

A GLOBALLY IMPORTANT MARINE ECOSYSTEM

Papuan Bird's Head Seascape

The Wayag Islands in NW Raja Ampat.

ABOUT THE BIRD'S HEAD SEASCAPE

The Bird's Head Seascape sits at the epicenter of the so-called "Coral Triangle" region. It is located in northwest Papua, Indonesia, stretching from Teluk Cenderawasih in its eastern reaches to the Raja Ampat archipelago in the west and the FakFak-Kaimana coastline to the south. Covering a combined area of over 180,000 km² and more than 2500 islands and submerged reefs, the Seascape is home to over 1,200 species of coral reef fishes and nearly 600 species of scleractinian hard coral (approximately 75 percent of the world's total)—the highest coral reef biodiversity recorded for an area of this size anywhere in the world.



Map of the Papuan Bird's Head Seascape.

OUTSTANDING BIOLOGICAL IMPORTANCE

Two recent biological surveys highlighted not only the amazing diversity of marine habitats and species in the Seascape, but also how little we know about these underwater life forms. The surveys uncovered as many as 56 new species of fish, coral and mantis shrimp in less than 6 weeks! Perhaps even more stunning for a Seascape of this relatively small size, up to 50 of the new species appear to be endemic to the Bird's Head Seascape—found nowhere else in the world, despite being connected to the surrounding western Pacific.

Research has also shown the Bird's Head Seascape to contain critical habitats for globally-threatened marine species, including the largest leatherback turtle nesting area in the Pacific Ocean, green and

A training session for the local NGO KONPERS and the turtle nest monitoring team on the turtle rookery island of Piai in Raja Ampat.



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A Raja Ampat fisher paddles out to sea. Local communities are a key partner in the Seascope Initiative.

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Cirrhilabrus cenderawasih, a new species of flasher wrasse discovered during the recent Teluk Cenderawasih survey.

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CI staff member preparing to dive on one of the BHS surveys and collect reef status data.

hawksbill turtle rookeries, and migratory cetacean aggregations of sperm and Bryde's whales, orcas and numerous dolphin species. The Seascope also boasts healthy populations of dugongs, estuarine crocodiles, and giant clams, and manta rays. Without question, the Bird's Head Seascope ranks as a global priority for marine conservation, particularly given recent biogeographic analyses that suggest the Coral Triangle region exports and maintains biodiversity of the entire Indo-Pacific marine realm.

The terrestrial biodiversity of the Bird's Head Seascope is also remarkable. Abundant tropical forests in the region host unique birds of paradise, cuscus and tree kangaroos, as well as endemic frogs, snakes and bats, while coastal karst forests in Raja Ampat are home to a host of endemic orchids, palms and other plants. Indeed, the stunning beauty of Raja Ampat's karst islets led the great naturalist Alfred Russell Wallace to proclaim them "one of the most singular and picturesque landscapes I have ever seen."

URGENT THREATS

The Bird's Head Seascope's rich coastal and marine resources make it extremely attractive to fisheries, marine tourism, oil and gas, mining, and forestry interests. Unfortunately, a combination of factors currently tends to favor poorly-controlled exploitation of natural resources at the expense of sustainable economic development and conservation. The Seascope is extensive, the islands and reefs are widely dispersed, and human population density is relatively low. Unregulated access to local resources, and recent policies supporting rapid exploitation of Papua's natural resources and even transmigration of fishers from central and western Indonesia leave many residents feeling powerless and disenfranchised.

Given this situation, the 14 local governments in the Bird's Head Seascope, including the newly-formed Raja Ampat Regency, require strong support to develop effective coastal and marine resource management that conserves biodiversity, sustains fisheries, and maintains marine tourism potential while generating sustained benefits for local communities and for the Seascope as a whole. To achieve this objective the Initiative strongly believes a multiple-use network of ecologically-connected and resilient marine protected areas is required. These must be supported by and embedded in local and national legislation, and co-managed by local communities and local government agencies. Fortunately, there are already several well-established marine protected areas in the Bird's Head Seascope to serve as anchors for this network, including Teluk Cenderawasih National Park, Indonesia's largest marine protected area.

