



INDONESIAN SEA TURTLE CONSERVATION

Background

Indonesia has more than 550 species of corals, more than a quarter of the world's freshwater and marine fish species, and contains more coral reefs than any other country (85,000 km²). It is the country where the highest numbers of fish and coral species have been recorded, and in terms of marine habitat, there are more than 17,000 islands, and 81,000 km of coastline. Indonesia also contains extensive and unique shallow shelf and seagrass beds and has the largest stands of intact mangroves remaining in SE Asia.

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Marine Turtles in Indonesia

Six out of seven of the world's species of turtles are found in Indonesia. Because of the large numbers of islands, extensive coastline, sea grass and coral reefs, Indonesia provides important nesting and foraging grounds to many species and is home to the largest rookery for Green Turtles recorded in SouthEast Asia, in the Berau Islands, East Kalimantan, and is home to the largest nesting rookery for Leatherback turtles along the Northern Coast of Papua. Indonesia also represents important migration routes, lying as it does at the cross-roads of the Pacific and Indian Oceans.

Sea turtles are designated worldwide as threatened and endangered species, in part due to their unique life history which makes sea turtle populations vulnerable to several sources of mortality at critical stages in their life. Many species of sea turtle require decades to reach maturity, they come ashore onto beaches to lay their eggs, and they have a migratory nature, where their migrations may extend across national jurisdictions and the high seas. Turtles are therefore vulnerable to accidental interactions with fishing gears, to having their nesting beaches eroded or washed away, and to the harvesting of meat and eggs. Based on early monitoring data, it is estimated that many sea turtle species in Indonesia are reduced to up to 90% of former levels. The Government of Indonesia has recognized the urgent need for conservation measure to protect and restore the sea turtle populations in Indonesian waters, and has put in place a number of 'in-situ' and 'ex-situ' conservation measures.

List of Turtles Recorded in Indonesia:

- Green Turtle
(*Chelonia mydas*)
- Hawksbill Turtle
(*Eretmochelys imbricata*)
- Loggerhead Turtle
(*Caretta caretta*)
- Leatherback Turtle
(*Dermochelys coriaca*)
- Olive Ridley
(*Lepidochelys olivacea*)
- Flatback Turtle
(*Natator depressus*)



Achievements

In-situ conservation

Following the World Parks Congress in Bali in 1982 the Indonesian Government has worked to build on the existing designated marine areas and create a comprehensive national system of marine protected areas. Key Steps in this effort include:

1984: PHPA Marine Conservation Data Atlas

- Surveys and catalogue of location of important marine habitats and marine species for Indonesia including an inventory of important marine species such as marine turtles.
- Foundation for National Marine Conservation Strategy and expansion of existing marine protected area system (WWF/IUCN/PHPA).

1993: Biodiversity Action Plan for Indonesia

- Appendix 8: 49 Priority Marine Conservation Areas, 6 of the top 10 sites identified as high conservation value for turtle nesting.
- Set goal of 20 million hectares for area of Marine Protected Areas including all major marine habitats and sites of high conservation value.
- Identify the need to enforce legislation to protect important marine species such as dugongs, marine turtles, and whales.

Presently, there are 36 Designated Marine Conservation Areas in Indonesia covering about 4,700,000 ha of total area:

- 6 Marine National Park
- 5 Marine Strict Nature Reserves
- 19 Marine Nature Recreation Park
- 6 Marine Wildlife Sanctuary

In addition, there are 8 extensions of existing terrestrial protected areas, covering about 550,000 ha:

- 3 extension of National Park
- 1 extension of Nature Recreation Park
- 4 extension of Strict Nature Reserves

Example of Protected Areas that Contain Important Turtle Sites:

Pulau Sangalaki and Pulau Sammana in the Derawan Archipelago of Berau Regency in East Kalimantan: The Derawan archipelago is home to the largest nesting rookery of Green Turtles recorded in SE Asia, and are one of a series of important green turtle populations found along the coast of Borneo. Turtles nest all year round in Derawan Islands, with an average of thirty turtles estimated to nest each night on Pulau Sangalaki alone. In April 2001, the local district government (Berau Bupati Decree No.44/2001) also revoked the concessions to collect eggs on Sangalaki, increasing the overall level of protection for the nesting sites in this important area, which formerly only covered Pulau Samama.

