

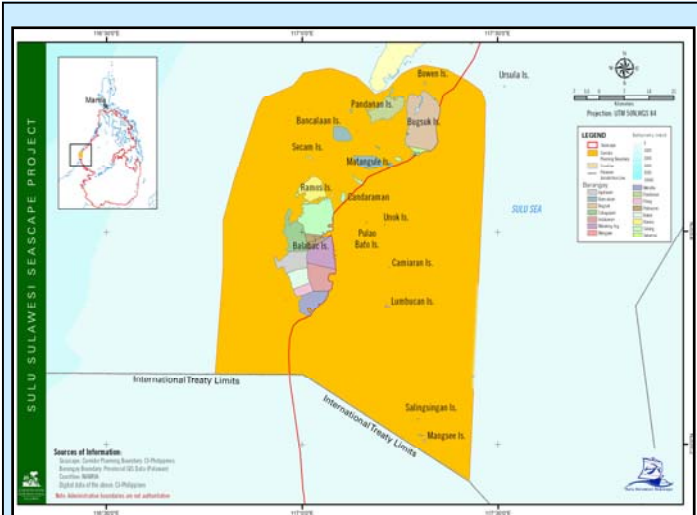
# CORRIDOR HIGHLIGHTS

## BALABAC STRAIT CORRIDOR

Volume 1, Number 1



The **BALABAC STRAIT MARINE BIODIVERSITY CONSERVATION CORRIDOR** is a critical passageway between the South China Sea and the Sulu Sea.



Rare mangrove and reef formation in the waters of Balabac (photo © Juergen Freund / CI).

## Mangroves & reefs under attack

Recent studies have confirmed the massive reduction in the mangrove and coral reef areas in Balabac between the 1980s and the 1990s. Mangroves were decimated because of tan barking, charcoal making and the cutting of trees for firewood and construction materials. Coral reef degradation resulted from destructive fishing that blasted and poisoned the reefs. The reported intrusion of foreign fishing vessels and commercial fishers within municipal waters also contributed to the steady decline in fish catch between the 1970s and the present.

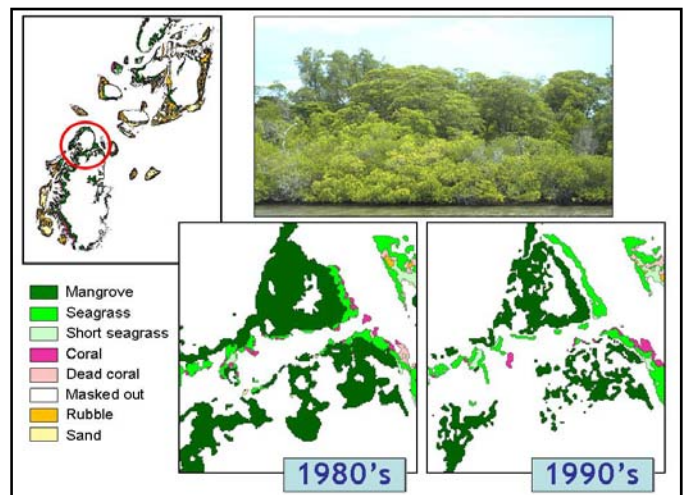
In 2005, in order to curb the damage, the local government declared the municipal waters of Balabac a marine protected ecoregion. The ordinance also set aside a strict protection or core zone of 44,000 hectares, where only compatible activities such as marine culture and pearl farming are allowed. The ordinance is, however, being legally challenged by indigenous groups asserting their rights over ancestral fishing grounds.

### GLOBAL IMPORTANCE

Only slightly bigger than the state of Delaware, the Balabac group of islands, the southernmost municipality of Palawan province, is composed of 31 islands and islets, with 20 villages and a growing population of around 35,000. It has a total land area of about 58,166 hectares, with some 489,562 hectares of municipal waters. Yet, this is a place where high, unique biodiversity faces destruction and exploitation on a daily basis, thus making it a priority marine conservation area in the Philippines.

