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# Regional **t**rainning **C**ourse

*on*

Urban Flood Mitigation (UFM)

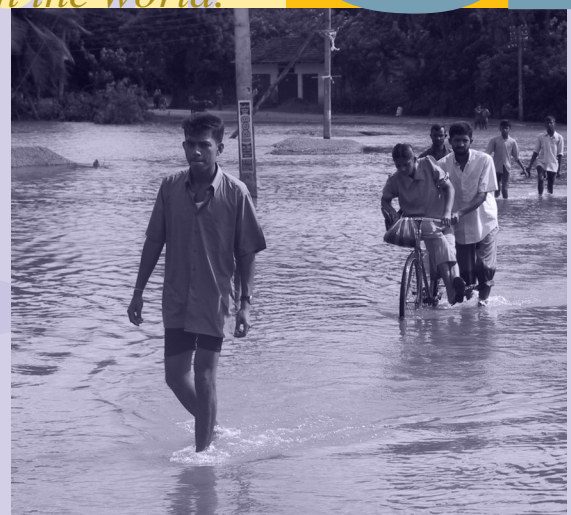
# Overview

# UDRM

background

*Asia is the most disaster prone region in the world.*

Among the natural hazards that annually create havoc in the region, flood is known to be the most frequently occurring. The global deaths due to flooding is ranked second only because storm surges, which can be considered a type of flash flood, is presently not classified as flood disaster. Although flooding is primarily a natural phenomenon, human interventions such as deforestation, poorly developed land drainage systems, greater agricultural land use and rapid urbanization have exacerbated the occurrence and severity of flood disasters.



## Urban Disaster Risk Management (UDRM)

The outcome of Asia's high rate of urbanization has been the expansion of urban populations in geographic areas which are prone to disaster impact. The result is an increased vulnerability of populations and infrastructure. Disaster mitigation measures such as:

- earthquake and cyclone-resistance building and infrastructure
- flood and landslide control measures
- incorporation of disaster vulnerability into land use planning
- introduction of regulatory measures in industrialized zones

## *Mitigation offers the best and most cost effective approach to deal with floods.*

The course on Urban Flood Mitigation (UFM) is an integrated approach to development of flood risk reduction strategies that involves engineering, settlement development, public administration, community-based strategies and land use planning (with environmental considerations). This multi-disciplinary treatment of the flood problem and of the requirements of flood risk management is expected to enable a holistic view on preparedness measures. Case studies are presented to enhance understanding.

The UFM starts with an overview of the flood issue and then to the discovery of the various options and best combinations available to mitigate their impact. The Course concludes with a treatment of measures desirable and applicable at the national and local level.

have rarely been attempted in most Asian countries. Activities undertaken by the Asian Urban Disaster Mitigation Program (AUDMP) over a period of eight years, have demonstrated the effectiveness of mitigation measures in reducing natural disaster vulnerability. Demonstration projects in nine countries, information dissemination and networking activities, and the regional training courses on Earthquake Vulnerability Reduction, Flood Risk Mitigation, Technological Risk Reduction and Urban Disaster Mitigation have convincingly brought to light the opportunities for high impact interventions. Local officials in selected cities have positively responded to the initial project activities by the way of funding and incorporating disaster vulnerability considerations to their buildings and zoning regulations.

Currently, a significant high demand is apparent for Urban Disaster Risk Management (UDRM), not only in AUDMP target countries but also in other countries of the region. This demand for expansion of UDRM activities has been set to improve response, preparedness capacities to reduce the vulnerability.

As ADPC has been implementing and linking diverse activities through out the region, it has recognized the importance of enhancing the scope of AUDMP through the theme action which is focused on Urban Disaster Risk Management. This will become a permanent focus area of ADPC for future endeavor. UDRM will continue to facilitate interventions for promotion of local and traditional practices, research and technology transfer, replication of best practices, promotion of innovative solutions, development of information products to capture experiences for their dissemination as well as training and capacity-building.

To improve *knowledge* on the causes of flooding; risk analysis, mapping and flood policy; assessment of flood policy; assessment of flood damages; and to provide information on flood mitigation measures and their advantages.

To build *capacity* on modern disaster mitigation tools through introduction of remote sensing and GIS application for hazard mapping, risk analysis and spatial analysis for vulnerability mitigation measures.