Meru Betiri: Meru Betiri National Park in East Java, is a nesting beach for 4 species of turtle; green, olive ridley, leatherback and hawksbill. Park staff at Meru Betiri have been running a monitoring and tagging program for the past seven years, the longest

continuous tagging program in Indonesia. The recent tags were provide by SEAFDEC.

Ex-situ conservation

Successful conservation of migratory marine species such as marine turtles requires not just protection of sites of high biodiversity value but also work to curb the threats to turtles throughout the whole territorial waters. To achieve this, a number of key national policies have been passed, supported by relevant provincial and district legislature.

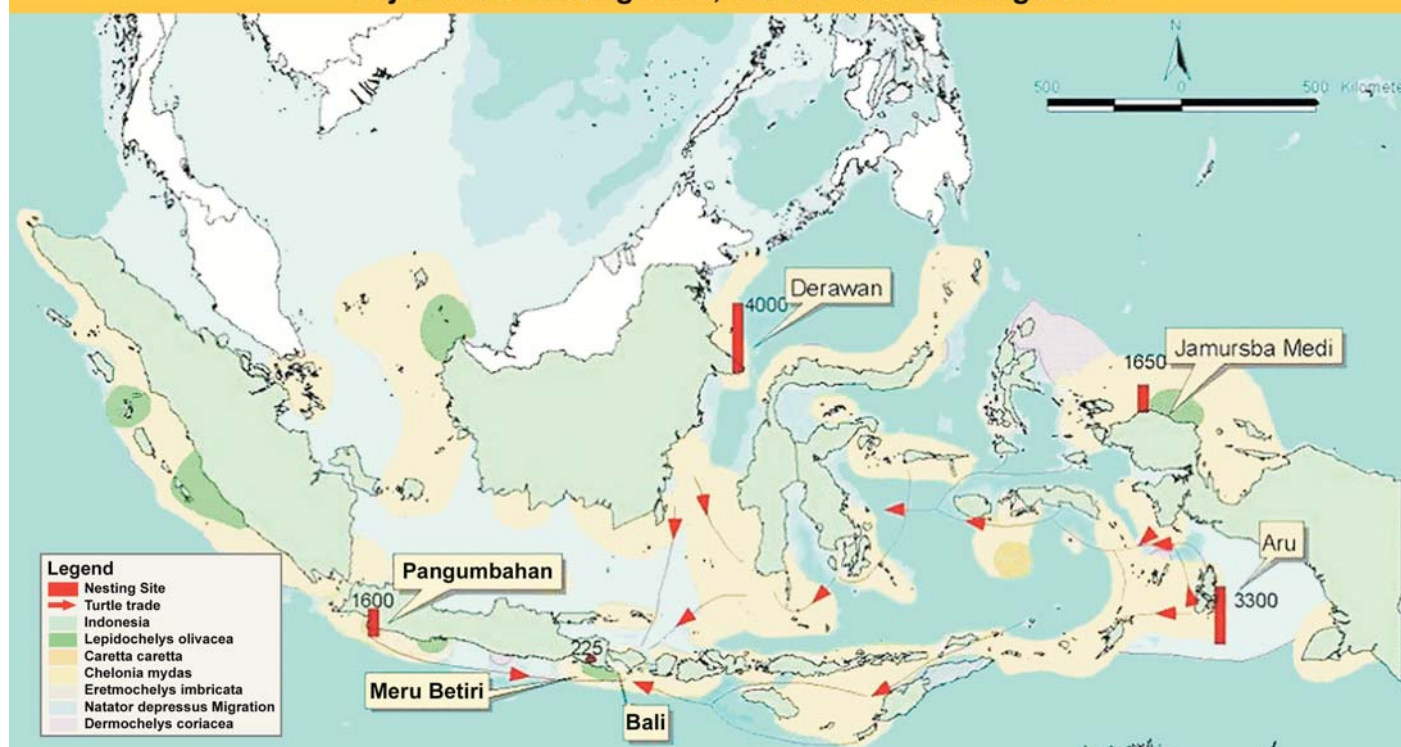
Working with Research Partners:

