International Ocean Institute OceanLearn

Division for Ocean Affairs and the Law of the Sea Train-Sea-Coast

DRAFT COURSE OUTLINE

Development, Implementation, and Management of Marine Protected Areas (MPAs)

The course is designed for government planners, decision makers and MPA managers whose task it is to oversee the development, implementation and management of MPAs within national and regional systems.

The United Nations Convention of on the Law of the Sea (UNCLOS) lays down the fundamental obligation of all States to protect and preserve the marine environment, including by taking measures necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life. Marine Protected Areas (MPAs) provide an effective tool to meet international and regional obligations and commitments for the protection of the marine environment, including marine biodiversity. The 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, placed a great deal of emphasis on the protection and preservation of the oceans' environment in harmony with the rational use and development of their living resources, thus establishing the concept of "sustainable development" embodied in Agenda 21, the programme of action adopted at the Conference. The 1992 Convention on Biological Diversity (CBD) conceived as a practical tool for translating the principles of Agenda 21, recognised the need to promote sustainable development whilst conserving biological diversity and ecosystems. The importance of the CBD in relation to marine biodiversity was emphasised at the 2002 World Summit on Sustainable Development in Johannesburg, where it was also pledged to establish MPAs consistent with international law and based on scientific information, including representative networks by 2012 and time/area closures for the protection of nursery grounds and periods. This was reaffirmed at the eighth CBD conference in Brazil in 2006.

While MPAs may encompass a range of definitions and classifications, and may allow multiple-uses, one of their main focus should be protecting biodiversity. MPAs have been demonstrated to be effective in conserving biodiversity, as well as having

1

a range of other benefits for fisheries (bigger fish, and larger yields), people (securing livelihoods and alleviating poverty) and the marine environment (ecosystem services, genetic resources, and shoreline protection). As many marine organisms migrate and use different habitats at different stages of their life cycle, the establishment of representative, linked systems of MPAs offers the most efficient way to protect biodiversity and ensure the sustainability of natural resources.

Governments, in collaboration with local communities, stakeholders, and NGOs, are committed to developing networks of MPAs as part of the goals set at the international and regional levels. To this end, some governments have taken the lead, such as the 'Micronesia Challenge', but there is considerable debate as to whether the targets for conservation of representative marine habitats will be met. It is also important to ensure that targets are achieved through sustainable and enforceable MPAs. This course will assist countries to develop sustainable MPAs by providing decision makers and managers with the skills needed to ensure targets are not reached through 'paper' MPAs.

This course focuses on the development, implementation, and management of MPAs within a national context whilst meeting local, regional, national and international obligations. The course targets government officials and MPA managers and will provide the skills needed to address development, implementation and management of MPAs. It is presented in three main sequential parts: national legislative strategies for developing MPAs; implementing MPAs through selecting potential MPA sites; and management requirements for MPAs. The three stand-alone parts allow the course to be split into sub-courses if necessary.

This interdisciplinary course aims to introduce the participants to the range of issues in developing and managing MPAs, including the environmental and social contexts of selecting sites for MPAs. Participants will develop the ability to source and critically examine required information for the development and implementation of MPAs, and will acquire knowledge of management tools and skills to apply them to ensure MPAs are sustainable in an environmental, economic and social context.

The relevant modules from the Train-Sea-Coast *Management of Marine Protected Areas* course (Red Sea Course Development Unit) are presented in the left-hand column. The contents column is indicative only, and is not exhaustive. Following the TRAIN X methodology, the subject content will be finalised following finalisation of performance objectives.

For further information contact:
The international Ocean Institute (robin.south@impac.org.au**) or**
DOALOS (doalos@un.org**)**

Introduction to course		
Theme	**Learning objectives**	**Contents**
INTRODUCTION & WHAT IS AN MPA	To explain the objective of the course, and the different definitions and types of MPAs	Overview of learning objectives and course structure Key definitions (MPA) and types of MPAs

Thematic Module 1 - DEVELOPING MPAs: National Legislative Capability For Developing MPAs		
Theme	**Learning objectives**	**Contents**
INTERNATIONAL LEGAL AND POLICY FRAMEWORK FOR THE DEVELOPMENT OF MPAs	To implement conventions and treaties relating to marine conservation, through integrating them, into national policy and initiatives	UN Convention on Law of the Sea UNEP Regional Seas Conventions Convention on Biological Diversity Global directions and conventions WSSD 2002: representative network of MPAs by 2012 SIDS 2005 Mauritius: Kofi Annan "Need high level of political commitment for marine conservation and protected areas", pledges to support networks of MPAs in SIDS CBD 2006 Brazil: Reaffirm protection targets of 10% of ecological regions Regional directions and conventions Ocean policy [Other instruments should be added in this section]
NATIONAL LEGISLATIVE FRAMEWORK	Critically evaluate the national legislative and institutional framework relating to marine conservation[1]	National goals and objectives Precautionary Principle Ecosystem approach Assessment of national legislation Legal framework Institutional framework Gap analysis
LEGISLATIVE CASE STUDIES	Implement relevant elements and instruments of model legislation within national frameworks	Legislative case studies as lessons learned

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[1] Participants would be requested to bring information or have knowledge of their national framework.

