

Seascapes in focus

Green sea turtle (*Chelonia mydas*) in sea grass.

New Partnership Initiative in CT

With more than 600 species of coral (over 75 percent of all known coral species), 3,000 fish species and the greatest extent of mangrove forests in the world, the Coral Triangle is the global center of marine biodiversity. Comprising eastern Indonesia, parts of Malaysia, the Philippines, Papua New Guinea, Timor Leste and the Solomon Islands (see map), the region is a bastion for the entire Indo-Pacific marine realm.

Yet, overfishing, destructive fishing practices, pollution and climate change threaten the sustainability of the marine resources that support over 150 million people in the Coral Triangle region.



Conservation International (CI) has targeted the area as a priority for marine conservation activities. Through two of its three Seascapes (Sulu Sulawesi and Bird's Head), and collaboration with The Nature Conservancy in a third Coral Triangle Seascape (Sunda Banda), CI and its partners are working to improve the stewardship of marine wildlife and to reinforce

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Ecuador's Navy and CI Team Up to Implement VMS

Quito, Ecuador; March 15, 2008 Ecuador's marine territory, which is considerably larger than our entire national land area, provides an enormous source of wealth for our industrial fishing fleet, one of the largest in Latin America, as well as food for thousands of small-scale fishing families along our Pacific coastline. Although our ocean waters are best known for the Galapagos Marine Reserve, our mainland coastal waters are also biologically rich and unique.

Patrolling and providing security at sea for our many mariners is the responsibility of the Ecuadorian Navy. Recently, with the support of Conservation International, we have initiated a process to make this immense task more manageable through nationwide implementation of a satellite-based Vessel

Monitoring System (VMS). This system will allow us to determine the position of vessels in real time, to help control illegal activities and rescue boats that lose power and are carried out to the open sea, where there is little hope of finding them using traditional search methods. Although we are still in the early

stages, just beginning a pilot phase in the Galapagos, we are confident that the partnership forged with CI and other environmental groups will be a success, contributing to the well-being of our seas and the people who depend on them.

Written by: Capitán de Navío Carlos Flores
Subdirector de la Dirección Regional Insular de Marina Mercante



Above: Luis Suarez, of CI, signs a cooperation agreement with a navy official to implement the Vessel Monitoring System.

NEW PARTNERS INITIATIVE

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and enhance the legal and policy authorities for marine conservation in the Seascapes.

In addition to its Seascape approach, CI's work in the Coral Triangle centers around marine management area science, sea turtle conservation, climate change adaptation, the Global Marine Species Assessment, shark conservation, fisheries management, and wildlife trade.

For more than a decade, CI

has focused on forging partnerships with governments, NGOs, academic institutions, the private sector and local communities in Southeast Asia and Melanesia. In December 2007, the governments of Indonesia, the Philippines, Malaysia, Timor Leste, Papua New Guinea and the Solomon Islands formed a multilateral partnership, the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security, and committed to work together on priority Seascapes, marine protected areas, ecosystem

approaches to fisheries management, climate change adaptation and endangered species. Together with these and other partners, we can help industries and governments understand that healthy marine ecosystems are good for business and people and thus halt further damage to some of the world's most beautiful and biologically important coral reefs.

For more information about the Coral Triangle and to explore the region please visit: www.conservation.org

BIRD'S HEAD SEASCAPE

MV Kalabia Launched in Raja Ampat

On February 27, 2008, the long-awaited floating marine conservation education classroom, the MV Kalabia, was officially launched by the Bupati of Raja Ampat at a gala celebration attended by schoolchildren, government officials and customary leaders. The 37meter Kalabia, which is named for Raja Ampat's endemic walking shark, is brightly painted with Papuan motifs and marine life murals. Jointly operated by CI

and partner TNC, the ship will sail two-week routes throughout Raja Ampat, visiting each of the 89 remote villages in the archipelago to conduct a three-day interactive conservation education curriculum that has been custom-designed for local schoolchildren. A team of eight CI conservation educators leads the curriculum, which includes activities such as "ecosystem detective," conducted among mangrove forests and while snorkeling on Raja Ampat's world famous reefs.

The Kalabia program is designed to greatly increase local knowledge of the marine environment and support for conservation initiatives such as marine protected area development.



