

Coastal and Marine Biodiversity Conservation and Utilization



By

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ABSTRACT

The coastlines and seas around Thailand and other tropical countries within Asia are among the most productive and diverse in the world. Coral reefs and sea grass beds provide the primary production and habitat needs of countless marine animal species, while mangrove ecosystems support hundreds of animal and plant species from diverse origins (marine, intertidal and terrestrial). However, conserving these valuable, but fragile, ecosystems and the Biodiversity they support is made very challenging by a number of factors, including the high levels of exploitation of aquatic species by coastal fishing communities and commercial fisheries, and by development pressures to increasingly urbanize and industrialize Asia's coastal zones.

Against this background, the traditional approach has been to conserve marine and coastal areas of high Biodiversity value within Marine Protected Areas (MPAs), or other designated conservation areas (e.g. Biosphere Reserves). But these have had only limited success in Asia because local resource-dependent communities living within and around MPAs often have not been consulted or involved adequately, and the capacity to manage such areas has usually been weak. Nonetheless, MPAs do offer the potential to achieve conservation and sustainable utilization objectives, provided the support and participation of the traditional communities most affected is gained through appropriate awareness-raising; and by providing them with tangible benefits, such as alternative livelihood opportunities.

More recently, the ecosystem-based approach has gained support as a strategy for the integrated management of land, water and living resources to promote conservation and sustainable use in an equitable way and one which is less dependent on a protected area designation. The ecosystem-based approach is particularly applicable to the sustainable management of inshore marine and coastal Biodiversity because many of the species concerned have complex feeding, habitat and life-cycles requirements which make them dependent on more than one ecosystem. The mud crab (*Scylla* spp.), for example, moves between mangrove, inshore and offshore habitats during its life history, which includes phases as a planktonic, crawling, burrowing and swimming organism.

This paper looks at the benefits of applying the ecosystem approach to achieve sustainable natural resources utilization in marine and coastal areas. It draws on examples and lessons learned from MPAs, the Ranong Biosphere Reserve, community "crab banks", and from the broad experience of MFF in its efforts to apply ecosystem-based and participatory approaches to coastal ecosystem and Biodiversity conservation.