

GIS for Disaster Risk Management

An introductory course

11-22 May 2009

Bangkok, Thailand



Rapid population growth and urbanization combined with increasing frequency of hydro-meteorological hazards due to climate change is causing a rapid increase in the number of vulnerable communities exposed to hazardous events. As a result, disasters are increasingly taking a heavy toll of life and property. Unplanned growth both in urban and non-urban areas calls for an adequate preparation to reduce the impact of disasters. There is an increasing pressure on management practitioners that they need to take decisions based on available data in the various phases of disaster risk management. Most of the disaster related data are spatial in nature and therefore, geographic information systems (GIS) could play an important role in disaster risk mitigation, preparedness and response. GIS also helps in informed decision making.

Objectives

The main objective of the course is to create awareness and provide knowledge to disaster management practitioners on the importance of spatial data and GIS in disaster risk management. Participants will learn about applications of spatial data in hazard and vulnerability assessment, disaster preparedness, recovery and reconstruction.

Course content

Module-I: Disaster risk management (DRM)

- Introduction DRM
- Tasks involved in DRM
- Data necessary for DRM
- Spatial data for DRM

Module-II: Data sources and integration

- Sources of spatial data
- Data collection means
- Data available on the Internet
- International Charter and Sentinel Asia project
- Data integration (GIS, RS, GPS etc.)

Module-III: Hazard, vulnerability and capacity assessment

- Introduction to hazard assessment
- Hazard assessment using spatial data
- Vulnerability and capacity assessment
- Use of GIS in vulnerability and capacity assessment

Module-IV: Disaster preparedness, response and recovery

- Introduction to disaster preparedness
- Utility of spatial data in disaster preparedness
- Early warning systems
- Visit to an early warning system for hydro-meteorological disasters
- Applications of spatial data in response and recovery

Course schedule

11-22 May 2009 (two-weeks).

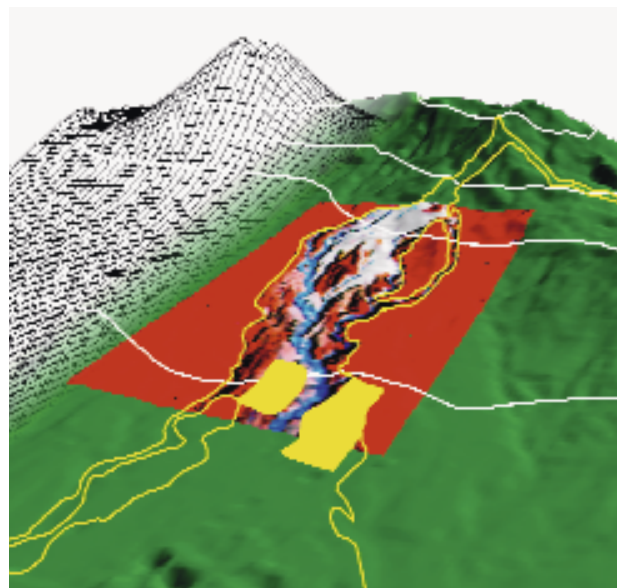
Benefits

At the end of the training, participants will be able to:

- Indicate the role of spatial data for executing the various tasks in disaster risk management
- Outline the main sources of spatial data and their applications in disaster management
- Understand the potential applications of GIS in hazard, vulnerability and capacity assessment
- Have insight in the applications of GIS in disaster preparedness and planning
- Be exposed to the set-up of early warning systems for selected disasters
- Understand how spatial data and GIS can be used in their day-to-day work as DRM practitioners.

Participants

Disaster management professionals who wish to use GIS in their organization for disaster preparedness and response will be benefited from this course. This course is aimed at



professionals working in government organizations, municipalities, NGOs, international organizations and academic institutions. The course is not intended for people with experiences in GIS. They are advised to follow the advanced course on 'GIS for Multi-hazard Risk Assessment' to be offered after this course.

Organizing institutes

The *Asian Disaster Preparedness Center (ADPC)* is a lead regional resource center dedicated to disaster reduction in Asia and the Pacific region and is located in Bangkok, Thailand. ADPC works with governments, NGOs and communities of the Asia and Pacific region to strengthen their capacities in disaster preparedness, mitigation and response through professional training, technical assistance, regional program management and information and research. It has now been recognized as an Inter-governmental Organization with effect from 28 February 2005 with a mandate to expand disaster management and mitigation activities in various countries.

For more information: www.adpc.net.

The *Geoinformatics Center of the Asian Institute of Technology (AIT)* in Thailand is a non-profit center for training and capacity building in Remote Sensing, GIS and GPS technologies. It was established at AIT in 1995. The Center has undertaken a number of disaster and environment related projects in South and Southeast Asia, drawing participants from more than 25 countries within the Asia-Pacific region and to date more than 1,000 persons have been trained.

For more information: www.geoinfo.ait.ac.th.

The *International Institute for Geo-Information Science and Earth Observation (ITC)* is the largest institute for international higher education in the Netherlands. ITC provides international education, research and project services in the field of geo-information science and earth observation using remote sensing and GIS. ITC is an associated institution of the United Nations University (UNU). The cooperation between ITC and the United Nations University is directed at developing and carrying out a joint programme on capacity building in disaster management and in land administration, and at disseminating knowledge on these and directly related issues.

For more information: www.itc.nl/unu/dgim.

Course fee

The tuition fee is US\$ 2,000 per person which covers cost of resource input, set of training materials, refreshments during the training sessions, airport transfers, transportation for scheduled study visits, social and cultural visits during weekends and minor medical expenses (if necessary) and accident insurance. The tuition fee does not include accommodation (US\$ 40-50 per night), living expenses (DSA) and air-fare.

Medium of instruction

The medium of instruction of the course is English.

Prerequisites

Basic knowledge of disaster risk management aspects is desirable. No knowledge or skills with GIS are required.

Assessment and Certification

Participants will receive certificates upon completion of the course.

Applications

Applications can be sent by e-mail, fax, or surface mail and application forms are available at: www.adpc.net www.geoinfo.ait.ac.th

Contact

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