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EASTERN TROPICAL PACIFIC SEASCAPE

The Coiba World Heritage Site Makeover

Over the past three years, Panama's Coiba National Park has experienced a complete makeover to bring its management up to the level required to protect its outstanding natural resources. This transformation resulted from a 2004 law decreed by the Panamanian Congress to expand the Park's boundaries and establish a regulatory frame-

work for economic activities, followed in 2005 by UNESCO World Heritage designation. Under the ETPS initiative, and through the combined efforts of a wide range of partners, Coiba park rangers have improved their management skills, marine enforcement has been strengthened, appreciation for the park's outstanding features has been increased, and new eco-tourism jobs have been created in

poor communities that now benefit from the conservation of Coiba's resources. After nearly two years of social and ecological research, public consultation and stakeholder participation, Coiba now has a new management plan to guide efforts to achieve conservation and sustainable resource use.

SULU-SULAWESI SEASCAPE

Seabirds in the Sulu-Sulawesi Seascape

In May 2007, CI conducted an assessment of seabirds in the Philippine part of the Sulu-Sulawesi Seascape to improve baseline knowledge on their occurrence, distribution and abundance. Seabirds, which include boobies, frigatebirds, terns and noddies, are dependent on small islands and coastal areas for breeding and survival.

The study recorded 16 seabird species in the Cagayan Ridge Cor-

ridor, which is considered the last refuge and breeding ground of Philippine seabirds, including the Critically Endangered Christmas Island Frigatebird and the beautiful Philippine Black Noddy.

Seabirds are significant indicators of the overall health of marine ecosystems, and the worldwide populations of nearly all species of seabirds have decline severely over the last 25 years. Human activities, loss of habitat from erosion and predation by introduced species such as rats and domestic

animals such as cats and dogs, are the primary threats to seabirds in small islands within the Sulu-Sulawesi Seascape.



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Luis Angel Rojas: Tárcoles Fisherman Honored for Conservation

On April 7, 2008 artisanal fisherman Luis Angel Rojas, a lifetime resident of Costa Rica's Tárcoles Community, received a shark conservation award, recognizing his



Above: Luis Angel Roja, with his son, at the ceremony in Tárcoles honoring his efforts.

**"Responsible
fishing is our
future."**

- Luis Angel Rojas

outstanding contribution to providing valuable capture data that will assist managers in developing sustainable fishing strategies in the newly created Tárcoles Community Managed Fishing Reserve and beyond. The event was hosted by CI partners CoopeTárcoles,

PRETOMA and CoopeSolidar and attended by school children, fishermen and nearly the entire Tárcoles fishing community.

Luis Angel's contribution to conservation includes much more than providing research data. He has represented his cooperative at international events, where he provides valuable on-the-ground insights into conservation and management planning processes. Last November, before a group of international scientists and government representatives in Las Perlas,

Panama, he provided poignant reminders of the dire conditions that small-scale fishermen face and their need for viable solutions to improve their livelihoods as they commit to achieving sustainable use of marine resources and avoiding by-catch of non-target species, including sea turtles and sharks. Perhaps Luis Angel's greatest contribution to both conservation and his community is that he practices what he preaches: his commitment to responsible fishing is spreading to other community members who now emulate his efforts.

SPECIES SPOTLIGHT

Threshers in Batangas

The plight of the pelagic thresher (*Alopias pelagicus*) and big-eye thresher (*Alopias superciliosus*) sharks in the Philippines is alarming conservationists. Since December 2007, more than 40 thresher sharks have reportedly been caught at Matuco Point by sardine fishermen in Batangas Bay, within the Verde Island Passage. In March, a team of researchers from CI-Philippines, the Philippine Coast

Guard, First Philippine Conservation Inc. and the local government surveyed a reef reportedly frequented by thresher sharks. Though no sharks were sighted, the abundance of wrasses associated with cleaning stations – similar to the only confirmed thresher shark cleaning station in the country in Malapascua Island, Cebu – may be one reason why the sharks frequent the area. More surveys are being planned to determine

the frequency of shark visits to the Verde Island Passage. In support of thresher shark conservation, the Batangas local government and the City Council recently passed a local ordinance to protect the sharks from being caught and traded.

BIRD'S HEAD SEASCAPE

Fourteen new fish species described from BHS

In the past six months, 14 new fish species have been described from the Bird's Head Seascape, including two epaulette "walking" sharks, three dottybacks, a tilefish, a jawfish, a flasher wrasse, a fairy basslet, a pipefish, a rainbowfish, a fusilier, a lionfish and a damselfish. Eleven of these species were published in a special "Blue Auction" edition of the journal *Aqua* in January 2008. Additionally, at least four new fish species were uncovered in the past four months, with the total number of reef fish species recorded from the BHS now reaching 1,321. Of these total species, 1,184 are found in Raja Ampat alone, and at least 30 appear to be regional BHS endemic species. Progress also continues on the identification and description of approximately 40 new species of hard coral collected from the BHS over the past two years.

