



Marine Turtle Protected Area Network in the Sulu-Sulawesi Seascape

SUGUD ISLANDS MARINE CONSERVATION AREA

At a Glance

The Sugud Islands Marine Conservation Area (SIMCA) is the first privately managed marine conservation area in Sabah, Malaysia. Measuring 46,317 hectares (463.17 square kilometers), the area includes the three islands of Lankayan, Billean, and Tegapil and their surrounding waters, shallow coastal reefs, seagrass beds, and sandy bottom areas in the Sulu-Sulawesi Sea.



Reef Guardian

SIMCA is located approximately 80 kilometers from the mainland of Sandakan, around two hours away by speedboat. It is also about 40 kilometers from Turtle Islands Park.

SIMCA is home to at least 500 species of fishes and two species of marine turtles: the green (*Chelonia mydas*) and the smaller hawksbill (*Eretmochelys imbricata*) turtles. There are also 26 species of seagrass and algae, seven species of giant clam (*Tridacna* sp.), and countless other marine life. The islands are built over shallow, rocky shoals from coral shingles from the surrounding reef on the fringes. They are covered with a variety of plant life, which includes screw pine *Pandanus*, the yellow-flowered *Sophora*, and the furry silver-leafed *Tournefortia*.



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.

Legislation

Turtles are protected under the Fisheries Act 1985 and the Fisheries Regulations 1999 (Control of Endangered Species of Fish) for Peninsular Malaysia and the Federal Territories of Labuan, and Wildlife Protection Ordinance 1998 for Sarawak and the Wildlife Conservation Enactment 1997 for Sabah. Under the enforced enactment, anyone caught in possession of a turtle is punishable under Section 41(4)(a) of the same Enactment, which provides for a fine of not less than MYR 50,000 and not more than MYR 250,000, and with imprisonment of not less than a year and not more than five years.



Sugud Islands Marine Research Centre located on Billean Island

Conservation History

SIMCA is the first conservation area in Sabah developed under Section 21 of the Wildlife Conservation Enactment 1997. SIMCA was gazetted on 3 December 2001 as a Category II Conservation Area under The International Union for Conservation of Nature (IUCN) Protected Area Management Category.

In 2003, the Sabah Wildlife Department (SWD), a department under the Ministry of Tourism, Culture, and Environment Sabah leased SIMCA to Reef Guardian, a private non-profit organization. The lease agreement runs for 30 years, with an optional 10-year extension. Reef Guardian Sdn Bhd was established with a paid up capital of MYR 500,000 (the authorized share capital). In addition, MYR 200,000 (about US\$63,500) contributed in the form of in-kind mutual use/support that includes office, quarters, utilities by Lankayan Island Dive Resort (LIDR), the parent organization of Reef Guardian.

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Statistics

- Average annual nesting: **415 per year over 16 years**
- Maximum number of recorded nestings: **854 in 2013**
- Average hatchlings released: **32,000 per year over 16 years**
- Average number of tourists: **3,000 per year**
- Average revenue collected: **MYR 250,000 per year**, which goes into park management



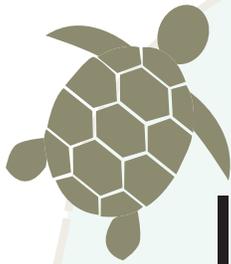
Conservation Importance

As SIMCA's islands are unpopulated and remote, they are vulnerable to threats of illegal fishing and turtle egg poaching. The LIDR in Lankayan Island, with an area of only 0.05 km², is the lone structure in the otherwise uninhabited SIMCA islands. Thus, the successful government-private partnership between SWD and Reef Guardian has given SIMCA a new lease on life.

These collaborative efforts have reduced cases of encroachment by fishermen into protected areas and no-take zones. Additionally, the long-term monitoring of marine conservation activities has shown an increase in the number and diversity of fish species, a wide range of coral cover, and more marine turtles landing and nesting.

SWD trains and certifies Reef Guardian staff as honorary wildlife wardens. The main duties of a warden are to monitor and enforce regulations, promote best practices for marine and environmental conservation, and marine protected area (MPA) enforcement. It has been observed that investments in establishing the surveillance system, monitoring the reserve, enforcing regulations, training personnel, and undertaking conservation and outreach programs have had positive results in SIMCA.

The Marine Turtle Protected Area Network (MTPAN)



In 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.



