5th Regional Training Course

GIS for Disaster Risk Management Level I

An Introductory Course

31 May – 11 June 2010, Bangkok, Thailand

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 increasingly taking 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 a need for inclusion of disaster risk information in development planning and create awareness among the disaster management professionals.

Disaster risk information is spatial in nature and Geographic Information Systems (GIS) play an important role in disaster risk assessment and management. This course primarily deals with the geographic aspects of disaster risk assessment and management and targets disaster management professionals who intend to use GIS in their day-to-day work, but they do not have any earlier (or very limited) GIS experience.

Objectives

The main objective of the course is to impart knowledge and skills to disaster management practitioners in using of GIS and spatial data for disaster risk assessment and management. Participants will not only learn how to carry out disaster risk assessment for different hazard types, but also how to use risk information for emergency planning and preparedness.

Course contents

Module–I: Introduction

- Introduction to disaster risk assessment
- Introduction to GIS and spatial data necessary for disaster risk assessment
- Source of spatial data
- Applications of Google Earth images

Module–II: Hazard, Vulnerability and Risk Assessment

- Hazard types and hazard assessment methods
- Physical and social vulnerability and vulnerability assessment methods
- Quantitative and qualitative risk assessment methods
- Participatory GIS

Module–III: Elements at Risk

- Types of elements at risk
- Classification of buildings, critical facilities, lifelines and other infrastructures
- Generation of elements at risk database using building footprints, census data and digital elevation model

Module–IV: Disaster Risk Management

- Introduction to disaster risk management
- Use of risk information for emergency planning and preparedness
- Early warning systems
- Spatial data in response and recovery

Benefits

At the end of the training, participants will:

- Understand the importance of spatial data in disaster risk assessment and management
- Understand the potential applications of GIS in hazard, vulnerability and risk assessment
- Improve skills in using GIS in their day-to-day work

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 professionals with knowledge and working experiences in GIS. They are advised to follow the advanced course on 'GIS for Disaster Risk Management – Level II' to be offered after this course.

Organizing institutions

The Asian Disaster Preparedness Center (ADPC) is a lead regional resource center dedicated to disaster reduction in Asia and the Pacific region and it 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 technolo-

gies. 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

ITC established in 1950 and as of 2010 a *faculty of the University of Twente* provides international education, research and project services in the field of geo-information science and earth observation using remote sensing and GIS. The aim of ITC's activities is the international exchange of knowledge, focusing on capacity building and institutional development in developing countries and emerging economies. To date ITC has almost 20,000 alumni in all parts of the world, some of whom are taking leading positions in their respective organisations.
For more information: www.itc.nl (ITC) and www.utwente.nl (University of Twente)

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, transportation for scheduled study visits, social and cultural visits during weekends and accident insurance. The tuition fee does not include accommodation (US$ 40-50/night), living expenses (DSA) and air-fare.

Language of instruction
The language of instruction of the courses is English.

Prerequisites
Basic knowledge on disaster risk management aspects is desirable. Knowledge of or skills with GIS is not required.

Certification
Participants will receive certificates of attendance 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

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