

National Fish and Wildlife Foundation

NFWF/Legacy Grant Project ID: 0302.10.021782

Coral Reef Conservation Fund 2010 - Submit Final Programmatic Report (Activities and Outcomes)

Grantee Organization: Coastal Conservation and Education Foundation, Inc.

Project Title: Reef Ecosystems Improvement through Effective Fisheries Governance

Project Period 09/01/2010 - 02/28/2012
Award Amount \$75,000.00
Matching Contributions \$100,000.00
Project Location Description (from Proposal) The project will be implemented in the municipalities of Medellin, San Remigio, Tabuelan and Tuburan located in the Far Northern Cebu Province, Philippines involving 17 MPAs with a total of 406.06 ha.

Project Summary (from Proposal) Address issues of overfishing and rapid degradation of coastal ecosystems which threaten fish stocks in Central Philippines with collapse.

Summary of Accomplishments Project milestones were: Formation & strengthening of the Far North Cebu CRM Council as key institutional mechanism of the MPA network; Conduct of MPA network planning workshop; Coastal Resource Management planning; MPA Management planning workshop for at least 3 MPAs in Tuburan & Medellin; Provision of technical assistance to harmonize municipal fisheries & CRM ordinances congruent to MPA networking and EBFM; Organization & establishment of inter-municipal wide coastal law enforcement mechanism; Technical assistance to Far North Cebu CRM Council in MPA network management plan adoption and implementation; Technical assistant to LGUs in implementing selected EBFM control-oriented measures; Planning & technical assistance to municipal CRM/MPA managers in individual MPA management & implementation of other CRM tools; Development & installation of sustainable financing mechanisms of MPAs; Capacity building of municipal & community CRM/MPA managers; Organizational & policy development support to Municipal Fisheries & Aquatic Resource Management Councils & MPA management bodies; IEC materials produced & disseminated; Formation of successor generation of MPA leaders from the youth sector; Formation of successor generation of MPA leaders from the women sector; Annual monitoring of MPA on biophysical, social impact & MPA management effectiveness; participatory resource assessment and fishery research; and, organizing of inter-municipal MPA monitoring team.

Lessons Learned Lessons learned were: (a) Improved management of coastal resources is contingent upon enhanced local capacities for reef governance. There is, therefore, a need to continually build capacities of local governments and MPA managers in every way possible.; (b) Inter local cooperation for the shared responsibility to manage common resources is essential.; (c) Protecting the resources in the Far North Cebu area is a shared responsibility between and among local government units, local community, non-government organizations, ACADEME and stakeholders.; (d) Building local and community organizations such as MFARMCs, MPA management councils, and People's Organizations is critical towards ensuring sustainability of coastal management programs.; (e) It is important to continuously monitor and evaluate the conditions of the resources through participatory and accepted methods for monitoring.

Conservation Activities	Formation and strengthening of the Far North Cebu CRM Council as institutional mechanism of the MPA network
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Progress Measures Value at Grant Completion	Other (# MPA network formed and strengthened) 1
Conservation Activities Progress Measures Value at Grant Completion	MPA network planning workshop Other (# MPA network management plan created and implemented by network member local government authorities) 1
Conservation Activities Progress Measures Value at Grant Completion	Coastal Resource Management Planning for the Municipality of Medellin Other (# CRM Plan for the Municipality of Medellin, Cebu) 1
Conservation Activities Progress Measures Value at Grant Completion	MPA Management Planning-workshop (1 MPA in Tuburan town; 2 MPAs in Medellin town) # of management plans created or updated within last five years 3
Conservation Activities Progress Measures Value at Grant Completion	Technical assistance to harmonize municipal fisheries and CRM ordinances congruent to MPA networking and EBFM Other (# Harmonized fisheries and CRM policies enacted congruent to MPA networking and EBFM) 1
Conservation Activities Progress Measures Value at Grant Completion	Organize and establishment of inter-municipal wide coastal law enforcement mechanism Other (# Inter-municipal wide coastal law enforcement mechanism established) 1
Conservation Activities Progress Measures Value at Grant Completion	Technical assistance to Far North Cebu CRM Council in MPA network management plan adoption and implementation % activities from management plan being implemented 100
Conservation Activities Progress Measures Value at Grant Completion	Technical assistance to local government units (LGUs) in implementing selected EBFM control-oriented measures such as fishing gear control Other (# of local government authorities implementing selected EBFM control-oriented measures) 4
Conservation Activities Progress Measures Value at Grant Completion	Planning and technical assistance to municipal CRM/MPA managers in individual MPA management and implementation of other CRM tools Other (# Local government authorities and community CRM/MPA managers assisted and capacitated) 200
Conservation Activities Progress Measures Value at Grant Completion	Development and installation of sustainable financing mechanisms of MPAs Other (# User fee system and other sustainable financing mechanism installed) 3
Conservation Activities Progress Measures Value at Grant Completion	Capacity building of municipal and community CRM/MPA managers on cetacean and marine turtles conservation Other (# Local government and community CRM/MPA managers trained) 30
Conservation Activities Progress Measures Value at Grant Completion	Organizational and policy development support to Municipal Fisheries and Aquatic Resource Management Councils (MFARMCs) and MPA Management Bodies Other (# of MFARMCs and MPA Management Bodies assisted regularly) 21
Conservation Activities Progress Measures Value at Grant Completion	Information, Education and Communication materials produced and disseminated Other (# of project brochure disseminated) 1000
Conservation Activities Progress Measures Value at Grant Completion	Information, Education and Communication materials produced and disseminated Other (# of posters disseminated) 1000
Conservation Activities	Information, Education and Communication materials produced and disseminated

