



WWF International Corals Initiative

Andaman Sea ecoregion

Geographic location: Andaman and Nicobar Islands (India), Indonesia, Malaysia, Myanmar, Thailand

Biodiversity features

The Andaman Sea ecoregion is biologically rich in both diversity and abundance. This high biodiversity is encountered from genes to individuals to species, habitats, and ecosystems. The coral reefs, mangroves, sea grass beds, marine lakes and deep sea valleys of the region form a constellation of diverse habitats that support a spectacular variety of flora and fauna. Much of this remains to be investigated or fully documented.

In India, the Andaman and Nicobar islands are the country's most important coral reef resources and the largest block of coral cover in South Asia. Fringing reefs dominate, surrounding most of the 500 islands, although isolated outcrops and extensive communities growing on rocky shores and vertical granite walls also are frequently found. The area is regionally outstanding in terms of both species diversity and intact corals. Approximately 200 coral species and 400 fish species have been recorded to date.

Thailand's most extensive, pristine, and best-developed reefs occur in the Andaman Sea, particularly in the Surin Islands. Although the Andaman Sea composes only one third of Thailand's coastline, over half of the country's coral reefs are found in these waters. Surveys here have recorded 210 species of coral, and over 100 species of reef fish. Further South in Malaysia, a number of islands are important for coral reef development, while mangroves are more common on the mainland coast.

Many of the Andaman Sea ecoregion islands, as well as certain stretches of coastline, are important nesting areas for a variety of sea-turtles, all of them endangered or threatened. These include the leatherback, hawksbill, Olive Ridley and green turtles. Some of these nesting sites are of global importance. The Nicobar Islands have more nesting leatherback turtles than any other site in

the northern Indian Ocean. Dugongs have also been recorded throughout the region, and the Irrawaddy dolphin swims the Thai and Malaysian waters. Whale sharks, coconut crabs, various dolphins, and blue and sperm whales are some of the other marine animals that form this rich diversity of fauna.

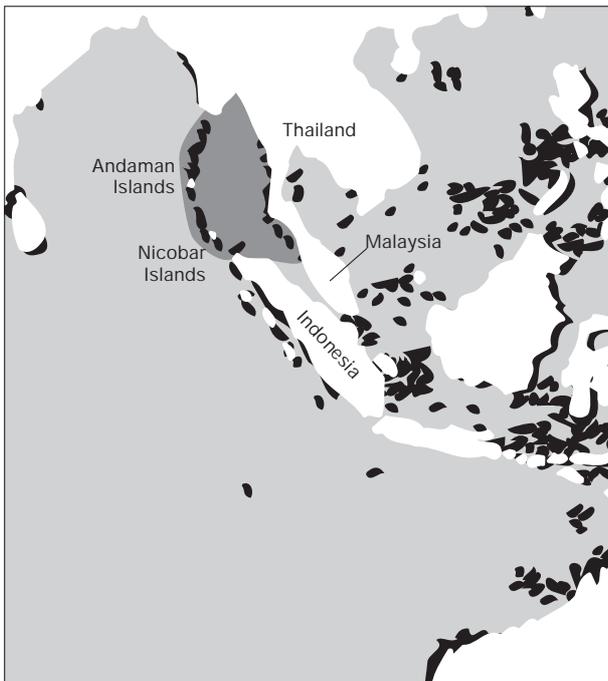
The human dimension

Perched on the western edge of Southeast Asia, the southern realm of the Andaman Sea ecoregion in Thailand and Malaysia, has been affected both positively and negatively by the region's economic cycles. The growth in nature based tourism in the 1970s brought both wealth and the related challenges of conserving the natural beauty from unrestrained development. Fishing is another key activity throughout the region, both for commercial and subsistence purposes. In Thailand, tens of thousands local small-scale fishermen have traditionally fished the Andaman Sea nearshore waters for generations. These communities are sensitive to changes in legislation and coastal development, not to mention significant poaching activity from foreign vessels, which impact on their ability to earn their livelihoods.

The current population of the Andaman and Nicobar islands is estimated to be close to 450,000. This has grown in recent decades due to immigration and settlement from mainland India. To protect the resource base for indigenous populations, the Government is considering stronger controls on further immigration. Indigenous rights to resource use are currently restricted to the tribal or indigenous populations, and encompass the protection of tribal areas from exploitation by non-tribals.

Threats

A variety of familiar threats are contributing to the demise of coral reef ecosystems in the Andaman Sea. Even those reefs which are relatively remote from coastal pres-



WWF in the Andaman Sea

WWF's Andaman Sea marine ecoregion work has been focused on biological research and monitoring, capacity building, livelihoods, and sustainable use. Partnerships are important, as the stakeholder consultation process is one of the best guarantees of a solid long term conservation program. In India, for example, WWF has worked with local populations to conduct a conservation prioritization project for the Andaman and Nicobar Islands. The project focused on biodiversity and socio-economic values, incorporating the perspective of the local communities and their priority areas for conservation.

In Thailand, WWF's Coastal Wetlands Policy and Conservation Awareness Project has launched an awareness campaign focusing on overfishing, destructive fishing gear, and the participation of local small-scale fishermen in the management of coastal resources. Capacity building and networking for small-scale fishermen's organizations has been encouraged and supplemented by advocacy for improved policies and laws.

WWF-Malaysia's Andaman Sea work focuses on marine protected areas (MPAs), which support highly diverse coral reefs and are crucial to the maintenance of fisheries resources. Activities include long-term monitoring of the reefs' conditions, capacity building among chalet and dive operators, and raising awareness through production and dissemination of educational materials. The Langkawi Archipelago is one example of WWF's support for sustainable use of the natural environment. Corals fringing the islands support some of the most diverse marine ecosystems in the world, yet the islands are also premier holiday retreats. The rapid development to meet tourism needs has resulted in damaged coastal areas and coral reefs and significantly reduced aquatic life. WWF is working with local stakeholders to help protect the areas that are still intact and maintain the archipelago as a hotspot of both biodiversity and tourism value on a long-term basis.

asures have been affected by some combination of over-exploitation, destructive harvesting techniques, pollution and lack of management. Damage to species and habitats occurs both from legal and illegal harvesting, as well as clearance for construction, settlement and agriculture. Severe siltation around the Andaman Islands, for example, is a result of widespread and poorly managed deforestation. The islands have also been impacted by pollution from local saw mills and other small-scale industries, including the dumping of non-biodegradable materials, hazardous waste and sewage.

Some of these excessive pressures on reefs are due to a lack of awareness among the local populace. Others are externally sourced. Uncontrolled tourism, destructive fishing practices and poaching by neighboring countries, and marine-based sources of pollution (e.g. ballast discharges, marine debris, oil slicks and spillage from cargo and passenger vessels) must all be addressed at a national, regional and sometimes international level for effective management. Global warming, and the related rise in sea temperatures causing coral bleaching, is also a threat experienced in the Andaman Sea that is being addressed at the global negotiating table.

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