

# Regional Training Manual on Disaster Risk Reduction for Coastal Zone Managers



with financial and technical contributions from







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## Acknowledgement

Regional Training Manual on 'Disaster Risk Reduction for Coastal Zone Managers' is developed by the Asian Disaster Preparedness Center (ADPC) with technical and financial support from United Nations Environment Programme (UNEP), United Nations International Strategy for Disaster Reduction (UN/ISDR) and European Commission AIDCO Programme.

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This Manual is developed by Loy Rego and Arghya Sinha Roy from ADPC. Support was provided by Peter Roberts and Alex Fowler from ADPC in finalizing the document and the presentations and Lowil Espada for design.

INTRODUCTION

Introducing the Regional Training Manual on Disaster Risk Reduction for Coastal Zone Managers

## Background

Asia is one of the region hardest hit by natural hazards and in which the vast populations settled in both urban and rural coastal areas are particularly vulnerable. Global climate change is expected to increase the frequency and intensity of climate related hazards (IPCC Fourth Assessment Report, 2007). Early warning systems and preparedness plans are necessary but are, in themselves, insufficient to reduce risk– additional measures must be taken to address underlying vulnerabilities. Healthy ecosystems play a vital role in this regard.

Coastal ecosystems and associated watersheds provide a wide range of services to coastal communities, including food provision, natural shoreline protection against storms and floods and flood regulation among others. These services are fundamental to building community resilience to coastal hazards, yet they are under threat from a variety of sources.

Thus protecting coastal ecosystems and reducing disaster risk in coastal communities requires the active participation of a broad cross section of stakeholders – the engagement of coastal zone managers and allied environmental professionals is essential for success.

The United Nations Environment Programme (UNEP) through financial support from the United Nations International Strategy for Disaster Reduction (UNISDR) and European Commission AIDCO programme has undertaken to build disaster risk reduction (DRR) capacities of coastal zone managers. The project works with stakeholders at regional and national level (India, Indonesia Sri Lanka and Maldives) and links to the Mangrove for Future (MFF), a multiagency, multi-country initiative which works for healthy coastal ecosystems for a more prosperous and secure future for coastal communities'.

This manual has been prepared by the Asian Disaster Preparedness Center (ADPC) in partnership with UNEP and through close consultation with the national partners in the project countries and basing on the national training courses developed in the framework of the same project. This regional manual aims at building capacity of coastal zone managers to design and implement coastal development projects that enhance protection of lives and livelihoods while improving environmental quality and protecting ecosystem services. The manual also aims at enhancing the knowledge of DRR practitioners on the prospective services of healthy coastal ecosystems.

## Objectives of the Training Course

This Training Manual on 'Disaster Risk Reduction for Coastal Zone Managers' is for use in regional training course on DRR for Coastal Zone Managers, aimed at building the capacity of government officials, NGOs, academia and other entities responsible for developing and implementing coastal zone management (CZM) programs/projects by introducing the issues and opportunities for integrating DRR into CZM projects. The knowledge shared through this training will help the participants in developing projects and regulations on coastal areas that incorporate DRR concerns and measures – but will not turn coastal managers into DRR experts. By being trained in this field, coastal zone managers will also better identify which kind of development projects would increase local vulnerabilities.

At the same time the course also aims at enhancing the awareness of DRR practitioners on the role healthy coastal ecosystems can play in disaster mitigation and prevention, emphasising the importance of adopting integrated coastal development planning (a combination of structural and non structural measures) for reducing risk. At the end of the Training Course it is expected that the participants would be able to:

- Identify risks from natural hazards which impact CZM projects and also improper coastal development processes which might lead to accumulation of risk in coastal areas;
- 2. Understand the conceptual framework of risk reduction;
- Recognize various measures; structural and non structural, for risk reduction in coastal areas;
- 4. Apply the theory and use practical tools in integrating DRR in CZM plans and programmes; and
- 5. Develop a list of actions which they can undertake in their daily work programme in order to reduce the risk in coastal areas.

## Content of the Regional Training Course

The course is structured in eight (8) modules. Hereunder is a brief description on each of the module.

#### Module 1: Introduction to the Course

The course would start with an introductory session, which would establish the importance of the course for the participants and the skills, technique and knowledge they would acquire at the end of the course. The rationale would be established through citing the impacts of natural hazards on coastal development projects as well as how improper planning and implementation of these projects could lead to increase in risk from natural hazards.

#### Module 2: Knowing the coast better with a DRR perspective

This module would explore two sides namely the importance of coastal development and the services/resources coastal ecosystem provides and at the same time the type of risk coastal areas face; risk arising from a combination of natural and human induced hazards including Climate Change (CC), as magnifying factors of hazards, clubbed with physical, social and economical vulnerabilities and limited capacity.

#### Module 3: Introducing DRR and its linkages with Climate Change Adaptation

This module would introduce the terminologies, concepts and framework for DRR by explaining the Hyogo Framework for Action (HFA) and its Five Priorities for Action. For each of the priorities, concepts would be explained through examples from coastal environment; systems, stakeholders and concerns. Linkages between Climate Change Adaptation (CCA) and DRR would be highlighted.

#### Module 4: Assessing the coastal risk from natural hazards

Undertaking risk assessment in itself is a complex exercise and needs to be carried out at various levels. This forms the first step if DRR needs to be integrated in coastal development programs and projects. While there are tools and techniques available, they need to be adapted in the context of coastal areas, data availability and capacity etc. Thus this Module would introduce the available tools for undertaking risk assessment and highlight the type of information required.

#### Module 5: Measures for DRR in coastal areas

This Module would introduce the various measures that could be adopted to reduce risk in coastal areas; structural man made, structural ecosystem based and non structural measures (policies, laws, plans, awareness, etc) and how to link all these in an integrated manner.

#### Module 6: Understanding the ground realities: Field Exercise

This Module would give a flavour of the ground realities to the participants by undertaking a field visit to a coastal area affected by natural or human induced hazard, interaction with

communities living in the area to understand their perception of risk and discussions with local agencies on existing systems and plans.

#### Module 7: Integrating DRR in CZM; linking Policy to Action

Through examples and case studies, this Module would help identify entry points for integrating DRR in CZM policies, plans, programs and projects, thus aiming at influencing the way coastal development projects are planned, designed and implemented with a strong component on disaster resilient development.

#### Module 8: Taking it back home; where to start from

Through this Module, participants would be able to draw up a list of actions which should be undertaken in their respective organizations to make sure the initiatives they undertake in coastal areas are disaster resilient and do not add to the risk. Some of these actions the participants could directly initiate on their return, where as for some they could only advocate for and raise awareness among their peers.

# Course Schedule

Day	Module/Session	Duration
Day 1	Module 1: Introduction to the Course	
	Session 1.1: Knowing the Participants	30 minutes
	Session 1.2: Expectation Setting	30 minutes
	Session 1.3: Why this course? Impact of disasters on coastal development	60 minutes
	Session 1.4: Looking at the skills and building on them	45 minutes
	Module 2: Knowing the coast better with a DRR perspective	
	Session 2.1: Importance of CZM (Optional)	45 minutes
	Session 2.2: Understanding coastal ecosystem services	60 minutes
	Session 2.3: Valuation for ecosystem services (Optional)	60 minutes
Day 2	Module 2: Continued	
	Session 2.4: Understanding the coastal hazards	45 minutes
	Session 2.5: Recognizing the coastal vulnerabilities	60 minutes
	Session 2.6: Introduction to coastal climate change	60 minutes
	Session 2.7: Knowing the coastal risk	45 minutes

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