The Indonesian Government is working with conservation partners, and with science partners, to protect critical sites and better understand the population dynamics of marine turtles in Indonesia.



One very exciting research program involves Scientists from the NOAA (US National Ocean and Atmospheric Administration), working with staff from the Directorate General of Forest Protection and Nature Conservation

Major Turtle Nesting Sites, Trade Issues and Migration

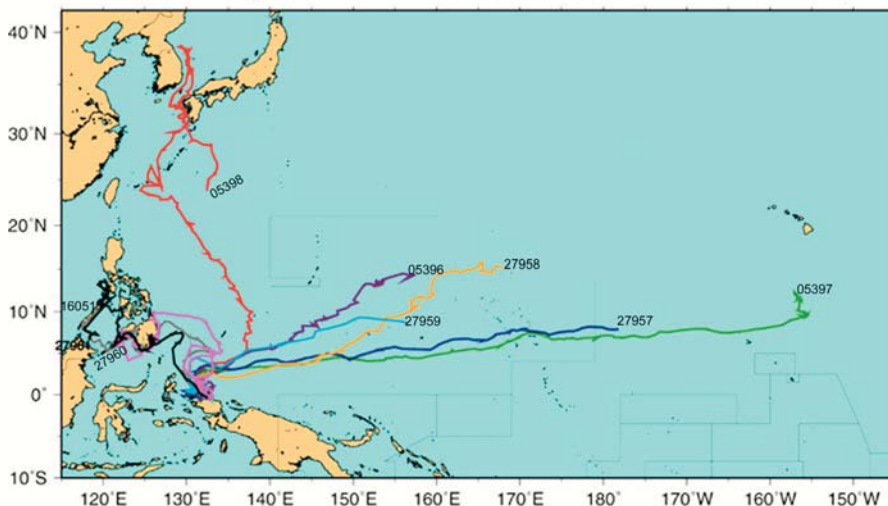


(PHKA), WWF Indonesia, local and Provincial Government, and the Indonesian Science Institute (LIPI), to track the migrations of leatherback turtles after they leave the beach in Papua. The results are showing the great distances traveled, and the number of countries whose waters the leatherback turtles travel through during their migrations. This state of the art research, that include DNA analysis, is helping the Directorate General of PHKA to decide on the most appropriate management and policy options to conserve the Indonesian Leatherback turtles.

Relevant National Decrees

Currently all species of marine turtles are protected from domestic consumption and trade by national law and from international trade by being party to CITES. In addition, action has been taken at the provincial level to tackle areas of particularly high threat such as the demand for turtle meat in Bali. An example of this was the provincial decree or Bali Governor Decree No. 243, passed in 1999 in Bali, revoking the quota for green turtle take in Bali. To help raise awareness and educate Bali residents and Indonesian about the need for turtle conservation, the Indonesian Government and Serangan village community group is also developing a Turtle education center on Serangan Island in Bali, in partnership with the private sector in which WWF Indonesia is providing technical support on this planning process.

