SPECIAL CERTIFICATE COURSE

Coastal and Marine Biodiversity and Protected Area Management

for field-level MPA managers

भारतीय वन्यजीव संस्थान
Wildlife Institute of India

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of:
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
of the Federal Republic of Germany

Photo: Dr. Neeraj Khera

What is so significant about coastal and marine biodiversity?

Ecosystems and biodiversity underpin the global economy and human well-being. The coastal and marine ecosystems provide as much as two-thirds of the ecosystem services that make up the planet's natural capital.

With a coastline of more than 7500 km spanning 13 states and union territories, India is endowed with a diversity of coastal and marine ecosystems. These include coral reefs, sea grass meadows, mangroves, mudflats, and coastal wetlands, each supporting a unique diversity of species and genes.

The available information shows that the major threats to the sustainability of marine and coastal protected areas include land-based pollution and eutrophication, overfishing, destructive fishing, illegal, unreported and unregulated (IUU) fishing, alteration of physical habitats, invasions of exotic species, global climate change and natural disasters.

In the coastal areas, a major determinant of the well-being and livelihood security is the availability of marine and coastal biodiversity resources and access to these resources. Consequences of the biodiversity loss and resulting loss of ecosystem services, therefore, have far reaching impacts on livelihoods and the overall well-being of coastal communities.

One of the most effective means of protecting marine and coastal biodiversity is through the establishment and management of marine and coastal protected areas (MPAs) and community-involvement in managing the coastal and marine ecosystems.

For the managers of these ecosystems and protected areas, a good understanding of the mechanisms (scientific, socio-political, economic and legal) under which different factors operate and affect marine and coastal biodiversity will be the key to developing approaches for sustainable and effective management of coastal and marine ecosystems.

Capacity Development for Sustainable and Effective Management of Coastal and Marine Protected Areas (MPAs)

Photo: Dr. Neeraj Khera

Capacity development is the process of developing the capacities of individuals and shaping joint learning processes such that the individuals are enabled to achieve sustainable results within their own system of reference.

Capacity development facilitates change among people, in three dimensions: knowledge, skills and values/ attitudes. A combination of traditional and innovative capacity development measures is required to achieve the objective.

About the Special Certificate Course

This course for the field-level MPA managers, viz. Range Forest Officers and Foresters, is planned to be delivered as a special certificate course of one-month duration.

The first week will provide an overview of the key concepts and experience sharing. The second and third week will focus on field- exposure, assessment and monitoring methods of coastal and marine biodiversity, community interaction etc. The fourth week will then focus on effective management planning of coastal and marine biodiversity and protected areas, outreach, communication and change management.

The course is intended to enable the participants to have a sound understanding of the concepts and issues related to managing coastal and marine biodiversity, coastal and marine protected areas, ecological and socio-political context, conservation approaches and legal-policy framework between terrestrial and coastal-marine PAs, as well as necessary skills to conduct assessment and monitoring of coastal and marine habitats and species and prepare field reports, and develop-under supervision-operational plan for MPAs based on management effectiveness guidelines.

Training Approach and Methodology

The course is structured as a modularised curriculum. Different modules will be delivered using different training methods over different time periods. The modularised structure provides flexibility to adapt the contents, methods and duration of different topics based on the training needs of the participants.

The course will use a mix of field-based and classroom training sessions, in almost equal proportions, to facilitate the participants in applying the theoretical information from class-room sessions into the field conditions, and to absorb the experience from local ecological, as well as, human communities.

A unique feature of the course will be to focus on the aspects of appreciation and contemplation of nature and ecological consciousness, for which special sessions will be organised during the course.

For class-room sessions as well as field-exercise, the course will use participatory methods of training. A participatory training is different from the conventional way of training in that, in a participatory training, learning occurs through active involvement of the trainees and it is they who develop the answers. Following are some examples of such methods:

1. Group work and presentations
2. Dialogue and brainstorming
3. Knowledge Café
4. Role play
5. Simulation (case study simulation/ video simulation)
6. Online games and Mind Maps
7. Case Studies
8. Fish Bowl
9. Icebreakers, energisers, and team-building exercises

Learning Outcomes of the Course:

By the end of the course, the participants will be able to:

- outline concepts and issues related to managing coastal and marine biodiversity, and demonstrate the types and relevance of different categories of MPAs in different scenarios
- differentiate clearly, between the ecological and socio-political context, conservation approaches and legal-policy framework between terrestrial and coastal-marine PAs.
- conduct assessment and monitoring of coastal and marine habitats and species and prepare field reports
- develop, under supervision, operational plan for MPAs based on management effectiveness guidelines
- be open to acquiring more knowledge on coastal and marine biodiversity relevant issues

An overview of the modularized course

MODULE 1

An introduction to coastal and marine biodiversity

Learning Outcomes

After completing this module, the participants are able to:

- explain the term 'Biodiversity' and describe different aspects of the concept
- outline different types of ecosystem services arising out of coastal and marine biodiversity
- express the difference between terrestrial and coastal ecosystems with clear examples
- illustrate different types of coastal and marine habitats and summarize the threats that they face
- understand the ecological basis for conserving coastal and marine biodiversity
- appreciate the difference between preservation conservation and management of coastal and marine biodiversity

Module 2

Coastal and marine biodiversity and ecosystems services in the overall environment and development context

Learning Outcomes

After completing this module, the participants are able to:

- understand the value of ecosystems and different elements of it
- appreciate the role that biodiversity elements play in providing livelihoods to the coastal communities
- demonstrate the role of coastal and marine protected areas in climate change adaptation and disaster risk reduction
- discuss and debate on the options and choices to manage coastal and marine ecosystems