Balabac is bounded in the north and south by the Balabac straits, linking the South China Sea and the Sulu Sea. Thus, fish and invertebrate larvae, as well as migratory species like tuna, sea turtles, sharks, whales and dolphins move between these two hotbeds of marine life through Balabac's waters. Turtles in particular congregate here for mating, nesting, hatching and feeding, making it one of the most important turtle habitats in Southeast Asia. With its major shipping lanes and proximity to Malaysia, Balabac is a crossroad of geographic, cultural, and marine diversity.

Marine flora and fauna of global significance and a large variety of habitats can be found in Balabac. It is the only known habitat for the Balabac mousedeer (*Tragulus napu nigricans*). Estuarine crocodiles (*Crocodylus porosus*), some 10 species of endemic birds, at least 28 true mangrove species, 30 coral genera and 289 reef fish species call this place home.



Temporal variation map showing mangrove depletion in Balabac, '80s—'90s.

**CONSERVATION MISSION**  
Conservation International's mission is to conserve the Earth's living heritage — our global biodiversity — and to demonstrate that human societies are able to live harmoniously with nature.

### SULU-SULAWESI SEASCOPE PROJECT

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## Wanted: A conservation plan

In spite of compelling evidence of Balabac’s high biological importance, both in the terrestrial and marine realms, there have been no conservation-related projects in the area from 1990 to 2002. In 2005, the Sulu-Sulawesi Seascape (SSS) Project of Conservation International (CI), made possible through the Walton Family Foundation, provided much-needed funds to jump-start conservation work. Balabac is now one of the four priority Marine Biodiversity Conservation Corridors of the SSS project.

In line with its desired conservation outcomes for species, sites and corridors, CI and its partners are now gathering information on the status of Balabac’s critical marine habitats, fishery and threatened marine species. Socio-economic factors, linkages with various groups and scientific data will all contribute to coastal resource management and development plans. Threats to ecosystems and species, whether immediate (such as destructive fishing) or long-term (such as overfishing and resource-use conflict), have been identified, and the appropriate solutions are being sought. This also includes a comprehensive information and awareness campaign focusing on key members of the local community to instill conservation values especially among children.

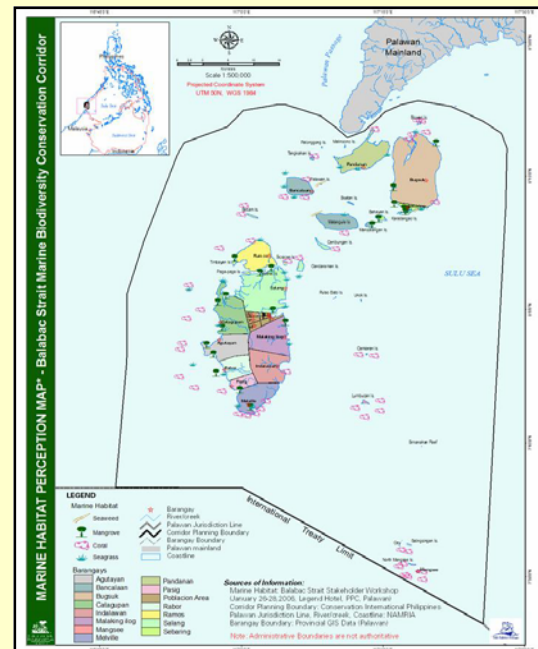


Awareness campaign targeting children and other members of the local community is critical in overcoming conservation ignorance (photo © CI, Art Faburada).

## We’ve got it on paper

What has come out of data gathering efforts in Balabac?

- A map on the extent and distribution of critical marine habitats such as coral reef, mangroves and seagrass areas. Scientists are determining the rate of destruction, and the places that need immediate attention.
- An assessment of the condition of corals, reef fishes, fisheries, seagrass and mangroves and the corresponding threats to their existence. Monitoring stations now detect changes in coral and reef fish distribution.
- A study demonstrating the relationships of fish populations, based on the patterns in food distribution and water circulation
- A draft of the Coastal Environmental Profile of Balabac. This describes the socio-economic and biophysical characteristics of the area, and will be passed on to the local government as source material for the development of municipal management plans.



Balabac habitat map.