Thematic Module 2 - IMPLEMENTING MPAs: Selecting MPA Candidate Sites		
Theme	**Learning objectives**	**Contents**
IDENTIFICATION AND EVALUATION OF HABITATS	To identify: the types of habitats within a national/regional context and their importance (biological, ecological and other benefits, including socio-economic); potential impacts and stressors; and endangered species and vulnerable habitats	Coverage of representative habitats (coral, mangroves, seagrass, spawning, migration corridors, upwellings, sea mounts) Habitat assessment (ecology) Knowledge of external stressors (atmospheric, terrestrial, oceanic) Valuing ecosystem services Interaction and linkages between ecosystems Endangered species (inc. marine mammals, turtles, birds) and vulnerable habitats Data sources Gap analysis and research needs (links to Module 2- sources of technical assistance) Databases, modelling and mapping Preparation of technical report
SOURCES OF TECHNICAL ASSISTANCE	Secure the best scientific, technical social, economic and operational information and advice related to MPAs development	Sourcing assistance from international agencies (eg. UNEP), international financial institutions (e.g. GEF and the World Bank) and Regional Seas and LMEs, and competent NGOs (eg. WWF, TNC, WWF Marine Ecoregions)
INTRODUCTION TO SOCIO-ECONOMIC ASPECTS & CONFLICTING INTERESTS	To recognise the importance of incorporating socio-economic aspects and to identify conflicting interests in MPA site selection	The need for community and stakeholder acceptance of MPAs Identifying stakeholders, their activities, and conflicting interests (local community and other stakeholders are considered further in following modules) Identifying existing data Data sources, collection techniques and usefulness Introduction to GIS for mapping and resource assessment (considered further in MPA site selection) [not clear why GIS is in this section] Introduction to database and matrices of resource use (considered further in MPA site selection) Case studies of MPAs that have failed due to social stressors, adjacent stressors (eg. runoff), and lack of connectivity or small size

Thematic Module 2 - IMPLEMENTING MPAs: Selecting MPA Candidate Sites		
Theme	**Learning objectives**	**Contents**
THE LOCAL COMMUNITY	To identify local community uses and impacts on a potential MPA, and how to include the local community in MPA site selection and development	Resource ownership (coastal and marine tenure) Types and benefits of public participation Identifying who participates, when and how participation occurs Consultation methods Data collection techniques Identifying current resource use patterns and levels Cultural and historical significance Economic studies Local community livelihoods and population growth predictions Identifying alternative livelihoods Identifying Traditional Ecological Knowledge (TEK)
OTHER STAKEHOLDERS	To identify the range other stakeholders that can impact on an MPA and how to include their interests in MPA site selection and development	Identifying other stakeholders and their patterns and level of use (eg. tourism, fishery, shipping, shell collection, coastal land uses such as logging or agriculture) Identifying relationships between local community and other stakeholders, including conflicting interests Consultation and participation methods Economic studies
MPA ASSESSMENT & SELECTION	To assess environmental and socio-economic issues and priorities in order to select MPA sites that meet biodiversity objectives, are accepted by stakeholders and are not adversely affected by external stressors, and fulfil national and international obligations	Integrating science (ecology, ecosystem, disturbances) and socio-economic issues (users, impacts) Identifying social and economic value of potential MPA sites Prioritising issues and sustainability of potential MPA sites Oceanic processes and 'source – sink' modelling (MPA connectivity) Transparency and accountability in MPA site selection Delineating MPAs Designating potential networks Incorporating resilience in MPA design (TNC)

Thematic Module 3 - MANAGING MPAs: Management Planning and Strategies		
Theme	**Learning objectives**	**Contents**
MANAGEMENT PLANNING	To develop goals and objectives for MPAs, and to create management plans that are inclusive and sustainable	Identifying principles underlying management of MPAs Establishing goals and objectives (realistic, measurable) Collecting baseline information and designating control sites Research and monitoring (introduction) Establishing partnerships -Government and Local Community (and NGOs) Business planning approach (sustainable financing, budget and asset management) Human resource management, including staffing and capacity building (identifying training requirements and opportunities) Adaptive management Involving the local community (co-management, collaborative management, incorporating TEK)
MANAGEMENT STRATEGIES	To analyse different types of management strategies and to adapt them in a national legislative and institutional context	Zoning (multiple use and no take) User pays and financing techniques Marine education and interpretation Incentive-based mechanisms (skill training, employment, equipment trading) Development and planning controls (including EIAs) Environmental impact contingency measures (oil spills, pollution) Cumulative and synergistic impacts Writing an MPA management plan and strategies to communicate management plan to stakeholders and users
ENFORCEMENT	To analyse enforcement measures and identify applicable measures for MPAs	Enforcement and compliance (legislation, spatial and temporal controls, permits, quotas, equipment restrictions) Surveillance techniques Using local communities and other stakeholders Budget, limitations, and priorities
RESEARCH AND MONITORING	To identify research and monitoring needs and to develop the capacity for monitoring	Monitoring and evaluating environmental effectiveness Using local community to monitor MPA Using volunteers and NGOs to assist in monitoring Adaptive management

Thematic Module 3 - MANAGING MPAs: Management Planning and Strategies		
Theme	**Learning objectives**	**Contents**
PUBLIC AWARENESS PROGRAMME	To identify communication needs and objectives and develop a communication programme	Methods of communication Target groups Learning principles Production of materials Using local community to communicate benefits of MPA
EVALUATION OF MANAGEMENT	To evaluate management effectiveness and develop a process of incorporating continual learning	Evaluating management effectiveness (referring to previous modules 8-12) How to develop a review process and review committee Different review processes and methodologies (refer to MPA News vol.7) Key elements in review Implementing changes and continual monitoring GBRMPA review case study
FIELD TRIP	To critically analyse an MPA	Review legal framework, management objectives, community involvement, and effectiveness of the MPA (environmental and management)
SIMULATION EXERCISE & MASTERY TEST	TO identify environmental and socio-economic values for a range of fictitious sites and develop a network of representative MPAs and construct management plans and strategies to ensure the effectiveness of the MPAs	Fictitious coastal and marine area with different habitats, pressures, stakeholders Participants will be required to assess, amongst others, the human resource, legislative, ecological and social data, and budget requirements to develop a network of MPAs.