaster information and elements at risk data
- Apply GIS/remote sensing in hazard, vulnerability and risk assessment
- Employ risk information in emergency preparedness planning
- Visualize hazard and risk information
- Apply GIS/remote sensing to post-disaster damage assessment



The course is extended over 10 work days structured around the following modules:

MODULE 1: Core/Basic Information (AIT/ADPC)

- Basic concepts and terminologies of disaster management

- Basic concepts of GIS and remote sensing
- Introduction to spatial information
- Handling spatial information (Introduction to ArcGIS)

MODULE 2: Post-Disaster Impact and Damage Analysis (UNOSAT)

- The use of satellite imagery for disaster relief and recovery
- Impact analysis and preliminary damage assessment
- Building damage assessment

MODULE 3: Pre-Disaster Risk Assessment (ITC)

- Hazard Assessment
- Elements at risk and vulnerability assessment
- Types and methods of risk assessment, risk evaluation, cost-benefit analysis

MODULE 4: Risk Information for Risk Reduction Planning (ITC)

- Risk evaluation
- Visualization of risk information
- Risk information and spatial planning

MODULE 5: Mini-Projects

The course is divided into 5 modules where UNOSAT shall be responsible for module 2 only. UNOSAT's module is structured into 4 sessions of 1.5 hours each with an estimated workload of approximately 16 hours spread over 3 days. It is considered that the length of the course well reflects its scope and is adequate to enable participants to achieve the learning objectives.



Drawing upon the rich repository of knowledge and experience in the application of GIS in disaster risk management of ADPC, AIT, ITC, UNITAR-UNOSAT, and other partner organizations, the course is primarily designed to promote the understanding of the importance of data and outputs of GIS processed application in the disaster management and disaster risk reduction works.

The course has a mixture of adult learning methodologies such as interactive lectures, discussion sessions and group exercises. A mini-project will additionally allow participants to practice GIS application in their own situation of selected

hazard type and disaster management phase. Participants can bring their own dataset to the practice in the course, if they have any.



The course is open to all participants who are working or will be working in the organizations where spatial information is used or considered to be used for the purpose of disaster risk management, disaster management, or disaster risk reduction. There is no prerequisite GIS knowledge for participant who is interested in this course.

Interested persons can apply as individuals although preference will be given to those sponsored by an organization. Registration should be done through the ADPC website. An application form is available [here](#). Find more information regarding this event [here](#).



Institution:

This course is co-organized and facilitated by the Asian Disaster Preparedness Center (ADPC), the Asian Institute of Technology (AIT), the Faculty of Geo-Information Science and Earth Observation of the University of Twente, the Netherlands (ITC) and UNITAR/UNOSAT.

Language:

All teaching and reference materials are in English. Participants must be fully conversant in English.

Software:

Minimum software includes: ESRI ArcGIS version 10.1 with extensions (spatial analyst), Google Earth and access to the internet.

Enquiries:

For further information, please send your enquiries to tsua [at] dpc.net (tsua[at]dpc[dot]net)