

Location



Introduction

The Republic of the Philippines is an archipelago, bordered to the north and west by the South China Sea, to the southwest by the Sulu Sea, to the south by the Celebes Sea, and to the east by the Philippine Sea. The country shares maritime borders with Indonesia, China, Japan, Palau, Malaysia, Vietnam and Taiwan.

The country's tropical marine climate makes it hot and humid for much of the year. During the June-September rainy season typhoons are common. From October to February northeastern monsoons bring cold winds from the north, and from March to May the country experiences very hot summer weather.

The Philippines and China both claim sovereignty over Scarborough Reef. China, Malaysia, Vietnam and the Philippines claim various parts of the Spratly Islands. The country also maintains a dormant claim on Malaysia's Sabah State in northern Borneo. There are ongoing maritime delimitation negotiations between the Philippines and Palau.

Regional Seas and Biogeography

South China Sea (northwest)
Sulu Sea (southwest)
Celebes Sea (south)
Philippine Sea (east)
Pacific Ocean (north)

LMEs:

- Bay of Bengal
- Gulf of Thailand
- South China Sea.

Habitats

The country's approximately 36,280 km of coastline largely consists of rugged, irregular shores with natural harbours, and some rocky and white sand beaches.

- *Corals* occur along much of the Philippine coastline, including a number of large coral reefs and a few scattered cold water coral areas.
- *Mangroves* are found along many coastal areas of the country.
- *Seagrass beds* are widespread in nearshore areas along the Philippine coast.
- *Tidal flats* are found throughout the Philippines.

Biodiversity Hotspots

The Philippines hosts large numbers of biodiversity hotspots. The following information gives an overview of some of the sites which host significant marine wildlife.

→ Ramsar sites

Puerto Princesa Subterranean River National Park (also an ASEAN Heritage Park, a UNESCO Biosphere Reserve, and World Heritage Site) is located on the island of Palawan. The site consists of a range of ecosystems including shoreline and mangrove forest. The park hosts approximately 233 wildlife species including the Hawksbill Turtle (CR), Green Turtle (EN) and Nordmann's Greenshank (EN), as well as 15 endemic avian species.

Tubbataha Reefs Natural Park (also a National Marine Park and UNESCO World Heritage Site) is located in the centre of the Sulu Sea, and consists of a wetland with near pristine coral reefs hosting approximately 359 coral species, 13 species of shark, 13 species of cetacean, and 100 species of birds including breeding and feeding Christmas Island Frigatebird (CR). At least 28,000 individuals of seven breeding seabird species were recorded

in 2021. Hawksbill Turtle (CR) and Green Turtle (EN) forage here but only Green Turtles are known to nest.

Negros Occidental Coastal Wetlands Conservation Area covers 110 km of coastline on the island of Negros, hosting Hawksbill (CR), Green (EN), and Olive Ridley (VU), Turtles, Irrawaddy River Dolphin (VU), Great Knot (EN), Far Eastern Curlew (EN), Spotted Greenshank (EN) and Philippine Duck (VU).

Olango Island Wildlife Sanctuary (also an IBA and MPA) is a low-lying island with intertidal sandflats, mangroves, seagrass beds, coral reefs and islets. The sanctuary is one of the most important areas in the country for migratory waterbirds, providing wintering, roosting and feeding areas, with over 10,000 shorebirds recorded at one time and total numbers approaching 50,000. Of particular note are the concentrations of Far Eastern Curlew (EN), Chinese Egret (VU) and Philippine Duck (VU).

Las Pinas-Paranaque Critical Habitat and Ecotourism Area is a coastal wetland in Manila Bay with two interconnected mangrove covered islands, shallow lagoons and coastline. At least 5,000 migratory and resident birds have been recorded here including Chinese Egret (VU), and Philippine Duck (VU).

Sasmuan Pampanga Coastal Wetlands are located in Manila Bay on the island of Luzon. The area includes mudflats, mangroves and riverine habitat serving as important stopover points for migratory birds, with over 50,000 individuals counted in 2020. Species of special concern include Spotted Greenshank (EN), Black-faced Spoonbill (EN) and Far Eastern Curlew (EN).