Local government officials and community volunteers being oriented on the use of arms and communication equipment during on-the-ground orientation on enforcement and implementation of environmental laws (photo © TKFI).

## Capacity building...

Increasing the capacity of the people to enforce their own laws and to manage transborder issues has been a critical part of institutionalizing the idea of conservation in Balabac. Municipal mayors from southern Palawan paid a visit to Kudat Banggi, Malaysia to learn about their conservation system. Local enforcers in Balabac formed Task Force *Pilandok*, after the local name of the Balabac chevrotain, to manage this unique species. Enforcement activities in Balabac are now aligned with those of the National Anti-Environmental Crime Task Force.

There have been several training sessions for local people on coastal law enforcement and environmental governance, sea

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### Capacity building...from page 2

turtle identification, habitat assessment and marine mammal rescue. CI is working with Tanggol Kalikasan Foundation (TK) to orient local stakeholders on environmental laws. The first training was conducted in August 2006 and participated in by 52 people from the Municipal Government of Balabac, members of the Philippine Navy and the Philippine Coastguard, members of the Philippine National Police as well as barangay captains (elected village leaders), who all play important roles in the enforcement and implementation of environmental laws. Trainees learned more about the Philippine Fisheries Code, the Wildlife Act and other relevant laws. They were taught how to examine fish caught through illegal means such as bombing and poisoning and were drilled on the proper procedure for arresting, seizing and boarding boats as well as detaining violators, including the use of firearms and communication equipment.

Alternative livelihood options like seaweed farming, which is being pilot-tested with local volunteers, and ecotourism were introduced to fishermen. A grant to the University of the Philippines is supporting the assessment of seaweed farming as a livelihood source. Students were also trained on seaweed farming and taxonomy through hands-on activities.

In a true example of institutional validation, a Memorandum of Agreement (MOA) was signed between CI-Philippines and the Palawan Council for Sustainable Development (PCSD) to work together for the conservation of Balabac. Twenty barangay chairmen endorsed the MOA and CI assisted in the formation of Balabac's Environmentally Critical Areas Network (ECAN) Board.

### In the works...

- Generating and integrating biophysical and socio-economic information to strengthen existing Marine Protected Areas (MPAs), identify new ones, and design an appropriate MPA network, including assessment of threats to MPAs, species, habitats and ecosystems.
- Improving MPA management through law enforcement support and sustainable financing complemented by a review of existing economic policy and ecotourism practices affecting MPAs and corridors within the SSS, revising when necessary, and passing on the information to appropriate government agencies.
- Expanding the Information, Education and Communication Campaign plus training local managers and stakeholders in marine conservation research, education and enforcement management.
- Working with four partner grantees involved in data collection in Balabac: Palawan State University, University of the Philippines in the Visayas (UPV), Marine Science Institute of the University of the Philippines-Diliman, and Tropical Marine Research for Conservation. Local experts were engaged for CI-led studies such as mangrove and seagrass assessments, seabird assessment, fisheries by-catch study and GIS mapping. CI and the Pawikan Conservation Project of the Department of Environment and Natural Resources (DENR) have conducted marine turtle habitat assessments and training. The SSS Project is also helping develop a trans-border management regime between the Philippines and Malaysia to address such problems as the poaching of sea turtles and the illegal wildlife trade.

### Conservation ambassadors...

You can see it in the way they express their creativity. Always looking for ways to channel their creative juices to something more worthwhile than just merely singing songs, hands talking to guitar strings or transforming bamboo poles into instruments of transcendental meditation such as the rainmaker.

When CI-Philippines through the Seascape Project first came to Balabac, the Pilandokan Artist Group of Balabac gamely took on the challenge of leading the transformation of Balabac's youth into more environmentally conscious individuals. This group of artistic youths used their craft in helping CI set up the Photo Exhibit designed to show the children and people of Balabac's rich and unique biodiversity and cultural uniqueness and the need to wisely conserve its resources for the current generation and the next. They bravely crossed the cultural divide between Islam and Christianity and seek unity in cultural diversity through their music and crafts. This was on display during the NATURE JAM CONCERT featuring nature sounds and images delivered by Pilandokan. The concert served as the highlight of CI-P Seascape Project Photo Exhibit last November 2006, which up to now is on display at the municipal hall of Balabac for the townsfolk to see.

