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Marine and Coastal Protected Areas in Thailand: Status and Trend

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Protected areas are the cornerstones of biodiversity conservation. Parties of The Convention on Biodiversity (CBD) has recognized and adopted a work program to support a global network of representative and effectively managed terrestrial and marine protected areas at the 7th meeting of the Conference of the Parties in Kuala Lumpur in February 2004. During the meeting, a definition of “Marine and Coastal Protected Areas -MCPAs” has adopted as “*any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings*” (COP 7, decision VII/5). CBD has also decided to follow the Guideline and Definition of Protected Areas by IUCN (1994). They divided protected areas into 6 categories *i.e.* Strict Nature Reserve (Ia)/Wilderness Area (Ib), National Parks (II), Natural Monument (III), Habitat/Species Management Area (IV), Protected Landscape/Seascape (V), and Managed Resource Protected Area (VI).

Thailand’s territorial water is divided into two parts. The Gulf of Thailand, which joins the South China Sea, has a total area of approximately 300,000 km² of which about 188,000 km² are considered as territorial water of Thailand. The remaining areas are considered as the territorial water of Cambodia, Malaysia and Vietnam. It is characterized by relatively shallow waters of 45 to 80 m deep, a level sea floor, and a high influx of nutrients and freshwaters from rivers. Another part is the Andaman Sea, which joins the Bay of Bengal in the Indian Ocean. About 135,408 km² are considered as territorial water of Thailand. The remaining areas are considered as the territorial water of Myanmar, India and Indonesia. The Andaman Sea features coral reefs, dense mangrove forests, karst limestone islands, and pristine beaches with deep oceanic waters. Twenty-three, or almost a third of the country’s 76 provinces, are located in coastal areas. The total coastline is 2,880 km long, with 1,920 km along the Gulf of Thailand and 960 km along the Andaman Sea.

Thailand has several types of protected areas, including Man and Biosphere Reserves (MAB), RAMSAR sites to protect wetlands, and ASEAN Natural Heritages (ANH). An overview is provided in Table 1. In particular Marine National Parks (MNP), Marine Fishery Reserved Areas (MFRA) and Environmental Protection Areas (EPA) are crucial to the sustainable management of Thailand’s marine and coastal resources. Other area management approaches used include an integrated watershed management and specific area development planning. A total marine and coastal protected areas in Thailand is 79,757.22 km², while Thailand’s territorial water has an area of approx. 316,118.24 km². Thus, at present the marine and coastal protected areas occupied 25.2 % of the national marine waters of Thailand.

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Table1. Marine and Coastal Protected areas in Thailand.

TYPES	AMOUNTS	AREAS (km²)	IUCN Categories
1. Aquatic Preserved Areas	56	166.57	Ia
2. Non-hunting Areas	1	447.49	IV
3. Marine National Parks	21	5,685.23	II
4. Mangrove Forest	23 (provinces)	2,527.51	IV
5. Coral Reefs	420	160.50	IV
6. Seagrasses Beds	5	33.66	IV
7. Marine Fishery Reserved Areas	9	52,240.90	VI
8. Underwater Archaeological Reserved Area	1	27.00	V
9. Environmental Protection Areas	6	12,190.71	VI
10. Ramsar Sites	9	4,226.60	-
11. Biosphere Reserved Area	1	246.075	-
12. ASEAN Natural Heritage	3	1,804.97	-
TOTAL MCPAs in Thailand	-	79,757.22	-
Thailand's territorial water		316,118.24	

As presented in Table 2, various laws and regulations relate to marine and coastal protected areas. Key laws are those related to the use of resources such as for fisheries, forests, and wildlife. The various laws, developed at different times and for different purposes, involve multiple agencies and stakeholders.

Thailand's once abundant and healthy marine and coastal resources are under significant pressures. Urban and industrial development, tourism and recreation, fisheries, aquaculture, marine transportation, and extractive industries have led to increasing demands for natural resources and contribute to the pollution of coastal areas and ecosystems. However, Thailand demonstrates good performance in the area of habitat protection, in particular for coral reefs and mangrove areas, but significant threats to its marine and coastal resources remain. Erosion is impacting the coastal areas, coral reefs are degrading, fish stocks are not managed sustainably, and tourism pressures and demands for water and other resources are high. With a rapidly growing population, those pressures and the need for additional infrastructure and urban and industrial development will continue to increase in the coastal area, in particular along the Gulf of Thailand. Status and trend of MCPA in Thailand and cooperation within the region will be summarized and presented in the symposium.

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Table 2: Summary of Key Legislations and Agencies.

Legislation	Key agencies
<p>National Environmental Quality Act (1992) Enhance and conserve natural resources and environmental quality through environmental policies and planning. The Act regulates and calls for the creation of Provincial Environmental Management Plans (PEMP), Environmental Impact Assessments (EIA), Environmental Protected Areas (EPAs) and Pollution Control Zones (PCZs), as well as standard setting and monitoring, public participation and environmental education, and an environmental fund for investment.</p>	Office of Natural Resources and Environmental Policy and Planning (ONEP), Pollution Control Dept. (PCD), Dept. of Environmental Quality Promotion (DEQP) of Ministry of Natural Resources and Environment (MONRE), provincial and local governments of the Ministry of Interior (MOI) and other agencies.
<p>National Park Act (1961) Protects flora and fauna by prohibiting the trade or transport of species and human disturbances within park boundaries. The Act applies to all Marine National</p>	MONRE : Department of National Park, Wildlife and Plant Protection (DNP).
<p>Wildlife Conservation and Protection Act (1992) Regulates the possession, trading, hunting, and propagation of wildlife species, including carcasses and carcass products.</p>	MONRE: DNP, Department of Fisheries (DOF) of Ministry of Agriculture and Cooperatives (MOAC)
<p>Forest Act (1941) Controls logging concessions and the collection of non-timber forest products. Concession of mangroves was stopped in 1990s and all concession activities were</p>	MONRE: Royal Forest Department (RFD).
<p>Fisheries Act (1947, 1994) Governs fishing and aquaculture development through the protection of fishing habitats and nursery grounds, control of fishing gears and fishing methods, registration of fishing boats, protection of marine species, and</p>	DOF of the Ministry of Agriculture and Cooperatives (MOAC).