→ **National Parks, Marine Reserves, Protected Areas**

Apo Reef Marine National Park is an atoll reef complex which includes Apo Island and the northern and southern coral reef complex around Cayos del Bajo and Binangaan Islet. The park's fringing reefs, mangroves and sandy beaches provide habitat for seabirds and nesting Hawksbill (CR) and Green (EN) Turtles.

El Nido Marine Reserve (also an IBA) hosts large numbers of forest birds within its inland areas, and Green (EN), Hawksbill (CR), and Olive Ridley (VU) Turtles, dolphins and porpoise in its waters.

Turtle Islands Heritage Protected Area (shared with Malaysia) in Tawi-Tawi hosts nesting Green (EN), Hawksbill (CR) and Leatherback (VU) Turtles as well as foraging herons and shorebirds. Dugong (VU) are occasionally recorded

→ **IBAs**

Batanes and Babuyan Island Groups host birds migrating along the East Asian-Australasian Flyway, as well as foraging Green (EN), Hawksbill (CR) and Olive Ridley (VU) Turtles.

Buguey Wetlands on the north coast of Luzon, a complex of coastal lagoons, freshwater, brackish and saline marshes, mangrove swamps and intertidal mudflats is an important staging and wintering area for migratory ducks and shorebirds with 3-5,000 ducks including the Philippine Duck (VU), 3,000 waterfowl and 1,000 shorebirds regularly recorded.

Calituban and Tahong-tahong Islands in the Camotes Sea off the north coast of Bohol consist of intertidal mudflats, tidal lagoons and mangroves hosting large numbers of Chinese Egret (VU), as well as other waterbirds.

Lalaguna Marsh near the southernmost tip of Lamon Bay, Quezon Province, is largely freshwater, with some connection to the bay, hosting breeding and wintering waterfowl including Philippine Duck (VU).

Mactan, Kalawisan and Cansaga Bays is a complex of shallow bays and channels, intertidal mudflats and sandflats, mangrove swamps, salt pans and coral reefs. The site is one of the most important staging areas for migratory shorebirds in the Visayas with 4,000 or more birds of 23 species recorded. A variety of herons and egrets, including the Chinese Egret (VU) and ducks are also regularly sighted.

Manila Bay is a large enclosed sea bay with intertidal mudflats, sand flats and some mangroves. The bay hosts upwards of 32,000 shorebirds during migration and winter.

Pagbilao and Tayabas Bay, which includes extensive intertidal mudflats, sandflats, pockets of mangroves and offshore coral reefs, is an important staging area for migratory herons, egrets and shorebirds. Chinese Egret (VU) and Philippine Duck (VU) also occur in large numbers.

Polillo Islands, located of the eastern coast of Luzon, consists of 24 islands and islets which host Philippine Duck (VU) in large numbers, feeding populations of seabirds, and migratory shorebirds. Dugong (VU) are found in nearshore waters.

Ragay Gulf, in southeastern Luzon, is a protected gulf and estuary which hosts up to 5,000 herons and shorebirds during migration, as well as significant numbers of Chinese Egret (VU).

→ IMMAs

Malampaya Sound in Palawan hosts Irrawaddy Dolphin (EN) in the inner area of the sound, as well as Indo-Pacific Bottlenose Dolphins (*Tursiops aduncus*).

Iloilo and Guimaras Straits hosts Irrawaddy Dolphin (EN), Dugong (VU) as well as six other cetacean species.

Bohol Sea hosts Sperm Whale (VU), Blue Whale (EN) and thirteen other cetacean species.

Babuyan Marine Corridor hosts Sperm Whale (VU) and 12 other cetacean species.

Tanon Strait hosts at least ten cetacean species.

→ Marine Protected Areas

More than 280 MPAs are listed under the National Integrated Protected Areas System (NIPAS), however, many consist of only a few metres of coastline extending to an equally limited area offshore. Larger MPAs of 600km or more do exist. Most, including the larger MPAs, allow resource use, such as fishing.

At risk Wildlife

In this section, some individual wildlife species are mentioned followed by a letter in parentheses. These are species included in the IUCN Red List of Threatened Species within the top three categories of risk - Vulnerable to extinction (VU), Endangered (EN) or Critically Endangered (CR). A more complete list of IUCN listed species is found in Appendix 1.