Progress Measures Value at Grant Completion	Other (# of Tarpaulin billboards) 25
Conservation Activities disseminated Progress Measures Value at Grant Completion	Information, Education and Communication materials produced and Other (# of leaflets on MPA network) 1000
Conservation Activities disseminated Progress Measures Value at Grant Completion	Information, Education and Communication materials produced and Other (# of leaflet on Tanon Strait ecosystem and EBFM) 1000
Conservation Activities disseminated Progress Measures Value at Grant Completion	Information, Education and Communication materials produced and Other (# of leaflet on cetacean and marine turtle conservation) 1000
Conservation Activities Progress Measures Value at Grant Completion	Formation of successor generation MPA leaders from the youth Other (# of local youth trained on CRM and MPA) 50
Conservation Activities Progress Measures Value at Grant Completion	Formation of successor generation of MPA leaders from the women sector Other (# of local women trained on CRM and MPA) 50
Conservation Activities management effectiveness Progress Measures Value at Grant Completion	Annual monitoring of MPA on biophysical, social impact and MPA Other (# of MPAs monitored annually) 17
Conservation Activities Progress Measures Value at Grant Completion	Participatory resource assessment and fishery research Other (# of resource assessment and fishery research conducted) 1
Conservation Activities Progress Measures Value at Grant Completion	Organizing of Inter-municipal MPA monitoring team Other (# of inter-municipal MPA monitoring team developed and capacitated) 1

Conservation Outcome(s) Conservation Indicator Metric(s) Baseline Metric Value Metric Value at Grant Completion Long-term Goal Metric Value Year in which Long Term Metric Value is Anticipated	Improved reef fish stocks Other (Reef fish biomass) 0.04 metric tons/km2 Very Poor 5.1-20.0 metric tons/km2 Poor 20.1-35.0 metric tons/km2 Moderate 2015
Conservation Outcome(s) Conservation Indicator Metric(s) Baseline Metric Value Metric Value at Grant Completion Long-term Goal Metric Value Year in which Long Term Metric Value is Anticipated	Improved hard coral cover % live coral cover 21.59% Poor 25.0-49.99% Fair 50.0-74.99% Good 2020
Conservation Outcome(s) Conservation Indicator Metric(s) Baseline Metric Value Metric Value at Grant Completion Long-term Goal Metric Value Year in which Long Term Metric Value is Anticipated	Improved MPA management effectiveness Other (CCEF MPA management effectiveness rating) Level 2-Established Level 3-Enforced Level 4-Sustained 2015

REEF ECOSYSTEMS IMPROVED THROUGH EFFECTIVE FISHERIES GOVERNANCE (REEF Gov) PROJECT

Final Report

(September 2010 – March 2012)

