Marine Turtle Protected Area Network in the Sulu-Sulawesi Seascape **TUBBATAHA REEFS NATURAL PARK**

At a Glance

Undoubtedly one of the most precious jewels of the Philippine seas, the Tubbataha Reefs Natural Park (TRNP) sits in the middle of the Sulu Sea, along the Cagayan Ridge chain of underwater volcanoes. These geological features gave birth to the atoll reefs that are home to Tubbataha's rich marine biodiversity.

The park covers 97,030 hectares (970.3 square kilometers or km²), plus a 10-nautical mile (18.52-kilometer) buffer zone. It is composed of two large coral reef atolls and the smaller Jessie Beazley Reef, a coral structure about 20 kilometers north of the main atolls. Approximately 10,000 hectares (100 km²) of the park are coral reefs. There are two small islets—Bird Islet in the north atoll and the South Islet in the south atoll—but there are no habitable areas in the entire park.

The TRNP is part of the municipality of Cagayancillo in Palawan province. The islands of Cagayancillo, located roughly 130 kilometers northeast of Tubbataha, are the nearest communities to TRNP.

In 1998, Tubbataha became the Philippines' first national marine park, established through Presidential Proclamation No. 306. This made Tubbataha part of the National Integrated Protected Areas System (NIPAS). In 2009, Tubbataha's full protected area status under the NIPAS was affirmed through the enactment of Republic Act 10067, also known as the Tubbataha Act of 2009.



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This fact sheet is part of a series of profiles of the marine protected areas (MPAs) that make up the planned Marine Turtle Protected Area Network (MTPAN) of the Sulu-Sulawesi Seascape. These MPAs, found in Indonesia, Malaysia, and the Philippines, are coastal and marine habitats that have been deemed critical to the sustainability of marine turtle populations in the region.

Conservation Importance

In 1993, the TRNP was included in the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) roster of World Heritage Sites, in recognition of its outstanding and globally significant marine biodiversity. The TRNP was able to satisfy three of four natural criteria for World Heritage Site inclusion–specifically, the park's exceptional beauty, its important role in ecological processes that support fisheries and provide other key ecosystem services, and its value to in situ conservation of many globally threatened marine species.

The coral species recorded in the TRNP represent approximately 90 percent of all the coral species found in the Philippines, and 80 of the 111 known coral genera in the world. The healthy state of the park's reefs allows for a habitat that can support top predators like tiger and hammerhead sharks, marine mammals like dolphins, and endangered species like the Napoleon wrasse. At least 181 threatened and near-threatened species of marine life seek shelter in Tubbataha's reefs.

Tubbataha is critical to the existence of fisheries in the Sulu Sea because of its role in the reproduction, dispersal, and recruitment The park is home to at least **600** species of fish, **360** species of corals (about half of all coral species in the world), **23** species of sharks and rays, **13** species of dolphins and whales, and over **100** species of birds.

Vette Lee



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Regional Importance

Aside from being a UNESCO World Heritage Site, the TRNP is also recognized as one of the Philippines' seven Ramsar sites, globally important areas for the conservation of seabirds. Tubbataha's Bird Islet and South Islet support seven resident species of seabirds. The critically endangered Christmas Island Frigatebird is a regular visitor to the park.

The TRNP was also recently recognized as one of the four flagship sites of the Coral Triangle Marine Protected Area System (CTMPAS). The park was found to have met the criteria under the CTMPAS Framework and Action Plan for "Category 4: Flagship Sites," defined as "large, already effectively managed sites that have regional ecological, governance, and socioeconomic importance."

The park is recognized as an important developmental habitat for green turtles (Chelonia mydas) and a foraging habitat for hawksbill turtles (Eretmochelys imbricata). This means that the marine turtle population in the park is composed mostly of juveniles, although mating and nesting turtles have also been sighted. Juveniles spend approximately 10 years in such developmental areas before moving on to their adult foraging habitats. The sizable, protected habitat offered by the TRNP makes it a very important component of the Sulu-Sulawesi Seascape Marine Turtle Protected Area Network.

The Marine Turtle Protected Area Network (MTPAN)

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n 2009, the Tri-National Committee for the Sulu-Sulawesi Marine Ecoregion (SSME) approved the design of a Sea Turtle MPA Network, after scientific studies showed the **connectivity** of the marine turtle populations in the three SSME countries (Indonesia, Malaysia, and the Philippines).