MODULE 3

From landscapes to seascapes

Learning Outcomes

After completing this module, the participants are able to:

- explain the key differences between landscapes and seascapes
- demonstrate the need for differential assessment methodologies for terrestrial and coastal-marine ecosystems and biodiversity
- appreciate the differences in socio-economic and political contexts of terrestrial and coastal-marine ecosystems
- outline the key steps involved in conducting Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) and Marine Spatial Planning for coastal and marine ecosystems

MODULE 4

Sustainable Fisheries Management

Learning Outcomes

After completing this module, the participants are able to:

- appreciate the role of sustainable fisheries in ensuring effective conservation of coastal and marine biodiversity
- outline the key principles of sustainable fisheries management
- explain the difference between small-scale and commercial fisheries and their respective relevance to coastal and marine biodiversity
- appreciate the intricate relationship of fishing and biodiversity conservation

MODULE 5

Marine and coastal protected areas

Learning Outcomes

After completing this module, the participants are able to:

- define MPAs and different categories of MPAs
- explain the key features of MPAs
- describe in detail the guiding principles of establishment and management of MPAs
- appreciate the similarities and differences between terrestrial protected areas and marine protected areas and their management

MODULE 6

Governance, law and policies for managing coastal and marine ecosystems, biodiversity and protected areas

Learning Outcomes

After completing this module, the participants are able to:

- outline key International conventions and treaties relevant to biodiversity- in general, and coastal and marine biodiversity- in particular
- outline the laws and policies relevant to coastal and marine biodiversity in India
- explain- in detail- the legal and policy framework in India governing the MPAs
- appreciate the importance of identifying the appropriate legal regime for managing MPAs

MODULE 7

Assessment and monitoring of coastal and marine biodiversity and relevant issues

Learning Outcomes

After completing this module, the participants are able to:

- identify key coastal and marine ecosystems and species in India
- describe key assessment and monitoring methods used for coastal and marine habitats and species
- appreciate the magnitude and distribution of coastal and marine biodiversity- a global overview, in India, and an in-depth overview of their State
- conduct under-water / coastal surveys to monitor marine and coastal habitat features and species
- report based on the data collected

MODULE 8

Effective management planning of coastal and marine protected areas

Learning Outcomes

After completing this module, the participants are able to:

- outline the key elements of a MPA management plan
- describe in detail the steps involved in developing a MPA management plan
- define management effectiveness with examples
- appreciate management effectiveness in the ecological, social and economic context
- develop operational plan for MPA management based on the principles of management effectiveness
- conduct – in teams and under supervision- management effectiveness evaluation

MODULE 9

Change Management, Connectedness to Nature and Ecological Consciousness

Learning Outcomes

After completing this module, the participants are able to:

- appreciate their role as managers of MPAs in the overall context of coastal economy and livelihood dependence and rights of the coastal communities
- understand the dimensions of wellbeing and happiness as an emerging theme in human development discourse
- comprehend the deeper connect of human beings with nature akin to other biological organisms
- develop insights in the research on nature connectedness and deficit disorders
- appreciate the approach and practice of Contemplation of Nature

MODULE 10

Media and outreach

Learning Outcomes

After completing this module, the participants are able to:

- communicate their ideas and concerns on technical issues on coastal and marine biodiversity and MPA management in simple language
- choose the right communication methods to communicate with different sectors and stakeholders
- communicate effectively with journalists, and through them with the public and policy makers

Dates

January 10 – February 10, 2014

Venue

Indian Institute of Scuba Diving and Aquatic Sports (IISDA)

IISDA is India's premier SCUBA diving School located in Tarkarli, Sindhudurg, Maharashtra

About the Organisers:

The *Wildlife Institute of India (WII)* has a mandate to train Indian Forest Service officers, State Forest Service officers, as well as other key stakeholders such as the Coast Guard and Customs etc., and has recently initiated one-week refresher course exclusively addressing issues related to integrated management of coastal and marine biodiversity targeting senior forest officials.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is an enterprise owned by the German Government. GIZ implements sustainable development through international cooperation, on behalf of Germany and other partners. With a presence in over 130 countries, GIZ leverages its regional and technical expertise for local innovation. GIZ India has a team of over 300 staff.

To address the challenges in biodiversity conservation, the Ministry of Environment, Forests and Climate Change (MoEF&CC) of Government of India and GIZ India- on behalf of the German Government – are implementing the Indo-German Biodiversity Programme. The Programme consists of two projects: Incentives for Sustainable Management of Biodiversity and Ecosystem Services (ISBM) supported by the German Federal Ministry for Economic Cooperation and Development (BMZ), and Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas (CMPA) supported by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

About the project

Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas (CMPA)

The Government of India and the Government of Germany are jointly implementing a technical cooperation project titled 'Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas' (CMPA). The project is supported by the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Government of Germany and implemented by GIZ, India in partnership with the Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India.

The project aims at contributing to conservation of biodiversity through participatory approaches in the management of existing and potential coastal and marine protected areas in India. The project measures are being implemented on the following three pillars:

- Participatory management approaches for conservation of sites
- Capacity strengthening system for supporting participatory management of CMPAs
- Information, communication and awareness raising

One of the key capacity development measures is facilitating the training institutions of the forest, fisheries and media sectors in integrating coastal and marine biodiversity and protected area management relevant issues into their existing curriculum, and to equip the faculty members and training experts with latest and innovative training approaches and methodologies.

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