

Protecting mangrove areas through Community-Based Forest Management Agreements

The national situation of mangroves in the Philippines is rather dismal. For the past several decades, there has been an observed decline in the number of hectares of mangroves. From an estimated 450,000 hectares (ha) in 1914, mangrove cover is now down to 248,813 ha (World Bank Group, 2005). This estimate, however, has yet to be validated on the ground.

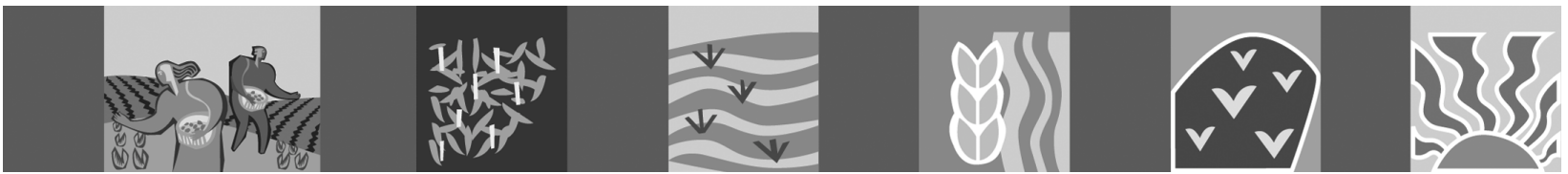
The primary threat to mangroves is their conversion to fish/shrimp ponds. At present, the pond to mangrove ratio is 1:1, or around 232,000 ha of fish/shrimp ponds for every 256,000 ha of mangroves (Primavera, 2012:8). This is below the ideal ratio of 4:1 as recommended by Saenger et. al. (1983) who indicated that “the amount of mangrove forest converted into ponds should not exceed one hectare of pond for four hectares of natural mangrove kept untouched.” Primavera et. al. (2012) suggested that no more than 20% of a discrete mangrove area in the country should be converted to ponds.

Worse, many of the once thriving mangrove areas that have been converted to fish/shrimp ponds are only partly functional or totally no longer operational. Section 43 of Presidential Decree 705, or the Forestry Code of the Philippines of 1975, provides that mangrove and other swamps released to the Bureau of Fisheries and Aquatic Resources for fishpond purposes which are not utilized or which have been abandoned for five years from the date of such release shall



The Badian Bay
Map by NFR

Condensed from *Private and Public Investments in Mangrove Areas under the CBFMA: Case Studies in Malhiao, Cebu, and San Juan and Talisay in Surigao del Sur* by NGOs Fisheries Reform (NFR). For more details of the case, contact: ngos4fisheries@yahoo.com



revert to the category of forest land. Further, by virtue of Section 49 of Republic Act 8550 or the Philippine Fisheries Code of 1998, all abandoned, undeveloped, and underutilized (AUUs) fishponds shall be reverted to mangroves once the best use of the areas has been assessed and determined by the Department of Environment and Natural Resources (DENR), the Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR), the local government units, other government agencies, and the National Fisheries and Aquatic Resources Management Council (NFARMC). The problem with the implementation of Section 49 is that there have yet to be clear implementing rules and regulations on how to cancel Fishpond Lease Agreements (FLAs) and how to revert AUUs under FLAs to mangroves.

This is the context for local mangrove management efforts being done in the Municipality of Badian in Cebu and the Municipality of Hinatuan in Surigao del Sur.

Mangrove protection in Malhiao, Badian, Cebu

The Municipality of Badian in Cebu is replete with coastal and marine resources. It has approximately 65 ha of coral reef, 203 ha of seagrass, and 117 ha of vegetated mangrove areas. Thick mangrove forests are located in Barangays Poblacion, Malhiao, Manduyong, and Bugas. Poblacion has the most extensive mangrove area in the municipality. These barangays surround the Badian Bay. There are more than 11 species of mangrove in the bay, including the *Rhizophora stylosa*, *apiculata* and *mucronata*, *Bruguiera gymnorrhiza*, *B. Pototan*, *Ceriops tagal*, *Nypa fruticans*, *Sonneratia alba*, *Avicennia alba*, *Avicennia lanata*, *Aigeceras floridum*, and *Tabigue/Bantigue*. *Tabigue* or *Bantigue*, which is considered an endangered mangrove species in

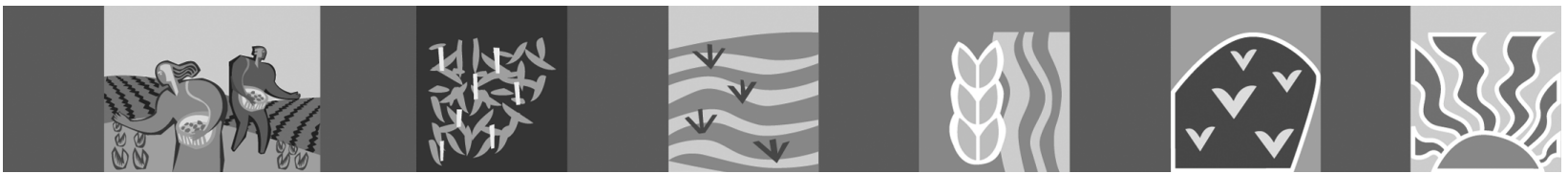
“Deforestation of the mangrove areas in Badian started in the late 1970s when there was massive conversion of mangrove areas for fishpond development, followed by the establishment of beach resorts, and utilization of mangrove stands as firewood in bakeries and for salt making.”

the Philippines¹, is found along Sima River. There are three mature bantigue trees along the river (with a diameter at the base of the trunk of almost 1.5ft). It bears pomelo-size fruits but there are no natural grown saplings in the vicinity.

