

Integrated coastal management (ICM) is, like MPAs, an important tool for management of coastal and marine resources. It has been adopted in many countries worldwide. This sheet explains how MPAs are more effective as part of an ICM framework and why ICM programmes should include MPAs.

All MPAs are affected by activities taking place outside their boundaries, including industry, agriculture and forestry, aquaculture, urban and port development and other forms of construction, and shipping. These activities may have as great an impact on the MPA as those taking place within its boundaries. The tight connections between MPAs and adjacent land and water, through currents, migratory species, larval dispersal, nutrient exchange and other processes, require that MPAs are incorporated within an overall coastal management regime for the country.

The recommended global approach to MPAs, promoted by the Convention on Biological Diversity, is a framework comprising three management levels, of which the third specifies ICM, as follows:

- A core network of fully protected MPAs or no-take zones (see sheet I1) protecting critical biodiversity areas;
- A larger network of multiple-use MPAs maintaining vital ecosystem functions and processes;
- An overall national MPA system embedded within a national ICM programme.

ICM and MPAs are sometimes perceived incorrectly as alternative approaches but both are essential for effective management of the oceans. ICM provides the framework for management of the coastal and marine environment, with MPAs as the key component for protecting biodiversity and maintaining ecological processes. ICM focuses primarily on managing coastal development, while MPAs focus on biodiversity conservation issues.

A 1993 Ministerial Meeting in Arusha marked the beginning of serious political commitment to ICM in the WIO. South Africa, Tanzania (see case study) and Mozambique now have national programmes underway, and South Africa has a legislative framework. Local level ICM activities are underway in many countries, such as the



Discharges of sediment-laden water, such as this plume adjacent to Dar es Salaam Marine Reserves in Tanzania, can have a major impact on MPAs.

Mecufi Coastal Zone Management Project in Mozambique and several District-level initiatives in Tanzania. All address the need to incorporate MPAs into general management of the coastal zone. Global guidelines on integrating MPAs and ICM are also in preparation.

THE ROLE OF ICM

ICM can be defined as the process by which multiple use of the coastal and marine environment is managed so that a wide range of needs are catered for, including both biodiversity protection and sustainable use, allowing all stakeholders (including government, NGOs, different economic sectors, and local communities) to participate and benefit. ICM programmes are generally based on coordinating bodies or committees comprising representatives of all the sectors involved in coastal development. Regular meetings should be held to ensure that information is exchanged about sectoral development issues and appropriate collaborative action taken where needed. Representatives of MPA management agencies or of the MPAs themselves (depending on the level of the committee) should participate. ICM regulatory mechanisms can then be brought in to address activities that might have a negative impact on the MPA and over which the MPA has no control, such as:

- Pollution from industrial and domestic sources;
- Agricultural run-off that might cause nutrient enrichment and/or increased turbidity;
- Solid waste from sources such as municipal dumps;
- Port development and coastal engineering, such as dredging and land reclamation;
- Mining in coastal areas or upstream of rivers that influence the MPA;
- Construction activities, whether industrial, urban, residential or tourism;
- Watershed and river basin development activities that may affect coastal waters.

ICM programmes also play a facilitating role where there is lack of harmony between national MPA legislation and sectors such as fisheries or forestry, and can help to promote effective implementation of EIA recommendations.

THE ROLE OF MPAS IN ICM

MPAs, and preferably a national MPA system or network, are essential components of ICM programmes, because they protect the biodiversity and ecological processes on which human use of the coastal zone depends. Thus they can be a major contributor to sustainable development and have an economic benefit. MPA management must also be coordinated and integrated with management activities outside the boundaries and linked to development programmes that address the needs of local people.

Some large multiple-use MPAs are very similar to ICM programmes, in that they allow for different uses of marine and coastal resources within an area, and the involvement of large numbers of stakeholders in the management process. Such MPAs may be able to help catalyse the development of an ICM programme in the area. Where programmes are already in place, the MPA needs to become one of the ICM 'stakeholders' and should share information and experiences.



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Many conservation areas are close to port facilities, such as Tanga, Tanzania, and managers must keep abreast of development and expansion plans."

KEY POINTS FOR THE MPA

- Ensure that the links between the MPA and the surrounding environment are fully understood by all MPA personnel and stakeholders.
- Participate in local ICM initiatives and in national programmes where these exist.
- Ensure that the MPA management plan addresses coastal management issues in the broadest sense, and that there is clear understanding of the role that the MPA plays in sustainable coastal development.

Sources of further information

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Intercoast Network – international newsletter produced by the Coastal Resources Center, Univ. of Rhode Island. www.crc.uri.edu

Sharing the Experience – coastal management in a rapidly changing world. CD-ROM containing c 200 publications generated by the Coastal Resources Management Program (CRMP), Coastal Resources Center, Univ. Rhode Island. Contact: communications@crc.uri.edu

Global Web Service on ICM - www.icm.noaa.gov – service provided by a partnership of international organisations including UNESCO, World Bank, and UNEP-GPA, to give advice and news on ICM.

CASE STUDY

MPAs and ICM in Tanzania

A National Integrated Coastal Environment Management Strategy was adopted in 2002. There are seven 'strategies', of which Strategy 3 concerns conservation of biodiversity. It recognises MPAs as an effective tool and proposes that the existing institutional arrangements for establishing and managing MPAs and other protected areas should be used. Since responsibility for natural resource management has been decentralised in Tanzania, District ICM Action Plans are proposed as the main mechanism for implementing ICM on the ground. These plans are expected to identify locally important critical coastal areas and areas of high biodiversity and specify actions that provide for their conservation, restoration and sustainable use.

The national ICM strategy is not yet being fully implemented but mechanisms are being tested at local level. Pangani District in northern Tanzania is developing a District ICM Action Plan that is integrated with a collaborative fisheries management plan, implemented jointly by the District and local communities. The fisheries management plan includes reefs that are closed to fishing (identified and enforced by the villages that use the fishing grounds). In one case, a closed area is a formal MPA, Maziwe Marine Reserve, designated under the Marine Parks and Reserves Act. The Marine Parks and Reserves Unit (MPRU) is technically responsible for management of Marine Reserves and has delegated management of Maziwe to the District and villagers. The District Fisheries Officer has been designated as an Honorary Ranger.

Integration of MPAs and ICM at the national level needs further effort. At present, ICM activities are carried out through the Tanzania Coastal Management Partnership (a joint initiative of the National Environment Management Council, University of Rhode Island and US-AID). Ultimately a coordinating body is to be established, as well as inter-agency working groups that will draw members from key disciplines and sectors to provide the main source of technical input. Working groups for mariculture and tourism are already established. At present there is no formal mechanism for coordination with MPRU, but this would be needed once the strategy is implemented.