Atty. Rose-Liza Eisma-Osorio

Executive Director, Coastal Conservation and Education Foundation, Cebu City

May 2012

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Acronyms and Abbreviations

APFA	Apalan Fishermen Association
BFAR	Bureau of Fisheries and Aquatic Resources
BLGU	Barangay Local Government Unit
CCEF	Coastal Conservation and Education Foundation, Inc.
CO	Community Officer
CBU	Capital Build Up
CLE	Coastal Law Enforcement
CRM	Coastal Resource Management
CMMD	Coastal and Marine Management Division
CENRO	Community Environment and Natural Resources Office
CLET	Coastal Law Enforcement Team
DENR	Department of Environment and Natural Resources
ECC	Environmental Compliance Certificate
EMB	Environmental Management Bureau
FNCCRMC	Far North Cebu Coastal Resource Management Council
FANOCLET	Far North Cebu Coastal Law Enforcement Team
GPS	Global Positioning System
IBP	Integrated Bar of the Philippines
IFARMC	Integrated Fisheries and Aquatic Resource Management Council
ICRMP	Integrated Coastal Resource Management Plan
IEC	Information, Education and Communication
IRA	Internal Revenue Allotment
LGU	Local Government Unit
MAO	Municipal Agriculture Office
MFARMC	Municipal Fisheries Aquatic Resource Management Council
MLGU	Municipal Local Government Unit
MOA	Memorandum of Agreement
MPDO	Municipal Planning and Development Office
MSWD	Municipal Social Welfare and Development
MHO	Municipal Health Office
MTO	Municipal Tourism Office
MPA	Marine Protected Area
NBI	National Bureau of Investigation
NFWF	National Fish and Wildlife Foundation
NGO	Non Government Organization
PIP	Project Implementation Plan
PNP	Philippine National Police
PO	People's Organization
PCRA	Participatory Coastal Resource Assessment
PLGU	Provincial Local Government Unit
REMOTE	Research and Monitoring Team
SB	Sangguniang Bayan
TUFFA	Tambungon United Farmers and Fisherfolk Association

Project Title: Reef Ecosystems Improved Through Effective Fisheries Governance Program in the Province of Cebu, Philippines
Type of Report: Final Report
Period Covered: September 2010 – March 2012
Submitted on: May 2012

Executive Summary

This final report features the over-all accomplishments and milestones of the project: Reef Ecosystems Improved through Effective Fisheries Governance Program in the Province of Cebu, Philippines, covering the period from September 2010 to March 2012. The project aims to improve the management capacity of local government units (LGUs) and community managers in coastal conservation and fisheries management; develop and capacitate a constituency for marine protected area (MPA) networking at the community-, municipal- and inter-LGU levels for effective management, enforcement, monitoring and policy development; and to integrate biophysical, socio-economic and governance measures into their coastal monitoring and evaluation programs.

The Coastal Conservation and Education Foundation (CCEF) has played an critical role in the implementation of coastal resource management in the towns of Tuburan, Tabuelan, Medellin and San Remigio in the Province of Cebu, Central Philippines through the strengthening of capacity of the coastal resources management (CRM) partners in the entire far northern area of the province of Cebu. The project began with the signing of the Memorandum of Agreement (MOA) between the concerned local government units and CCEF, and was followed by the accreditation of CCEF in the four towns by their respective legislative members.

This final report also focuses on project milestones consisting of the (a) formation and strengthening of the Far North Cebu CRM Council as a key institutional mechanism of the MPA network; (b) conduct of the MPA network planning workshop; (c) Coastal Resource Management (CRM) planning specifically for the Municipality of Medellin; (d) MPA Management planning workshop for at least 3 MPAs in Tuburan and Medellin towns; (e) provision of technical assistance to harmonize municipal fisheries and CRM ordinances congruent to MPA networking and EBFM; (f) organization and establishment of inter-municipal wide coastal law enforcement mechanism; (g) technical assistance to Far North Cebu CRM Council in MPA network management plan adoption and implementation; (h) technical assistant to LGUs in implementing selected EBFM control-oriented measures such as fishing gear control; (i) planning and technical assistance to municipal CRM/MPA managers in individual MPA management and implementation of other CRM tools (e.g., Fisheries and Habitat Management, Shoreline/foreshore Management, Coastal Tourism Development, Waste Management, Enterprise and Livelihood, Watershed Management, Coastal Zoning, Coastal Law Enforcement (CLE), and Legal and Institutional Arrangements); (j) development and installation of sustainable financing mechanisms of MPAs; (k) capacity building of municipal and community CRM/MPA managers on cetacean and marine turtles conservation; (l) organizational and policy development support to Municipal Fisheries and Aquatic Resource Management Councils

(MFARMCs) and MPA management bodies; (m) IEC materials produced and disseminated; (n) formation of successor generation of MPA leaders from the youth sector; (o) formation of successor generation of MPA leaders from the women sector; (p) annual monitoring of MPA on biophysical, social impact and MPA management effectiveness; (q) participatory resource assessment and fishery research; (r) organizing of inter-municipal MPA monitoring team.