EASTERN TROPICAL PACIFIC SEASCAPE

Taking the pulse of the ETPS

Ecological monitoring is the marine research equivalent of going to the doctor for regular checkups. Systematic observations of species that are rare, threatened, commercially valuable or play important roles in regulating food webs is like taking the ocean's pulse and blood pressure. Well-designed monitoring programs provide managers with early detection of problems before they become acute, and provide information that allows managers to gauge the success of their con-



Above: New species of Lionfish (*Pterois volitans*) found in the Bird's Head Seascape.

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servations strategies and adaptively adjust them to changing conditions. Over the past three years, leading research institutions from Costa Rica, Panama, Colombia and Ecuador have established a regionally coordinated monitoring effort using comparable field methods. Last October, the researchers' met to evaluate progress, refine methods and establish agreements to prepare scientific publications and management recommendations based on their findings. During the past months, two new sites in Ecuador have been integrated into this effort, bringing the number of participating sites to seven.

SULU-SULAWESI SEASCAPE

Sources and sinks in the Sulu-Sulawesi Seascape

Together with the University of the Philippines in the Visayas Foundation, Inc. (UPVFI), the University of the Philippines–Diliman

Marine Science Institute (UPMSI) and the De La Salle University through the Marine Environment and Resources Foundation, Inc., CI has studied ichthyoplankton distribution and dispersal in three Sulu-Sulawesi Seascape corridors: Cagayan Ridge, Balabac Strait and Verde Passage.

In 2006 and 2007, UPVFI and UPMSI studied models of water circulation in relation to the distribution and dispersal of fish eggs and larvae in the corridors, to determine spawning areas (sources) and settlement sites (sinks) and identify the best sites for marine protected areas.

The remainder of the project activities will now focus on generating detailed representations of species assemblages and fish larval development through staging, otolith analyses and dispersal simulations, to provide more specific data on sources and sinks of fish larvae as support for the establishment of marine conservation areas.



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The Ayau-Asia MPA in Raja Ampat

Encompassing two large atolls and fourteen coral cay islands in the far northeast of Bird's Head Seascape, the Ayau-Asia marine protected area (MPA) covers 101,440 hectares. The MPA was declared by five villages with tenurial rights over the islands and reefs in December 2006, and was formally recognized by the Raja Ampat Bupati and Indonesian Minister of Fisheries and Marine Affairs in 2007.

organically in an atoll environment. The program has been hugely successful, with the 2007 Christmas feasting season kept "turtle free" (the previous Christmas over 300 turtles were consumed).

The Ayau and Asia atoll systems are also the home of the last remaining known grouper spawning aggregation sites (SPAGS) in Raja Ampat, and the zonation system being developed for the

MPA is focused largely on protecting these SPAGS. Enforcement is a challenge, as the remote reefs are on the Indonesian border with Palau and are frequently poached by international fleets. Fortunately, the Indonesian Navy has recently installed a patrol post in the MPA and this, combined with the enthusiastic community-based patrols which started earlier this year, has already resulted in anecdotal reports of significantly decreased poaching in the region.

Until recently, Ayau's inhabitants were well-known as highly-skilled sea turtle hunters; the tightly-knit community holds large feasts to celebrate many aspects of their culture and traditionally turtle has been the preferred communal protein source. CI has worked closely with village elders and church leaders to substitute pork for turtle meat, with turtle hunters flying to Bali to learn the details of raising pigs



Green Turtle
(*Chelonia mydas*)

The Tárcoles Community Revolution

A few years ago, Costa Rica's Tárcoles village was much like other fishing communities in the ETPS. Poverty was increasing as resources declined, and prices for meager fish catches stayed flat as markets were saturated by industrial operators until CoopeTárcoles, a joint project of the Tárcoles fishermen and CoopeSolidar. The cooperative has a committed core membership whose dues pay for a manager and maintain their small state-of-the-art processing facility, which delivers high-quality, sustainably captured fish to local tourism operators.

In late 2007, CoopeTárcoles achieved a victory when the national government agreed to create a community managed marine reserve. In November, CoopeSolidar and CI helped CoopeTárcoles bring presidents of most Latin American artisanal fishing cooperatives from the International Fishers' Forum in nearby Puntarenas to the Tárcoles facility. The visitors were so impressed that they agreed to organize a Latin American Artisanal Fishers' Forum, to be held in Tárcoles in late 2008.