Deforestation of the mangrove areas in Badian started in the late 1970s when there was massive conversion of mangrove areas for fishpond development, followed by the establishment of beach resorts, and utilization of mangrove stands as firewood in bakeries and for salt making. A mangrove species, the *Nigad* (local name), is declining owing to indiscriminate harvesting/uprooting by bonsai enthusiasts.

Sometime in the 1990s, a group of Certificate of Stewardship Contract (CSC) holders in Barangay Malhiao organized themselves as the Malhiao Pundok Mauswagon (MAPUMA). Initially, MAPUMA, under the DENR's Coastal Environmental Project (CEP), started rehabilitating the mangrove area of Barangay Malhiao.

¹ According to Dr. Jurgenne Primavera, mangrove scientist, who was able to visit the mangrove areas of Poblacion and Malhiao in 2003



Boardwalk constructed under the CBFMA project
photo by IJFR

MAPUMA was transformed into the Malhiao Resource Management Multi-purpose Cooperative (MRMMPC) in 2000 after CEP ended and when Tambuyog Development Center partnered with the organization for the expansion of the Sustainable Coastal Area Development – Community-based Coastal Resource Management (SCAD – CBCRM) program. MRMMPC was contracted by the

DENR in 2001 to manage a 73-ha mangrove and seagrass area through the Community-Based Forest Management Agreement (CBFMA). This is an effort of both the fisherfolk and the government to protect mangrove forests in the Philippines. MRMMPC developed a 25-year Management Plan in 2002 and has been doing mangrove replanting and protection since then. The DENR sometimes provides technical support. However, with the department’s lack of funds and personnel, it cannot fully support the 25-year plan of the organization and similar plans of other organizations with CBFMAs. One of the major components of the 25-year plan of MRMMPC is to establish infrastructures to effectively guard the forest and to receive tourists who may want to stay close to nature. However, due to funding limitations, MRMMPC is unable to implement this plan.

Regardless, the organization has steadily spearheaded activities that address the general problem of continued cutting of mangrove

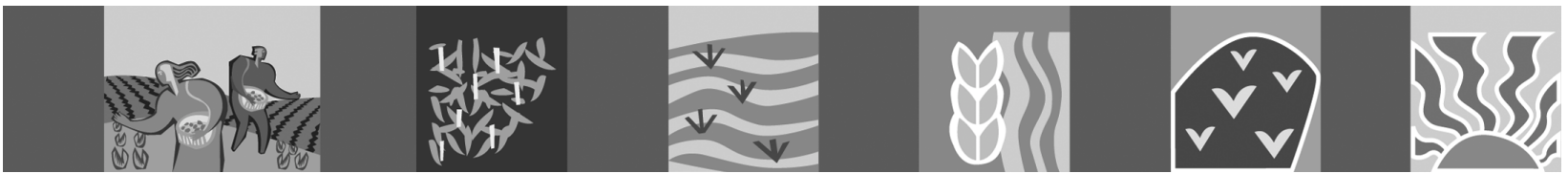
forests, and seek to reverse the trend through education and advocacy on the importance of mangroves and other coastal resources.

As part of its ecotourism project, MRMMPC established a coastal education center in the CBFMA areas called Malhiao Mangrove Eco Center, with support from a local foundation and Tambuyog Development Center. The Malhiao Mangrove Eco Center is equipped with an academic curriculum on coastal education, with learning modules that are officially recognized by the Department of Education District Level and adopted as part of the public elementary schools’ teaching and learning activities. It caters not only to students of Malhiao, but to local and foreign tourists as well, serving as a learning center on coastal education. It also serves as the starting point of the eco-tour, while behind it is the start of a 300-m² boardwalk and a 20-m view deck being constructed as part of the investments of both the LGUs and the community in the CBFMA area.

Some issues that prevail in Malhiao include: (1) illegal cutting of mangroves for posts, firewood, and forage for livestock.; (2) illegal structures along mangrove areas; (3) improper solid waste disposal that destroys newly grown mangroves; (4) low level of awareness among community members of the importance of coastal habitats; and (5) weak support from the LGU in the enforcement of the Comprehensive Municipal Fishery Ordinance.