The SSME Tri-National Committee recognized the **need to jointly manage shared marine resources**, and identified the establishment of the Marine Turtle Protected Area Network (MTPAN) as among the key programs through which transboundary cooperation could take place.

Following the expiration of the SSME Memorandum of Understanding (2006–2016), this initiative has continued under the Coral Triangle Initiative for Coral Reefs, Fisheries, and Food Security (CTI-CFF), given that the Sulu-Sulawesi is recognized as a priority seascape in the CTI Regional Plan of Action. The **marine protected area (MPA) managers of the network shall agree on the modalities for cooperation** to actively support each other's MPA management efforts, and collectively contribute to regional initiatives.

The importance of marine turtles

Marine turtles are important for conservation because they play a number of ecologically important roles. They are described as "gardeners of the ocean" because they help keep coral reefs and seagrass meadows healthy as they feed and graze. They need various habitats as they go through their life cycles, such as nesting beaches, coral reefs, open sea, and seagrass meadows. A healthy marine turtle population, therefore, serves as an indicator of the health of these different habitats, and conserving marine turtles also means conserving a wide range of ecosystems and ecosystem services that benefit human communities.

Communities

Although the park itself is uninhabited, it has long been the traditional fishing ground of the Cagayanons, the people of Cagayancillo. Eventually, as motorized vessels allowed greater access, the park also attracted fishers from other areas, including those who use destructive fishing methods such as cyanide and dynamite fishing.

Today, the protected status of the park prohibits such activities. Cagayancillo is well-represented in the management board of the park to ensure that the aspirations of its residents are taken into account in decision-making.

Tourists, specifically scuba divers, are among the important stakeholders of the TRNP. The relatively short dive season (March to mid-June) never fails to attract foreign and local diving enthusiasts, and their photos, videos, and stories help share the beauty of Tubbataha with the rest of the world. The conservation fees they pay contribute to the funds needed to manage the park and conduct information campaigns.

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Management Aspects

Tubbataha is widely acknowledged as one of the best-managed protected areas in the Philippines. Some of the factors that have contributed to its success are the following:

- Enactment of the Tubbataha Act of 2009, which provided the full legal and institutional framework for effective park management;
- Investment in technology and equipment needed for law enforcement, such as radar, radio communications, geo-positioning system units, and patrol boats;
- Regular research and surveys to monitor fish, coral, and seabird trends;
- · Periodically conducted research and monitoring on turtles, sharks, and cetaceans;
- Active and fully functioning Protected Area Management Body (PAMB), which provides policy direction, with the support of the Tubbataha Management Office (TMO), which takes care of dayto-day park administration;
- Regular protection and law enforcement efforts provided by a composite team of park rangers from the Philippine Navy, Philippine Coast Guard, TMO, and Cagayancillo municipality; and
- Investments in people to enable them to perform their functions competently. Marine park rangers are trained in important aspects of MPA management like basic ecology and research, MPA management, fisheries laws, common law enforcement protocols, and more.

In a management effectiveness evaluation done in 2012 by Conservation International under the United States Agency for International Development (USAID) Coral Triangle Support Partnership, Tubbataha scored the highest among the nine NIPAS MPAs assessed. Using the Management Effectiveness Assessment Tool (MEAT), the TRNP was found to be at Level 3 of four levels of management, which means that it was able to fulfill threshold criteria for MPAs whose management is "sustained." It scored high in all the MEAT criteria except in the area of sustainable financing, which is hardly surprising, given the enormous costs needed for an area as large and as remote as the TRNP.

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Prospects for Conservation

Law enforcement is one of the most important activities that managers intend to sustain in the TRNP. The park's rich fisheries resources are a highly attractive target, and park management believes that enforcement should be strong and consistent enough to deter illegal fishers. The park puts a premium on enforcement efforts, investing in equipment as well as in its enforcement team. It also promotes compliance through regular community outreach and information dissemination.

The conservation and protection efforts in the TRNP make it a critical part of the Sulu-Sulawesi Seascape Marine Turtle Protected Area Network. It also serves as an important research site that can yield much-needed information on the population dynamics and biology of marine turtles during their development or juvenile stage, since much of the previous research has focused on nesting turtles. In cooperation with some of its Sulu-Sulawesi Seascape partners, with whom the park is likely to be sharing marine turtle populations, the TRNP has begun conducting population studies using the latest technology and methods. It is envisioned that a better understanding of marine turtles based on these studies will enhance national and regional management of such habitats.