Left: Local children dance during a full day celebration honoring the achievements of the Tárcoles fishing cooperative.

Right: CoopeTárcoles has become a social hub and center piece of local economic growth in the community. This promotion banner stands outside their administrative offices in Tárcoles.



SEASCAPES IN FOCUS

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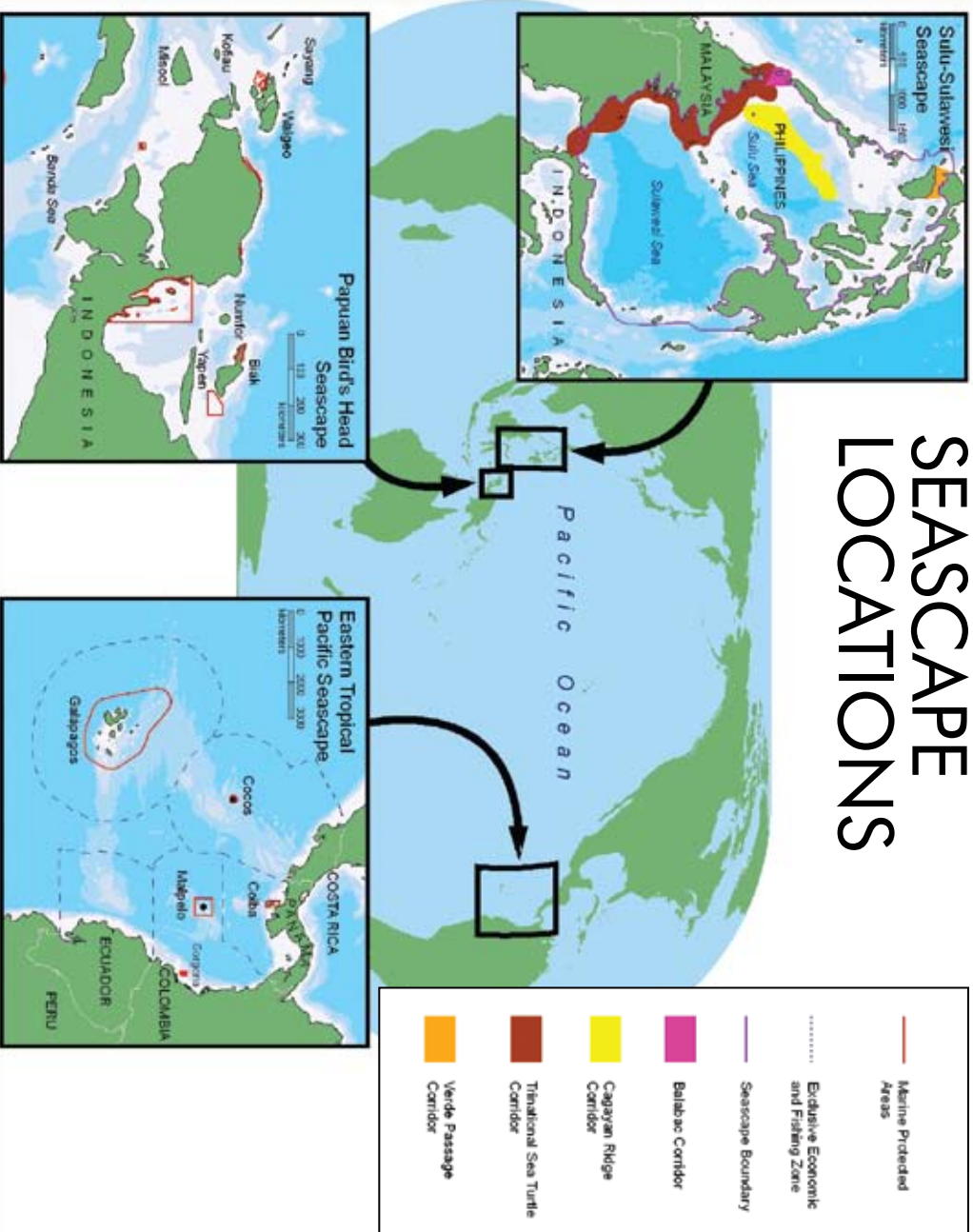
A Giant sea anemone (*Stichodactyla gigantea*) and pink anemonefish, (*Amphiprion perideraion*).

SEASCAPES IN FOCUS

Seascapes are large, multiple-use marine areas, defined scientifically and strategically, in which government authorities, private organizations and other stakeholders cooperate to conserve the diversity and abundance of marine life and to promote human well-being.

If you are interested in learning more or want to support the Eastern Tropical Pacific 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.