The project focused on capacity building of local government units and community managers to improve their management skills and develop a constituency for MPA networking while integrating biophysical and governance measures into the program. Implementing a multi-tiered coastal management program started at the barangay or village level through the organization and strengthening of the people's organizations and MPA management boards/councils; information, education, and communication (IEC) to the community; and assistance in enterprise and livelihood projects. This was followed by project interventions at the municipal level where capacity-building activities were done for mangrove management training, foreshore management training, ICRM planning, MPA management planning, refresher course on coastal law enforcement, fisheries orientation sessions and mobilizations, MPA budget allocation from LGUs, establishment of mangrove nursery, technical assistance to MPA monitoring, and installation of MPA marker buoys. Finally, at the inter-municipal and/or provincial level, the Far North Cebu CRM Council (FNCCRM), Integrated Fisheries and Aquatic Resources Management Council (IFARMC) and Far North Cebu Coastal Law Enforcement Team (FANOCLET) were established through technical assistance of the project. These LGU alliances were intended to strengthen the campaign on integrating and institutionalizing the alliance of governments to protect, conserve and manage coastal and marine resources in their areas using the ecosystem approach to management.

Complementary to these capacity-building activities are educational sessions on Ecosystem-Based Fisheries Management (EBFM) and MPA Networking; MPA network planning workshop; a FNCCRM council cross visit to the Province of Bohol; inter-LGU-/Cluster-wide council meetings; a study tour to Bataan Cetacean and Marine Turtle Conservation Center; youth camp; community video showing; development of posters, billboards, marker buoys, and other information, education and communications (IEC) especially to women and youth leaders.

Activity Components of the Project Plan

The project has three general objectives, which are to increase (i) improved management capacity of local government units (LGUs) and community managers on coastal conservation and fisheries management; (ii) developed and capacitated a constituency for the marine protected area (MPA) networking at the community-, municipal- and inter-LGU-levels for effective management, enforcement, monitoring and policy development; and (iii) integrated biophysical, socio-economic and governance measures into the coastal monitoring and evaluation program.

To effectively and efficiently achieve the objectives, target activities were identified which were espoused in the team's project implementation plan (PIP). This PIP has been the project implementation guide and has been key in addressing issues and concerns arising from the different aspects of management.

Milestones of the Project

The project has been implemented in four (4) municipalities in the Province of Cebu, namely: Medellin, San Remigio, Tuburan and Tabuelan, involving 17 MPAs with a total of 406.06 hectares. Throughout project implementation, eighteen (18) project milestones were noted. These were: (a) formation and strengthening of the Far North Cebu CRM Council as a key institutional mechanism of the MPA network; (b) conduct of the MPA network planning workshop; (c) Coastal Resource Management (CRM) planning specifically for the Municipality of Medellin; (d) MPA Management planning workshop for at least 3 MPAs in Tuburan and Medellin towns; (e) provision of technical assistance to harmonize municipal fisheries and CRM ordinances congruent to MPA networking and EBFM; (f) organization and establishment of inter-municipal wide coastal law enforcement mechanism; (g) technical assistance to Far North Cebu CRM Council in MPA network management plan adoption and implementation; (h) technical assistant to LGUs in implementing selected EBFM control-oriented measures such as fishing gear control; (i) planning and technical assistance to municipal CRM/MPA managers in individual MPA management and implementation of other CRM tools (e.g., Fisheries and Habitat Management, Shoreline/foreshore Management, Coastal Tourism Development, Waste Management, Enterprise and Livelihood, Watershed Management, Coastal Zoning, Coastal Law Enforcement (CLE), and Legal and Institutional Arrangements); (j) development and installation of sustainable financing mechanisms of MPAs; (k) capacity building of municipal and community CRM/MPA managers on cetacean and marine turtles conservation; (l) organizational and policy development support to Municipal Fisheries and Aquatic Resource Management Councils (MFARMCs) and MPA management bodies; (m) IEC materials produced and disseminated; (n) formation of successor generation of MPA leaders from the youth sector; (o) formation of successor generation of MPA leaders from the women sector; (p) annual monitoring of MPA on biophysical, social impact and MPA management effectiveness; (q) participatory resource assessment and fishery research; (r) organizing of inter-municipal MPA monitoring team.