→ At risk birds

The Philippines, situated on the East Asia-Australasian Flyway, hosts large numbers of wintering and migratory waterbirds each year. In particular, Manila Bay's shallow waters, intertidal flats and estuaries provide resting and feeding areas for waders and shorebirds, with more than 15,000 birds.

→ At risk reptiles

Five species of sea turtle are found in Philippine waters. Loggerhead Turtles (VU) are found in Quezon and Bicol regions, with rare sightings in Manila Bay. Green Turtles (EN) are found throughout the country, with major nesting sites in the Turtle Islands and Tawi-tawi. Hawksbill Turtles (CR) are also common throughout the country, with nesting sites in Ilocos, Bataan, Zambales, Catanduanes, Sorsogon, Camarines Sur, Palawan, Antiques, Negros, Sarangani and Zamboanga. Leatherbacks (VU) have been recorded nesting in Albay in the past, and are sighted in Palawan, Cebu, Davao and Sorogon. Olive Ridley (VU) nest mainly along the western coast between Luzon and Palawan.

Both fresh and saltwater crocodiles may be found in nearshore waters and a number of species of sea snake are found in Philippine waters.

→ At risk mammals

At least 25 species of marine mammal are found in Philippine waters. Dugong (VU) generally inhabit seagrass beds in the warm, shallow to medium deep, coastal waters of Palawan, southern Mindanao and northeast Luzon. Irrawaddy Dolphins (E) are most often found in nearshore northern Palawan in close proximity to freshwater outlets such as rivers and deltas.

The southern Tanon Strait, the waters off northern Luzon, the Sulu Sea and Bohol Sea regularly host large concentrations of cetaceans.

The Asian Small-clawed Otter (VU), while not a marine mammal, forages in nearshore and estuarine areas.

Past experience with oil spill and potential risks

There have been a number of spills in Philippine waters. The *Solar 1* incident in 2006 caused significant damage in Guimares and two spills involving the *MV Princess of the Orient* (1998) and the *MV Princess of the Stars* (2008) affected the Visayas Islands. No organised wildlife response was initiated in these cases.

In 2013, there was a 500,000 liter diesel spill in Cavite, which may have come from a submerged pipeline owned by Petron or from the *M/T Makisig*. Only impacts on fish and shellfish are noted in reports.

In 2020, 250,000 liters of bunker fuel spilled from a power-generating barge. No wildlife impact was reported.

The Luzon Strait, South China Sea, Sulu Sea and Philippine Sea all host major shipping routes near the Philippine coast. Oil terminals are present on Mindanao and in the Visayas. Domestic oil tanker routes and terminals are found throughout much of the interior marine waterways of the country.

International and Regional Treaties and Agreements

→ Oil spill and HNS Response

- CLC Convention 69
- CLC Protocol 76
- CLC Protocol 92
- FUND Protocol 76
- FUND Protocol 92
- FUND Protocol 2003
- LLMC Convention 76
- LLMC Protocol 96
- OPRC Convention 90
- HNS Convention 96
- HNS PROT 2010
- OPRC_HNS 2000
- BUNKERS CONVENTION 01

→ Marine Biodiversity Protection

- Indian Ocean South East Asia (IOSEA) Marine Turtle MoU
- Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)
- Association of South East Asian Nations-Oil Spill Response Action Plan (ASEAN-OSRAP) and MoU on ASEAN Cooperation Mechanism on Joint Oil Spill Preparedness and Response (ASEAN MoU)
- Memorandum of Understanding between the Republic of the Philippines and the Kingdom of Thailand on Joint Oil Spill Response
- Global Initiative South East Asia (GISEA)
- MoU on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia (CMS IOSEA)
- Coordinating Body on the Seas of East Asia (COBSEA)

Oil Spill Response and HNS Spill Response

→ National Contingency Plan?

