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**Marine program in brief**

**Total of area**  
55,220 km<sup>2</sup>

**Geographic Priority**

- Lembeh Strait
- Sangihe-Talaud Islands
- Tangkoko Nature Reserves

**Habitat Types**

Coral reefs and associated ecosystems including sand, seagrass and mangrove habitat

**Ecological findings**

- 50 coral genera recorded
- 624 reef fish species recorded

**WCS Involvement**  
2002

Argentina

Bangladesh

Belize

Fiji

Gabon

**Indonesia**

Kenya

Madagascar

Myanmar

Nicaragua

Papua New  
Guinea

**NORTH SULAWESI SEASCAPE**

The Sulawesi Seascape is one of eleven functional seascapes within the Indonesian part of the delineated Coral Triangle and it encompasses the North Sulawesi coastline up to and including Sangihe and Talaud Island Chains, and as far north as southern tip of Mindanao Island in the Philippines.

In assisting the Government of Indonesia to meet its goal of establishing 10 million hectares of effective Marine Protected Areas (MPAs) by 2010, we have begun to design, implement and improve the effectiveness of management of the network of MPAs in the North Sulawesi Seascape, Indonesia with the aim to improve the delivery of both biodiversity and human livelihood benefits.

This region forms part of the diverse Sulu-Sulawesi Sea Marine Ecoregion, which is situated in the heart of the Coral Triangle and is world-renowned for its coastal and marine biodiversity, including 70 genera of corals and about 2,500 fish species. The project will focus on strengthening the scientific foundation for coral reef ecosystem management decisions, scaling up community-based MPAs to identify shared goals and approaches, linking to other sites that have been proposed or are under discussion for MPA designation, and building the technical and professional capacity for management amongst local and provincial resource managers.

**The Human Dimension**

The project will enhance and build on existing experience in MPA and marine resource management and strengthen the engagement of a range of stakeholders by re-assessing management needs and priorities, community concerns and build a basis for information exchange, coordination, and collaboration.

**Threats**

Various pressures on the region's terrestrial and coastal ecosystems, especially coral reefs, including infrastructure development, agriculture, forestry, and mining, destructive fishing practices, pollution, and over-fishing – compounded by inadequate management systems and global threats, such as ocean acidification and warming and sea level rise – threaten not only biodiversity and ecosystem integrity but also the health and the livelihoods of the coastal communities dependent on them.



North Sulawesi Seascape



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By scaling up MPA network and improving community stewardship of MPAs in the region, the project aims to design a full network of MPAs that explicitly acknowledges MPAs and their connectivity, and the need for regulations management and policies for fisheries in non-MPA areas and the protection landscapes and their watersheds.

## WCS Activities

At WCS our unique approach is to blend community based approaches with quality scientific investigations to deliver conservation outcomes for Indonesian marine conservation. The objectives of work in North Sulawesi are:

- Assess patterns of resource use and conservation management to determine priority areas for conservation management;
- Assess coral reef resilience as response to climate change;
- Promoting improved marine governance and policy (MPA regulations);
- Design of and development of marine protected areas.

## WCS Expertise and Achievements

- Assessed coral reef ecosystem health of the Sulawesi Seascape covering the peninsula of north Sulawesi to the island chain of Sangihe Talaud in the north. Surveys at Blongko, Tangkoko, Lembah and Sangihe Talaud;
- Shown that management in some areas has been effective and improved the health of corals and fish populations, but in some areas management is less successful;
- Collaborated with the Department of Fisheries and district governments and other NGOs on MPA design and planning – process is ongoing to establish Lembah Strait Marine Protected Area;
- Built an Indonesian database on coral reefs, and key marine species to support monitoring of reef sites and adaptive management;
- Raised capacity in field science methods, data management, assessment of management effectiveness and seascape and MPA planning.

## Important Next Steps

- Assess socio-economic needs and perceptions to marine resource use and conservation;
- Develop community co-management and marine protected area networks;
- Build capacity of government and local NGO's in marine resource management;
- Conduct and support marine awareness and education programs;
- Assist communities in developing alternative livelihood projects;

# Establish integrated marine- terrestrial resource protection and management

### Partners

- Ministry of Marine Affairs and Fisheries
- Bitung District Government
- Conservation International
- Local NGOs

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### Mission

The Wildlife Conservation Society's International Conservation program saves wildlife and wild lands by understanding and resolving critical problems that threaten key species and large, wild ecosystems around the world.

### WCS Strategies

- Site-based conservation
- Research
- Training and capacity-building
- New model development
- Informing policy
- Linking zoo-based and field-based conservation



# WCS