A. Formation and Strengthening of the Far North Cebu CRM Council

1. Education Sessions on EBFM and MPA Networking

To initiate the formation of the Far North Cebu CRM Council, the project initiated education sessions on EBFM and MPA Networking for members of the MFARMCs on the basic knowledge and understanding of the MPA networking concept. The MFARMCs are composed of fishers, fish warden, municipal agriculture officers, municipal planning and development officers, *Sangguniang Bayan* member chairperson committee on fisheries and environment, barangay captains of 18 MPAs, youth sector and women.

This activity was conducted on January 25, 2011 for a total of 26 participants attended the activity, 20 were male and six were female. The major output of the activity was the creation and organization of Integrated Fisheries and Aquatic Resources Management Council (IFARMC) whose responsibilities are to implement the plans and activities set up by the four member municipalities. The creation of this council was guided and based on the Republic Act 8550, otherwise known as the "Philippine Fisheries Code of 1998".

2. MOA signing for the Creation of Far North Cebu CRM Council

As a consultative body of a common resource like the Northern Tañon Strait, the IFARMC advocated for the formal establishment of the Far North Cebu Coastal Resource Management Board between the local chief executive officers or mayors of the involved municipalities. Further, the IFARMC also extended their technical expertise in the formulation of the Integrated Coastal Resource Management Plan consolidating various appropriate interventions to fully protect the strait that would be considered by the FNCCRM Council.

The ceremonial MOA signing was done on June 2, 2011. The ceremonial signing was participated in by the different head of offices from National Bureau of Investigation (NBI), PNP, Phil. Army, Prosecutors, Integrated Bar of the Philippines (IBP), Congressman Salimbangon, Provincial Board Members, Mayors and Vice Mayors of the four towns and one city, IFARMC officers, NGO, BFAR, DENR, Media and the Provincial LGU headed by Gov. Gwendolyn Garcia.

At the end of the activity Gov. Gwendolyn Garcia handed over a check worth Php500,000 to the council and announced that it was just the beginning of her commitment of support. She also donated one PL speed boat for the Far North Cebu Cluster as well two pieces of 10M candle search lights, insurance of fish wardens, and one GPS unit to the cluster. Congressman Salimbangon, the House of Representative member representing the same district, also gave his commitment of support by giving a monetary amount intended for the enterprise and alternative livelihood of the fishers of the participating LGUs once the council office is installed.



Fig.1. MOA Signing for the creation of Far North Cebu CRM Council (FNCCRM).

3. FNCCRM Council cross learning visit to Province of Bohol

Responding to the needs of the FNCCRM Council especially on inter-municipal wide coastal law enforcement activities, the project conducted a cross learning visit to demonstrate how other inter-municipal alliances are addressing problems such as the encroachment of commercial fishing, the use of fine mesh nets, fishing without permit, cyanide fishing, compressor and the like. This activity, which was conducted on August 18 to 20, 2011, at the nearby province of Bohol, particularly the municipalities of Maribojoc and Tubigon was aimed at strengthening the FNCCRM Council and their Coastal Law Enforcement (CLE) initiatives in the Far North Cebu area while also enhancing their capacities on the implementation of CRM, MPA, CLE, solid waste management (SWM), and ecotourism local government initiatives.



Fig.2. FNCCRM Council cross visit to the Province of Bohol.

Learning from the good track record of the Province of Bohol on CLE and ecotourism, the

project facilitated the cross learning visit for a total of 60 participants. These were the Mayors, SB representative, all coastal barangay captains, MPDO, MAO, representatives from *Bantay Dagat*, and the MFARMC of the four member municipalities in the Far North Cebu Cluster.

The participants were able to observe and acquire knowledge on the implementation of CRM, CLE, SWM, MPA and ecotourism initiatives in the towns of Maribojoc and Tubigon. During the activity, the LGUs counterparted a total amount of Php102,800.