ABOUT THE SEASCOPE INITIATIVE

The Seascope Initiative, which is framed in the Bird's Head Seascope but focused particularly on its "crown jewel" of Raja Ampat, targets three major outcomes:

1. Conduct sufficient scientific research to support the development of an effective ecosystem-based management plan for the Raja Ampat Conservation Corridor by 2007.
2. Establish an enabling environment in the Raja Ampat regency for collaborative management of its marine and coastal resources by 2008. Additionally, the regency government will have chosen an environmentally sustainable economic development trajectory which benefits its citizens.
3. Ensure that the 45,000 km² Raja Ampat Conservation Corridor functions effectively, encompassing biodiverse insular, coastal, and nearshore habitat that is managed within a representative network of ecologically-connected marine protected areas by 2012.

MAJOR ACHIEVEMENTS

- **Effective Partnerships:** Non-governmental organizations (including Conservation International (CI), the Nature Conservancy (TNC), WWF and KONPERS), academia (UNIPA), national level fisheries and nature conservation agencies (PHKA and DKP) and local governments have joined forces and are committed to biodiversity conservation and sustainable development.
- **Exciting Research:** Studies are underway that will culminate in the drafting of an Ecosystem-Based Management Plan. The studies include the most comprehensive marine genetic connectivity study yet conducted in the world, satellite tracking of green and hawksbill turtles, aerial surveys of marine resource utilization, site monitoring of grouper and Napoleon wrasse spawning aggregations, and the development of a state-of-the-art dynamic ecosystem model of Raja Ampat's marine resources using advanced computer software.
- **New Discoveries:** Two major surveys of the biodiversity and socioeconomic conditions of coastal villages resulted in the discovery of up to 56 new species of fish, coral and mantis shrimp – most of them endemic to the Bird's Head Seascope.
- **Understanding Local Needs:** A Participatory Rural Appraisal of over 60 villages within Raja Ampat is providing crucial information for best tailoring our conservation approach to local conditions.

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Dense schools of reef fish like these *Plectorhincus polytaenia* sweetlips are just one of the many underwater attractions which have made Raja Ampat one of the hottest dive destinations on the planet.

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Raja Ampat schoolchildren at the annual "Environmental Jamboree".

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Schools of bigeye trevally (*Caranx sexfasciatus*) like this one are still common throughout Raja Ampat's productive waters.



A nudibranch, *Moor elysia*, found on a survey of Teluk Cenderawasih.

HOW YOU CAN HELP

If you are interested in learning more or want to support the Bird's Head Seascape contact:

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CI'S MISSION

Founded in 1987, Conservation International (CI) believes that the Earth's natural heritage must be maintained if future generations are to thrive spiritually, culturally, and economically. Our mission is to conserve the Earth's living heritage, our global diversity, and to demonstrate that human societies are able to live harmoniously with nature.

<http://marine.conservation.org>

- **Communicating with Stakeholders:** A community conservation radio network and publication of the bi-monthly "Tabloid Raja Ampat" is increasing conservation understanding of villagers in Raja Ampat's remote communities.
- **Community Involvement:** A cadre of eleven local community conservation organizers have been recruited and trained to function as a direct line of communication between Raja Ampat villages and CI's conservation professionals.

SHORT TERM GOALS

- Launch a joint patrol system that involves police, fisheries and conservation officers and local village leaders and aims to stop destructive fishing practices such as blast fishing, cyanide fishing and poaching of protected marine species.
- Provide guidance to the Raja Ampat government's economic development plans based upon an economic valuation of Raja Ampat's fisheries, tourism, forestry and mining sectors and the area's ecosystem services.
- Improve management of marine tourism in order to encourage growth of this priority sector in a manner that provides maximum economic benefits to Raja Ampat's government and peoples while also ensuring that Raja Ampat's fantastic marine and cultural diversity is not negatively impacted.
- Create a patrol post at the Sayang/Piai green turtle rookery, staffed by trained local villagers and local organization KONPERS, to monitor nesting and curb poaching.
- Design a network of marine protected areas within Raja Ampat to ensure sustainable management of important local fisheries while conserving globally-important marine biodiversity.
- Construct a field research station in the Dampier Strait Region and formalize a cooperative agreement with the State University of Papua (UNIPA) to sponsor conservation-focused research projects undertaken by undergraduate and graduate students.
- Launch the Bird's Head Seascape Awards Program to recognize and promote the efforts of local marine conservationists in the Seascape, from villagers to government officials to journalists and private sector entities.