The National Oil Spill Contingency Plan (NOSCOP), approved in 2019, integrates the Oil Spill Contingency Plans of the Philippines Coast Guard (PCG) Districts/Stations/Substations/Facilities and Oil Spill Response Organisations (OSROs). It mandates a National Operation Center for Oil Pollution (NOCOP) to serve as focal point and coordinating unit of the PCG, as well as point of contact for similar operations centers in other ASEAN member states. It also requires a variety of entities, including oil and gas industry facilities, vessels, and a variety of offshore operations to have their own contingency plans.

→ Role of Competent National Authorities

The PCG is the responsible agency for preventing and controlling pollution in territorial waters. Its Marine Environment Protection Command (MEPCOM) unit is the point of contact for response operations and oversees response within the NOSCOP.

Local Government Units (LGUs) have jurisdiction over smaller incidents within their area and may assist the MEPCOM during larger responses. Civil organisations and NGOs may be used to augment response as appropriate.

Other agencies designated under the National Disaster Response Plan may be called in as needed.

Oiled Wildlife Preparedness and Response

→ Formal guidelines?

While the text of the NOSCOP mentions wildlife response, these actions may only be undertaken after clean-up operations have terminated. The Department of Environment and Natural Resources (DENR), the Environmental Unit leader, is listed as the lead agency for Animal Wildlife Response.

→ **Response objectives and strategy**

Preventing wildlife from becoming oiled is the primary strategy, with live casualty treatment considered a last resort. The NOSCOP document does cover some aspects of wildlife response.

→ **Euthanasia or rehabilitation?**

Rehabilitation is mentioned within the NOSCOP, including discussion of management of residual animals after spill response demobilisation. There is, however, limited capacity to respond to marine wildlife in the country, thus international assistance would be required for any large-scale response.

→ **Impact assessment**

Environmental protection personnel are deployed under the NOSCOP to evaluate impact. It is expected that the DENR Biodiversity Management Bureau (DENR-BMB) would be involved. On demobilisation of any wildlife response, all casualties from the incident must be accounted for.

DENR-BMB is charged with conservation and protection of wildlife, including threatened wildlife including sea turtles, Dugong (VU) and other marine and freshwater species, and would likely be involved in impact assessment.

In addition, marine biology experts from academia are listed within the management team. An environmental damage report is prepared by the Planning Section Chief.

Details for assessing the extent of wildlife casualties are included in the plan.

→ **Notification and early response**

MEPCOM would notify DENR-BMB, which would determine whether, and how to, initiate any wildlife response.

→ **Wildlife responders**

There are few organisations with capacity for responding to wildlife, none with experience specific to oiled wildlife.

The Large Marine Vertebrates Research Institute (LAMAVE) works in sea turtle research and conservation. LAMAVE also responds to stranded marine mammals. Under MoUs with government agencies, LAMAVE is working on increasing the capacity to respond to sea turtle strandings throughout the country, providing training and workshops, and response kits, to local NGOs and resorts for initial response.

In the Visayas, the Bohol Rescue Unit for Marine Mammals and Wildlife (BRUMW) has some capacity to respond to sea turtles, and the Cebu Marine Mammal Rescue Network (CEMARNET) responds to marine mammals.

Wildlife In Need (WIN), operating in Subic Bay, has some capacity to respond to marine wildlife in that area. Marine Wildlife Watch of the Philippines is involved in advocacy, education and awareness, and provides some training.

→ **Cooperation between stakeholders**

LAMAVE works with local and national government agencies on wildlife issues, and with private resorts, BRUMW and CEMARNET on strandings.

Most of the marine wildlife response and education/advocacy groups work closely with relevant government agencies.

The Philippines also participates in the Sulu-Sulawesi Sea Oil Spill Response Network (SSRN), SOP for Joint Oil Spill Combat in the Straits of Malacca and Singapore (SOMS), and Joint Statement on Partnership in Oil Spill Response Preparedness in the Gulf of Thailand.

→ **Permanent facilities**

BRUMW has a small facility for marine wildlife.

LAMAVE is scheduled to open three turtle rescue centres under local management, which will operate in collaboration with the LAMAVE. The organisation can also provide kits for turtle response in remote areas.

The DENR-BMB maintains a number of Wildlife Rescue Centers (WRCs) around the country, however most are inland and concentrate on terrestrial wildlife seized from trade.