B. Conduct of the MPA Network Planning Workshop

1. Assessment and MPA Network Planning Workshop

The Marine Protected Area Network Management Planning Workshop covered eight (8) major components/strategies and management programs to respond to the issues of coastal resource depletion and to fully protect, conserve, and rehabilitate the ecosystems inside and outside marine sanctuaries. The management programs include: MPA Network development and strengthening, enterprise and livelihood development, Information and Education Campaign (IEC), Coastal Law Enforcement (CLE), research and monitoring, repair and maintenance, policy and ordinances, and ecosystems enhancement and management.

Policies and other regulatory mechanisms, strategies and actions are specified in every management option.

The main output of the activity was a draft of MPA network management plan formulated right after the activity on July 13 to 15, 2011 held at Durnhan White Beach Resort, Tabuelan, Cebu. It was participated in by stakeholders from the four towns composed of barangay captains of 19 barangays with established MPAs, fish wardens, MAO, MPDO and SB with a total of 48 attendees.

Incorporated in the MPA Network management plan was the vision, mission and goals for the 19 established MPAs within the network. National government agencies that lent a hand in conducting the activity were the Department of Environment and Natural Resources (DENR) through their Community Environment and Natural Resources Officers (CENRO both Toledo City and Carmen), PENRO, Bureau of Fisheries and Aquatic Resources (BFAR) and Coastal and Marine Management Division (CMMD).



Figure 3. Mr. Moreno Tagra (standing in front) CENR Officer facilitated Input on foreshore/shoreline

C. Coastal Resource Management Planning for the Municipality of Medellin

1. ICRM Planning for Medellin and Tabuelan

The ICRM Planning workshop was conducted on October 12 to 15, 2010 at the Tabuelan Training Center and October 19 to 21, 2010 at the Medellin Social Hall. It was participated in by different stakeholders involved in the town such as Mayors, *Sangguniang Bayan* members, Philippine National Police, Department of Interior and Local Government, Municipal Agriculture Office, Municipal Planning and Development Office, Municipal Social Welfare and Development, all coastal barangay captains, representatives from fisher sectors, women, Municipal Tourism Office, Municipal Health Office, fish wardens/*Bantay Bagat* and non-government organizations of the respective towns.



Based on the original project design, the Municipality of Tabuelan was not included but due to supplemental funding from the regional office of Department of Environment and Natural Resources (DENR), the town was included in the ICRM planning activities. Before the planning workshop the two municipal mayors of Tabuelan and Medellin issued executive orders creating their ICRM-Technical Working Group (TWG) responsible in the formulation of the plan.

To date, there are two ICRM Plans formulated in the municipalities of Tabuelan and Medellin, these are five-year comprehensive plans consisting of 11 components/strategies running from 2011 to 2015. It was refined and finalized before it was presented to

the SB members for legislation and adoption. The ICRM Plan of both municipalities were unanimously approved and adopted in January 2011 by their respective legislative and executive members.

The four-day workshop and write-shop would have not been realized without the help and counterpart support from DENR-CMMD worth Php24,000 and the municipal LGUs of Php18,000. Other counterpart contributions covered the venue, LCD projector and additional computers, while BFAR and CENRO extended support by providing inputs as resource speakers per component of the plans

D. MPA Management Planning Workshop for 3 MPAs

1. MPA Management Planning for Medellin MPAs

To effectively manage MPAs, a management plan is an integral tool in the development of MPAs and must be crafted to effectively guide management bodies. The MPA plan serves as a “blue print” for managers to effectively implement protected areas, and which also serves as basis for annual budgeting at the barangay and municipal level.

MPA management planning was conducted in Medellin only, since this is only town that did not have MPA management plans at the project outset. The Tuburan MPAs (Antipolo and Daan Lungsod) have already approved their MPA management plans at that time. Thus, the project expanded the MPA management planning workshop from two MPAs in Medellin to four MPAs. To date, there are now four MPA management plans formulated in Medellin, which have been adopted and approved at the barangay level. These are three-year comprehensive plans subject to assessment and re-planning.

The MPA Management Plans cover five areas of concerns namely: Coastal Law Enforcement (CLE), Information and Education Campaign (IEC), Capacity Building and Organizational Development (CB-OD), Research Monitoring and Evaluation (RME), Linkaging and Fund Sourcing (LFC). Each area of concern was carefully discussed and deliberated by committee members who formulated the interventions and activities to resolve the needs and issues in management.