Challenges in CBFMA areas in Hinatuan, Surigao del Sur

The Municipality of Hinatuan, on the other hand, is part of the province of Surigao del Sur in Mindanao. There are two CBFMA areas in the municipality. One is located in Brgy. Talisay that



covers 555 ha and the other is located in Brgy. San Juan with 410 ha. These areas are managed by the Socially Enlightened Association of Girls in the Rural Areas for the Sustainability of the Sea (SEAGRASS) and Barangay United for Development of Aqua Marine Sustainability (BUDAS) in Brgy. Talisay, and Active Native Develop and Unite for Human Aqua-Marine Wealth (ANDUHAW) in Brgy. San Juan. Both CBFMA areas are mangrove areas. In 2013, both areas were included in the National Greening Program of the national government. Notably, a women-managed area (WMA) has been established in Brgy. San Juan. WMAs are areas in the coastal zone that are traditionally used by women fisherfolk. The CBFMA areas in Hinatuan facilitated the mangrove reforestation of around 13 ha under the Upland Development Program in 2009.

While the CBFMA area in Badian has enjoyed relative prosperity, the community in Hinatuan is struggling to come to terms with land investments inside the CBFMA. Fishpond development legalized under the FLA has resulted in further deterioration of the area's mangroves. Abandoned, undeveloped, and underutilized (AUU) fishponds remain a central issue. There are 8.91 ha of fishponds in Hinatuan that have been abandoned. Of the nine FLAs recorded in the municipality covering around 206.71 ha, all are expired and should have been cancelled by the local government. There have been reports that mangrove cutting is still in practice inside the CBFMA areas and that there are fishponds within these areas as well. Further, the LGUs continue to issue tax declarations for areas to be developed as fishponds.

Recommendations

1. Harmonization of conflicting laws and overlapping jurisdiction among LGUs, DA-

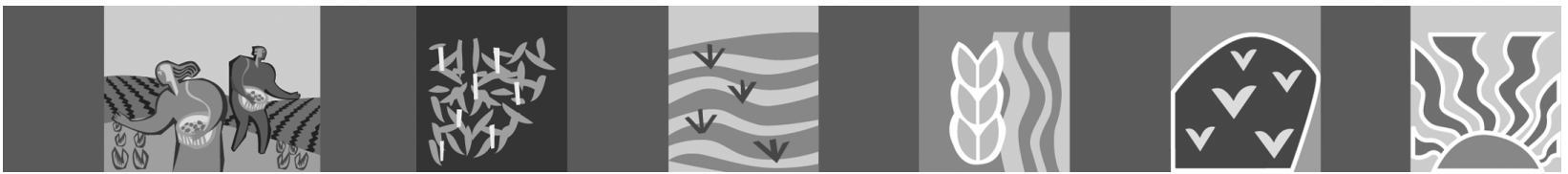
BFAR, and the DENR.

In Hinatuan, a major challenge is the overlapping of jurisdiction of DENR, BFAR, and the LGU, and conflicting policies particularly on mangrove management. For instance, despite the granting of a CBFMA to ANDUHAW and BUNLOD, the area was still converted to residential use. The CBFMA areas in Brgy. San Juan and Brgy. Talisay in Hinatuan are also threatened by the establishment of fishpond structures and the expansion of existing fishpond areas. Primary among these threats is the issuance of tax declarations by the LGUs for fishpond development.

It is noteworthy that the government, both at the local and national levels, is asserting its jurisdiction over mangrove resources. The LGU is issuing tax declarations obviously for revenue generation. The DA-BFAR, on the other hand, is asserting its jurisdiction over mangrove resources because it is also extracting permits and licenses for fishpond operations. The DENR, meanwhile, is asserting its jurisdiction over the mangrove resource for its mangrove reforestation program.

2. Strengthening of the role of CSOs and CBOs in capacity building and policy advocacy.

In the conduct of the study, it was found that the communities rely on civil society organizations (CSOs) and community-based organizations (CBOs) to build their capacity in correct mangrove reforestation and management. The mangrove reforestation programs that have been conducted in the communities are mainly focused on planting mangrove propagules and seedlings. There is little monitoring on whether these mangroves actually thrive or not. The communities also



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see CSOs and CBOs as facilitators to bridge the gap between the LGU and the community, given the lack of trust between the two parties. CSOs and CBOs are also expected to be among the advocates for the cancellation of FLAs and the reverting of AUUs to mangroves.

Specific recommendations raised during the key informant interviews:

On local governance

1. The LGU should send a letter to DA-BFAR on the status of the nine FLAs. Prior to this, the Sangguniang Bayan (SB) should write a resolution asking DA-BFAR to survey the nine FLA sites and determine the best management options for them;
2. In order to strengthen law enforcement, the LGU should form a Bantay Kawakatan or Mangrove Management Convergence Council, primarily to ensure that the remaining mangroves are properly managed. The body shall also see to it that the ratio of one hectare of fishponds to four hectares of mangroves is maintained or improved.

On awareness raising and capacity building

1. An Information, Education, and Communication campaign should be launched to increase the awareness of LGU officials and fishpond operators and caretakers of their responsibilities in mangrove management; and
2. A dialogue should be conducted among mangrove resource users to reach a consensus on how to properly operate fishponds and how to manage mangroves. ■

3.

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For the complete list of references, please contact the author of this case as indicated at the beginning of the article.