Truly, the Pilandokan Group has become more than just willing volunteers for the information and education campaign of Sulu-Sulawesi Seascape in Balabac -- they have become CONSERVATION AMBASSADORS, not just for Balabac but for our living heritage -- Earth's Biodiversity.



Passion for songs, passion for nature... Pilandokan's name was derived from Pilandok, local name of the Balabac Mouse Deer, which is endemic only to Balabac (photo © CI, William Azucena).



School children, adults and even law enforcers took time out to check out the Sulu-Sulawesi Seascape Photo Exhibit (photo © CI, William Azucena).

## New dolphin species for the Philippines!

In a recent marine mammal survey conducted by CI-P and TMRC in May 2006, a new dolphin species, the dwarf spinner dolphin, *Stenella longirostris roseiventris* was sighted in the waters of Balabac Strait. This species was first described in Thailand by Perrin, Miyazaki & Kasuya (1999). There are two spinner dolphin types in the world – the pelagic and shallow-water forms. The former inhabits deep water and feed mainly on mesopelagic fishes and squids is known as the spinner dolphin *Stenella longirostris*. The shallow-water species is the dwarf spinner dolphin *Stenella longirostris roseiventris* which feeds mainly of benthic and coral reef fishes as well as invertebrates.

The two dolphins were largely differentiated based on differences in the measurements of their skulls. Until this picture, there has been no live specimen to compare the two species. Dr. Louella Dolar of TMRC enthused that this is the “very first ever photo” of a live dwarf spinner dolphin “showing the pinkish coloration” in the ventral side. The pinkish coloration only shows if the animals are active in warm waters. The picture was taken by Terry Aquino. A scientific manuscript by Perrin, Aquino, Dolar and Alava describing the external appearance of the dwarf spinner dolphin has been accepted for publication in the Marine Mammal Science Journal as a result of this study.



First live documentation of dwarf spinner dolphin in the waters of Balabac Strait (photo © Terry Aquino)

## Challenge timeline: From initial gains to long-term goals...

A sound integrated coastal management plan is the key to effective priority marine resource use in Balabac. CI and partners are now providing the data to guide stakeholders in the formulation of this plan. Appropriate management zones, programs and actions will be identified, with the primary objective of conserving Balabac’s unique biodiversity.

By 2007, scientists and the local government of Palawan will work together to implement an integrated conservation and development strategy for the Municipality of Balabac, in the process identifying, creating or reassigning MPA networks in the Balabac Strait. Local leaders will also initiate discussions with authorities in Sabah, Malaysia regarding a transboundary management regime.

By 2008, stakeholders must be aware of the ecological and economic relevance of MPAs and MPA networks, as well as their role in marine conservation and management.

By 2012, stakeholders should understand the functions and benefits of protection, and must be empowered to work for protection-related legislation, as well as helping design such laws to reflect their unique situation, while still aiming for marine ecosystem conservation.



One of the white sand beaches in Balabac (photo © Juergen Freund / CI).



“I could tell you that this wouldn’t be easy...” (photo © CI, William Azucena)

## We see the future: Balabac in 2008 & beyond...

Beyond 2008, CI, through the SSS Project, can continue to help out in Balabac by facilitating stakeholder consultations and strengthening the capacities of Balabac’s stakeholders, both individuals and groups, to manage their own resources. CI can continue to provide the right alternative livelihood options and the corresponding training to wean people away from destructive practices. CI and partners can also continue to provide technical assistance for the implementation of municipal land and water use plans. Management intervention may or may not improve the situation, so Balabac’s local leaders must monitor and evaluate their own progress and modify their plans accordingly, all the while applying principles of transparency, accountability and participation.

Beyond 2008, there will be deeper understanding and full cooperation between the Philippines and Malaysia in biodiversity conservation in this region and in the world. There will be bilateral activities jointly conducted to eradicate destructive fishing activities, to reduce the poaching of marine turtles and other threatened species, and to prevent the traffic of illegally caught wildlife and smuggled lumber.

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