Regional Importance

The establishment of SIMCA is a successful effort that can be replicated across the region, especially for isolated MPAs. SIMCA management has been working for more than 10 years, and is an example of how ecotourism (conservation and tourism) can be effectively synergized. To date, many other MPAs have sent their staff to SIMCA for field training and experience, and for data exchange. Some elements of SIMCA's formula for success that are worth replicating are the following:

1. **Security enforcement.** Reef Guardian has its own sea and beach patrols to enforce the no-take policy. Sea patrols are conducted in collaboration with enforcement agencies such as the Malaysian Maritime Enforcement Agency (MMEA), the Police Field Force (PFF), marine police, and SWD. In addition, the Eastern Sabah Security Command (ESSCOM) and the Royal Malaysian Navy conduct security patrols.
2. **Continuous surveillance.** The radar tracking system on Lankayan Island functions 24/7 to monitor fishing boat traffic within SIMCA. The MMEA radar system on Tegaipil Island provides surveillance for security purposes, tracking all boat traffic in and out of Sabah and neighboring Philippine waters.
3. **Authority support.** SWD continuously supports and trains SIMCA staff as honorary wildlife wardens, and gives them the authority to enforce laws within SIMCA boundaries.
4. **Awareness/marine education.** The wardens are not armed; instead, they have been conducting a fisher interpretive program to educate apprehended fishermen since 2008. Activities to educate local youth and students are also conducted from time to time.
5. **Standard operating procedures (SOP).** SIMCA operates based on clear SOPs. The Five-Year Action Plan (2017-2021) and the Reef Guardian Enforcement Guidelines are the current SOPs for systematic and goal-oriented management.
6. **Environmental control.** SIMCA management has taken responsibility for minimizing environmental impact and waste management to avoid spillage in the ocean.

Management Aspects

SIMCA's private management approach includes sustainable financing through tourism; the separation of diver resort management and conservation management by two distinct bodies; the channeling back of operating resources directly into conservation; collaboration with government, universities, and private agencies; and engagement of local communities and fishermen in marine conservation activities.

The following are highlights of Reef Guardian and SWD turtle management practices in SIMCA.

Immediate release of hatchlings

The baby turtles are immediately released into the sea after emergence from the nests, even if this occurs during the day. This is because the baby turtle goes through a hyperactive stage known as a "frenzy period." This critical period is believed to enable the hatchling to swim rapidly across the shallow, predator-infested coral reef area.

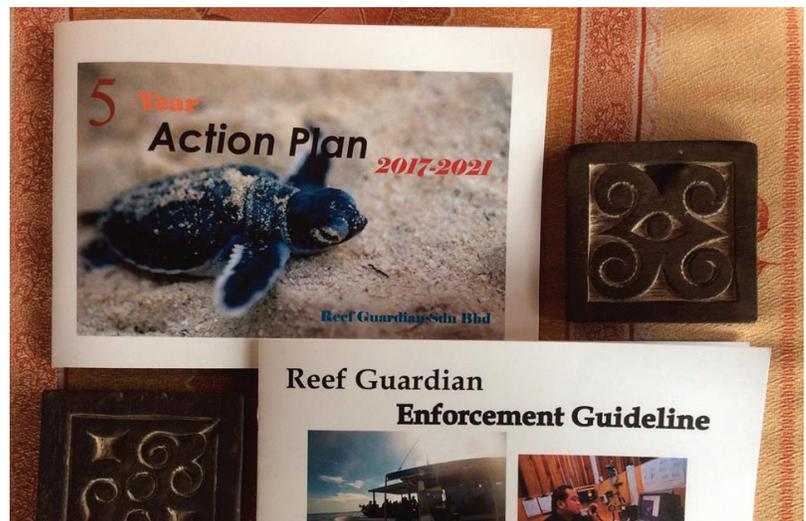


Training

Continuous training is conducted by SWD to enhance the capabilities of the honorary wildlife wardens and enforcement officers. This includes training in marine turtle crime investigation and prosecution, and even mock trials to better prepare the trainees to handle crimes against marine turtles.

Marine turtle conservation

Management is based on a Five-Year Action Plan. Comprehensive monitoring allows for an increase in nesting activities, maximizes hatching rates, and promotes sea turtle conservation awareness among SIMCA visitors. Daily beach patrols are conducted, especially at night, when nesting activities are at their height. Turtle-watching is allowed only when requested by visitors. Fundraising efforts help maintain conservation work, such as through an Adopt-A-Nest program implemented in 2012.



