



WWF International Corals Initiative

Bismarck Solomon Seas

Geographic location: Indonesia; Papua New Guinea, Solomon Islands (Western Indo-Pacific)

Biodiversity features

The Bismarck Solomon Seas ecoregion is known as the “Western Indo-Pacific cradle of coral biodiversity”. Its seascape stretches from the Birdshead (Doberai) Peninsula of West Papua (also known as Irian Jaya), across the Admiralty and Bismarck archipelagos of Papua New Guinea, to Makira Island of the Solomons. The Bismarck Solomon Seas support a variety of ecosystems that include coastal lowland and swamp forests, mangroves, tidal estuaries, deltas, lagoons, coral reefs, atolls, fringing reefs, and barrier islands forming an ecological mosaic that has created a rich marine biodiversity and high degree of endemism.

It is also a region of complex changes in sea depths, ranging from shallow sheltered reef flats to extremely deep channels that separate neighboring islands. The listing of marine species found within this unique seascape is still not complete, however isolated surveys indicate significant biodiversity features including:

- The longest island-protected lagoon in the world (Marovo Lagoon)
- The highest number of coral species ever recorded at one site (Raja Empat Islands)
- The largest remaining leatherback turtle rookeries in the Indo-Pacific Region on the northern coasts of West Papua, in and around the extremely ecological valuable Cendrawasih Bay
- Rare and unusual fish species such as the frogfish, pygmy seahorse, ghost pipefish, elegant cuttlefish and merlots scorpion fish, in Papua New Guinea
- Major breeding and feeding grounds in Papua New Guinea for sharks such as hammerheads and silver-tips, dugongs, and turtle species such as the hawksbill, green and Olive Ridley which nest the whole year round
- Migration paths for whales

- Tuna aggregation sites
- Extraordinarily dense mangrove colonies in the Solomon Islands, accounting for 43% of the world's mangrove species

The human dimension

Many communities within the Bismarck Solomon ecoregion live close to the sea in dispersed village communities that depend on healthy marine life. There are over 200 cultures and the lives, customs, languages and knowledge are linked inextricably with the ocean and island shores. The lifestyles and livelihood traditions of these people and their institutions are a critical feature of this ‘seascape’, as unique and valuable to future generations as the habitats and species that mark this place as an outstanding feature on the world’s map. In Papua New Guinea and the Solomon Islands, systems of customary tenure, recognized under institutional law, enable resource owners to control and utilize their resources. West Papua, however, follows a more centralized model of conservation and resource management and is currently grappling with issues of decentralization.

Threats

The Bismarck Solomon Seas are still in relatively pristine condition, however threats are increasing due to rapid population growth, expanding commercial interests and decision-making constrained by incomplete information. Events such as climate change and coral bleaching, cyclones and tidal waves have devastating impacts on the state of the region's biodiversity.

These add to the effects of human activities, such as the irrevocable damage caused by destructive fishing practices (cyanide, dynamite, traditional poisons), and inshore fisheries exploited both for commercial and subsistence use. The level of illegal, unregulated and unreported fishing is diminishing stocks. These impacts are exacerbated



by poorly planned coastal developments degrading the coast and inland waters, while ballast water discharges, oil and toxic spills contribute to pollution pressure from offshore.

What WWF is doing

Through its ecoregion conservation programme, WWF is building and strengthening partnerships at the local, ecoregional and international levels. WWF thus hopes to keep the process of conservation planning and implementation at the cutting edge and to build the capacity of all stakeholders. The three main components of our work in the Bismarck Solomon Seas are:

Biological research and monitoring

- In collaboration with local dive operators, mooring lines to protect vulnerable sites from anchor damage in the Ghizo reef system are being installed in the Solomon Islands
- A collation formed with similar minded partners to develop a functional network of marine conservation initiatives along the northern coast of Papua New Guinea
- With partners WWF is assisting to monitor and manage rookeries at Jamursbamedi beach in West Papua, which hosts a large aggregation of leatherback breeding population. This is a significant portion of the breeding populations that remains in the Indo-Pacific Region

Capacity building

- Implementing community-training initiatives, such as the identification of critical spawning aggregation sites in Marovo Lagoon, Solomon Islands
- Facilitating site based conservation work with communities in Madang Lagoon, Papua New Guinea
- Building the skills of Cendrawasih Park managers and local communities in the effective management of marine resources, in West Papua

Sustainable livelihoods

- The development of Vanua Rapita as an ecotourism lodge in the Marovo Lagoon, as an alternative to income from logging, Solomon Islands
- Seaweed farming, marketing dried fish and cooperatives management, as alternatives for community livelihoods, West Papua
- WWF is engaged in discussions with teachers and curriculum coordinators in Papua New Guinea to incorporate conservation, resource management, population and environment, and sustainable vocational training into the education system

The leatherback turtle has been chosen as the symbol of the Bismarck Solomon Seas ecoregion. A species that follows the migratory pattern across this region the leatherback binds together the countries, aspirations and partnerships that WWF hopes will come to represent the future shape of conservation across the ecoregion.

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