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References

Dizon, Emerlinda C., Rollan C. Geronimo, and Rodolfo Quicho Jr. Benchmarking the Management Effectiveness of Nationally-Managed Marine Protected Areas in the Philippines and Policy Recommendations. Final Report for USAID Coral Triangle Support Partnership (CTSP) and Conservation International – Philippines, September 2013. http://www.coraltriangleinitiative.org/library/technical-report-benchmarking-management-effectiveness-nationally-managed-marine-protected.

"Featured Protected Area: Tubbataha Reefs Natural Park." Philippine Clearing House Mechanism for Biodiversity, n.d. http:// www.chm.ph/index.php?option=com_content&view=article&id=382:featured-protected-area-tubbataha-reefs-naturalpark&catid=47.

"Support to the Implementation of the Tri-National Sulu-Sulawesi Marine Ecoregion Comprehensive Action Plan." GIZ, n.d. http://acccoast.bmb.gov.ph/images/files/publications/Factsheet_SSME.pdf.

Pilcher, Nick J. Design for a Network of Protected Areas to Safeguard Marine Turtles in the Sulu Sulawesi Seascape. Marine Research Foundation for Conservation International Philippines, February 2008.

Pilcher, Nick J. Population Abundance, Structure and Dynamics of Marine Turtles in the Tubbataha Reefs, Cagayancillo, Palawan, Philippines [Executive Summary]. Tu, n.d. http://tubbatahareef.org/research_synopsis/SEa%20Turtle_Executive%20Summary%20 2010.pdf.

"Tubbataha Reefs Natural Park." UNESCO, n.d. http://whc.unesco.org/en/list/653.

http://www.coraltriangleinitiative.org/news/four-mpas-named-flagship-sites-coral-triangle-marine-protected-area-system

https://rsis.ramsar.org/sites/default/files/rsiswp_search/exports/Ramsar-Sites-annotated-summary-Philippines.pdf?1501220655

http://www.tubbatahareef.org/home

With additional inputs from discussions during the Stocktaking Workshop on the Operationalization of the Sulu-Sulawesi Marine Ecoregion Sea Turtle MPA Network, December 2–3, 2013.

With additional inputs from Dr. Nicholas J. Pilcher, Marine Research Foundation and IUCN Marine Turtle Specialist Group

The Sulu-Sulawesi Seascape Project (2012-2018)

The Sulu-Sulawesi Seascape, shared by Indonesia, Malaysia, and the Philippines, ranks among the most diverse and productive marine ecosystems in the world. It is also home to the largest nesting populations of green sea turtles in Southeast Asia. The marine resources in the Sulu-Sulawesi Seascape face major threats such as overfishing, destructive fishing practices, rapid population growth, unsustainable coastal development, and pollution. As a consequence, valuable coastal habitats like mangrove forests, coral reefs, and seagrass beds are at risk of losing their function as breeding and nursery grounds for marine organisms. This situation is exacerbated by the effects of climate change.

Indonesia, Malaysia, and the Philippines see the need for transboundary cooperation to address these threats. This is being carried out under the umbrella of the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF). Designated as a priority seascape under CTI-CFF by the six member countries of the CT (Indonesia, Malaysia, the Philippines, Papua New Guinea, the Solomon Islands, and Timor-Leste), the Sulu-Sulawesi Seascape serves as a geographic focus of investments, action, conservation, and climate change-related results under the CTI-CFF Regional Plan of Action (RPOA).

Funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), the project focuses on effective management of MPAs and the establishment of a regional MPA network for marine turtles; an Ecosystem Approach to Fisheries Management in selected areas; and climate change adaptation planning. Included in the approach are scientific research to establish connectivity of marine turtle populations, institutional strengthening, and knowledge sharing through regional exchanges, cross visits, and publication and dissemination of lessons learned.

The project is jointly implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Conservation International (CI), with the Ministry of Marine Affairs and Fisheries (MMAF) of Indonesia; the Ministry of Science, Technology, and Innovation (MOSTI), the Department of Fisheries Sabah (DOFS), and Sabah Parks in Malaysia; and the Department of Environment and Natural Resources-Biodiversity Management Bureau (DENR-BMB) and the Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR) in the Philippines.

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