SIMCA enforcement

This is considered the most vital component of protection in the area. Reef Guardian formed its enforcement team in 2005 to stop the intrusion of illegal fishers in SIMCA. Honorary wildlife wardens are empowered to arrest violators; each one has a warrant card and a vest, to be utilized when performing duties. Enforcement briefing is also conducted regularly to enhance and maintain the skills and coordination of the team when performing tasks.

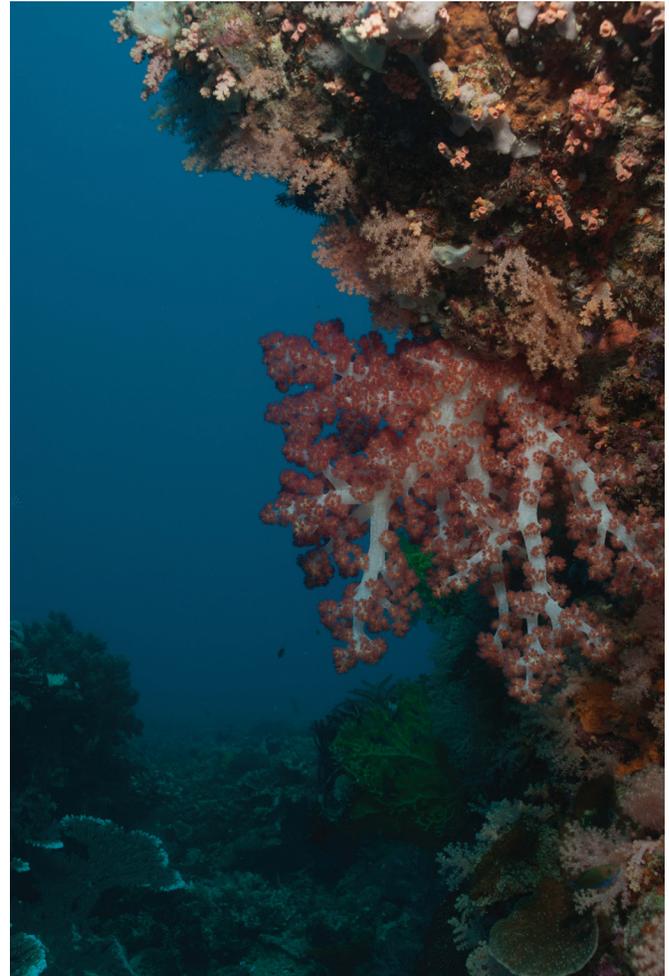
Prospects for Conservation Through Ecotourism

Reef Guardian operations are partially funded by a conservation fee of MYR 25 per visitor per night, levied on guests of LIDR. A maximum of 60 visitors can be accommodated in LIDR's 23 wooden chalets. The Billean-Lankayan Resort is an extension of LIDR, but construction has not been completed. Both resorts contribute MYR 50,000 each annually, as lease payment.

Thus, conservation fees generate approximately MYR 250,000 annually, which comprises 50 percent of the reserve's total operational costs. The remaining costs are met entirely by grants, resort lease fees, and the director's fund. The resorts also provide in-kind support for Reef Guardian, such as staff housing, a training center, and office and island utilities.

Occasionally, SIMCA also receives funds and grants from international nongovernment organizations such as the World Wide Fund for Nature (WWF) and Conservation International Philippines, as well as from the Sabah state government and the Ministry of Science Technology Innovation Malaysia (MOSTI).

At the SIMCA office, visitors can watch videos and see photographs that document the time, effort, and energy invested by Reef Guardian in protecting marine life in the area.



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References

Mr. Mohd Soffian Abu Bakar, Senior Wildlife Officer, Sabah Wildlife Department and Dr. Achier Chung Fung Chen. PhD, Lead Marine Biologist, Reef Guardian Sdn. Bhd

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Photos

Courtesy of Reef Guardian, unless otherwise specified

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.

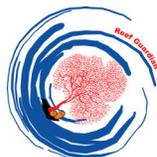
The project is jointly implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Conservation International (CI), with the Ministry of Marine Affairs and Fisheries (MMAF) of Indonesia; the Ministry of Science, Technology, and Innovation (MOSTI), the Department of Fisheries 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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Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

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