To *develop* administrative, managerial and professional skills in the practice of urban flood hazard mitigation.

To raise the level of *awareness* of the necessity of integrating urban flood mitigation measures in the urban planning and management process.

To *motivate* participants to initiate actions for flood risk analysis, implement mitigation measures, and analyze the status of flood risk and mitigation measures in cities.

To *learn* from successes and failures by mutual sharing of experience among participants and with the resource persons.

## course content

- Flood Issues and Urban Concerns
- Nature and Causes of Flood
- Flood Risk Analysis
- Damage Assessment and Failure Analysis
- Flood Hazard Mitigation
- Flood Protection Measures
- Structural Flood Proofing
- Flood Preparedness
- Flooding and Infrastructure
- Urban Growth and Invasion of the Wetlands
- Affordability and Costs of Mitigation Measures
- Disaster Locations and Hazard Mapping
- Introduction to Remote Sensing and GIS Application
- Flood Mitigation Policy Search
- Flood Mitigation Programming
- Field Visit to Mitigation Works

This course is particularly useful for those concerned with *reduction of vulnerability to floods in urban areas*. Although the focused area is the Asia-Pacific Region, participants from areas outside this region are welcome to join the Course.



participants

target

- Land use planners and urban planners attached to national level ministries, departments and institutions dealing with urban planning, development, housing, infrastructure, public works, utilities, water works and drainage, water resources planning etc
- Administrators and officials from provincial and city administrations, development and planning authorities
- Water engineers and flood control professionals
- Private sector: corporations, builders and infrastructure developers, re-insurance agents
- Elected representatives from cities and towns
- Emergency response, relief and rehabilitation agencies and emergency planners
- UN Agencies and international organizations
- NGOs working on disaster mitigation, especially on flood mitigation

audience



A limited number of full and partial scholarships will be available to deserving candidates from national government organizations or national NGOs. Preferences will be given to those who have undergone post-graduate training at ITC, Netherlands.

Interested persons can apply directly but preferably be nominated by their employer organization/ departments. To register, please fill out the ADPC Application Form and fax it to the number given at the end of this brochure or write a letter of inquiry at the given address. If you have access to the Internet, you may fill the form on-line at [http://www.adpc.net/UDRM/ufm\\_form.html](http://www.adpc.net/UDRM/ufm_form.html)

All training materials are presented in English. It is essential that participants are fully conversant in English language.

Resource persons are from ITC, AIT, ADPC and other experts in Flood Hazard Mitigation.

The course fee is US\$1,500 per participant. The fee is inclusive of the costs of training materials. Payment may be made by money transfer/international demand draft (DD) in advance or by cash at the registration desk during the training period. Preferred mode of payment should be confirmed.

Please indicate whether you need partial sponsorships. Inform the contribution that your organization is willing to commit.

Villa Caceres Hotel, Magsaysay Avenue, Naga City. ADPC can arrange accomodation if participants wish for assistance in this regard. Please indicate preference for single/sharing accomodation. the cost will be notified in due course.

Villa Caceres Hotel, Naga City, Philippines.

organized by



## asian disaster preparedness center

Established in 1986, ADPC is a leading regional resource center dedicated to disaster reduction. ADPC works with governments, NGOs and communities of the Asia and Pacific regions to strengthen their capacities in disaster preparedness, mitigation and response through training, technical assistance, regional program management, country project demonstration, information sharing and research.



in collaboration with  
**City Government of Naga**  
*Camarines Sur, Philippines*

Naga has built a reputation for being a model local government unit and a center of innovations in local governance in the Philippines which is founded on three elements: a progressive development perspective; functional partnerships among various stakeholders in the community; and people's participation. [www.naga.gov.ph](http://www.naga.gov.ph)



in collaboration with  
**GIS Application Center (GAC)**  
*Asian Institute of Technology*

GIS Application Center (GAC) was established in September 1995 in Asian Institute of Technology (AIT) as a non-profit training center with an aim to disseminate the state-of-the-art GIS, Remote Sensing and GPS technologies, and capacity building in the Asia-Pacific region.



co-funded by  
**International Institute  
for Geo-Information Science  
and Earth Observation**  
*the Netherlands*

Established in 1950, ITC is an internationally recognized center of excellence aimed at developing institutional capacities and building capacity in developing countries. ITC seeks to promote the sound application of geo-information by offering a range of programmes of research, education and project services.

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