2003-2004 post-nesting movement of Leatherback that nested in Jamursba Medi in July 2003



GMT Map created by Denise Parker 01/20/04

Relevant National Decrees		
Presidential Decree No 43	1978	Ratification of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)
Ministerial Decree Agriculture No. 327	1978	Determination of several types of wild animal to be protected (Whales, Dolphins, Crocodiles, Leatherback Turtle)
Ministerial Decree Agriculture No. 716	1980	Determination of several types of wild animal to be protected (Whales, Gray, Olive and Loggerhead Turtles)
Act No. 4	1982	Basic Provision for the Management of the Living Environment
Presidential Decree No. 26	1986	Ratification of ASEAN Agreement on the conservation of Nature and Natural Resources.
Act No. 5	1990	Conservation of Living Natural Resources and their Ecosystem.
Presidential Decree No. 32	1990	Management of Protected Areas
Act No. 5	1994	Ratification of the Convention on Biodiversity.
Government Regulation No.7	1999	Protection of all turtle species including green turtle

A Blueprint for Action to protect Indonesian Sea Turtles



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The following issues and actions are identified as priorities to ensure the conservation and

sustainable use of marine turtles in Indonesia

- The nesting population of Leatherback turtles on the North coast of Papua is the largest in the Pacific. In recognition of it's global importance, the Government of Indonesia pledges to ensure effective protection of the beach and the adjacent shallow water inter-nesting habitats within the next twelve months. The expanded MPA is used as a tool to provide better and effective protection of this species either their nesting habitats and foraging and migration routes.

- The migrations of Leatherbacks turtles from the nesting site in Papua takes them across areas of high seas and into the territorial waters of a number of a number

of countries. Given that protection of the nesting beach alone will not be sufficient to ensure the population persists, The Government of Indonesia calls on relevant countries to engage in bilateral agreements to safe guard the leatherbacks whilst in the waters of other countries.

- Accidental catch and entanglement in fishing gear poses a significant threat to Leatherbacks turtle. The Government of Indonesia calls on fishing nations and the fishing industry to work together to find solutions that ensure healthy, sustainable fisheries without damage to Leatherbacks.

- As a medium term goal, The Government of Indonesia pledges to build on the existing foundation of parks and establish an effective network of protected areas that include sites of high biodiversity value for migratory species such as turtles, egg nesting beaches, foraging grounds.

- The nesting population of green turtles in the Berau Islands off East Kalimantan is the largest in SE Asia and lies close to the unique Kakaban marine lake. Sammama and Sangalaki islands have already been given protection, however

turtles are still threatened by direct take using net in their foraging or mating areas within the Derawan waters and also at four other turtle islands. Therefore, an NGOs partnership (including WWF) is lobbying to expand the existing turtle reserve to cover the wider ecological function of the species and ecosystem in the form of a large-scale multi-purpose MPA hat serves to ensure turtle, biodiversity and fisheries conservation. Furthermore, considering the home range of the species within the Sulu Sulawesi Ecoregion the Government of Indonesia would develop a framework of integrated coastal zone management and will seek to coordinate turtle conservation efforts with adjacent countries that also have important green turtle nesting grounds.

- The consumption of turtle meat and eggs, and the harvesting of turtle for shell, still pose a serious threat, despite the presence of comprehensive legislation. The government of Indonesia will work to ensure take of turtle products only occurs for legitimate traditional or religious purposes and does not exceed sustainable levels or significantly impact the populations.

A Blueprint for Action to protect Indonesian Sea Turtles Summary:

- ☐ Pledge to protect the Pacific's most important remaining nesting site for Leatherback turtles in Papua within twelve months.**
- ☐ Call on governments visited by the Leatherbacks after leaving the nesting beaches in Indonesia, to enter into bilateral agreements focused on protecting the leatherbacks.**
- ☐ Call on fishing nations and the fishing industry to work on finding solutions that benefit both fishermen and turtles by minimizing accidental take and entanglement.**
- ☐ Build a systematic framework for protecting the green turtle nesting population in East Kalimantan and across the region, including transboundary sites.**
- ☐ Reduce the take of turtle products domestically to traditional use alone and to sustainable levels.**

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