→ **Current processes**

The NOSCOP calls for annual drills and exercises, both tabletop and active.

There are efforts underway to reopen a number of provincial stranding network units for marine wildlife.

Documentation and references

ITOPF Country Profile 2010: <https://www.itopf.org/knowledge-resources/countries-territories-regions/philippines/>
Sea Alarm Country Profile: <https://www.sea-alarm.org/publications/country-wildlife-response-profiles>
GISEA Country Profile: <https://www.gisea.org/regional-information/philippines>
Manila bay Oil Spill Contingency Plan: <http://pemsea.org/sites/default/files/manilabay-oilspill-plan.pdf>
National Oil Spill Contingency Plan (NOSCOP): https://coastguard.gov.ph/images/2019_Files/NOSCOP_Icon/Approved_NOSCOP_OCT_2019.pdf
Geography: <https://www.countryreports.org/country/Philippines/geography.htm>
Climate: <https://weather-and-climate.com/average-monthly-Rainfall-Temperature-Sunshine-in-Philippines>
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IUCN Redlist: <https://www.iucnredlist.org/species>
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Aragones, L. V. 2001. Status and conservation of marine mammals in the Philippines. FAO. Agris report: <https://agris.fao.org/agris-search/search.do?recordID=PH2003000587>
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Appendix 1

➔ **At risk birds**

Common name / Latin name / IUCN Red List Category (CR,EN,VU) / Resident-Migratory (season) / Breeding-Nesting-Pupping (season)

Common Pochard / *Aythya ferina* / VU / Migratory (winter) / Non-breeding

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Philippine Duck / *Anas luzonica* / VU / Resident / Possibly year round
Sarus Crane / *Gus antigone* / VU / Possibly extinct in this country /
Black-faced Spoonbill / *Platalea minor* / EN / Migratory (winter) / Non-breeding
Chinese Egret / *Egretta eulophotes* / VU / Migratory (winter) / Non-breeding
Christmas Island Frigatebird / *Fregata andrewsi* / CR / Migratory (winter) / Non-breeding
Far Eastern Curlew / *Numenius madagascariensis* / EN / Migratory (winter) / Non-breeding
Great Knot / *Calidris tenuirostris* / EN / Migratory (winter) / Non-breeding
Spotted Greenshank / *Tringa guttifer* / EN / Migratory (winter) / Non-breeding
Aleutian Tern / *Onychoprion aleuticus* / VU / Migratory (winter) / Non-breeding
Chinese Crested Tern / *Thalasseus bernsteini* / CR / Migratory (winter) / Non-breeding
Streaked Reed-warbler / *Acrocephalus sorghophilus* / EN / Migratory (Sept-June) / Non-breeding

➔ At risk reptiles

Common name / Latin name / IUCN Red List Category (CR,EN,VU) / Resident-Migratory (season) / Breeding-Nesting-Pupping (season)

Leatherback / *Dermochelys coriacea* / VU / Migratory / Nesting (spring/summer)
Loggerhead Turtle / *Caretta caretta* / VU / Migratory / nesting (spring/summer)
Green Turtle / *Chelonia mydas* / EN / Migratory / Nesting (spring/summer)
Olive Ridley / *Lepidochelys olivacea* / VU / Migratory / Nesting (spring/summer)
Hawksbill Turtle / *Eretmochelys imbricata* / CR / Migratory / Nesting (spring/summer)

➔ At risk mammals

Common name / Latin name / IUCN Red List Category (CR,EN,VU) / Resident-Migratory (season) / Breeding-Nesting-Pupping (season)

Dugong / *Dugong dugon* / VU / Resident / Breeding/calving (likely year round)
Irrawaddy Dolphin / *Orcaella brevirostris* / EN / Resident / Breeding/calving (likely year round)
Sperm Whale / *Physeter macrocephalus* / VU / Migratory (variable) / Non-calving
Fin Whale / *Balaenoptera physalus* / VU / Migratory (occasional) / Rare sightings
Blue Whale / *Balaenoptera musculus* / EN / Migratory (variable) / Rare sightings
Asian Small-clawed Otter / *Aonyx cinereus* / VU / Resident (estuarine areas) / Breeding/pupping (likely year round)