E. Technical Assistance to Harmonize Municipal Fisheries and CRM Ordinances Congruent to MPA Networking and EBFM

1. Creation and Organization of IFARMC

The name of the newly organized IFARMC is SARMETATU-IFARMC or “San Remigio, Medellin, Tabuelan and Tuburan Integrated Fisheries and Aquatic Resources Management Council”. The members are composed of SB Committee members on Fisheries and Environment, municipal planning and development officer, municipal agricultural officer, fishers representatives, fish warden, youth and women representatives, business sector representative, and non-government organizations.

The oath taking ceremony for the members of the IFARMC was done on June 2 2011 at San Remigio SB Session Hall with the Governor Gwendolyn Garcia of Cebu acting as the inducting officer. The national agencies, such as BFAR and DENR, also expressed their commitment to support the group.

2. Project Support to FNCCRM and IFARMC Activities

Monthly meetings have been organized by the IFARMC to discuss the draft MOA for the creation of the FNCCRM Council, passed policy recommendations and resolutions to harmonize fisheries policies in the four LGUs, and schedule future capacity-building activities, formal oath taking ceremony of the officers and ceremonial MOA signing between the mayors of the FNCCRM Council.

Regular monthly meetings are now conducted by the IFARMC. These have been attended by the representatives of the MFARMCs of Tuburan, Tabuelan, San Remigio, and Medellin while the national government agency, the Bureau of Fisheries and Aquatic Resource (BFAR), also designates personnel to attend every meeting of the council.

F. Organize and Establishment of Inter-municipal wide coastal law enforcement mechanism

1. Cluster-wide CLE operations planning and protocol formulation

With the host of illegal and destructive fishing activities that goes beyond the municipal boundaries of each town, management issues such as encroachment of commercial fishing, the use of fine mesh nets, fishing without permit, cyanide fishing, compressor, and the like became a cluster concern. It was identified that there was a need to plan for cluster-wide CLE operations and to formulate protocols to implement them. The activity for this formulation aimed to strengthen the Coastal Law Enforcement (CLE) in the Far North Cebu cluster/area. The outputs of the activity were the formulation of the CLE cluster-wide operations and the protocol plan. The plan specified protocols like the bi-monthly conduct of cluster-wide seaborne patrol operations, parallel to daily municipal-level seaborne patrol operations. Further, a backup system was made, and collaboration and communications between and among fish wardens of the four towns were also given emphasis and focus.

Pursuant to these protocol plan, the four (4) LGUs organized the FANOCLET (or the Far North Cebu Coastal Law Enforcement Team). In consonance with the formation of the inter-LGU coastal law enforcement team, regular meetings are now conducted at the end of every month, with each LGU playing host to every meeting on a rotation basis.

2. Coastal Law Enforcement Refresher course

With illegal fishing activities that are still visible in the area, key players are encouraged to work hand in hand in order to address these. Strengthening the Municipal Coastal Law Enforcement Team was clearly needed for them to be able to respond to problems and any forms of fishery law violations. The project saw the need for the municipal fish wardens to access information on fishery laws and other related fishery ordinances. In collaboration with the local government units of the four municipalities and national government agencies (BFAR and PNP), refresher courses on coastal law enforcement were conducted. The following were the objectives of the activities:

- Identify the different agencies involved in fishery law enforcement and become familiar with their respective functions.
- Identify the fishery/coastal issues within the municipality and in the ecosystem they happen in.
- Gain an understanding on the basic coastal/marine ecosystem.
- Gain knowledge about the general provisions of RA 8550, their enforcement, implementation, as well as prohibitions and penalties to be imposed according to the law.
- Update on the Fishery Administrative Orders and other relevant laws currently applicable in the municipal waters of the LGU.
- Know the proper procedure in gathering and handling evidences and filing cases.
- Know the techniques and protocols in Vessel Identification, Pre-boarding and Boarding Procedures, Identification of Permits and Licenses, Rules of the Nautical Road, Map



Fig.5. P/Ins. Bacayo, Chief of Police handle topic on seizure, arrest and affidavit making. On the other picture is identification cards of the deputized fishwarden.

reading and plotting, PNP rules of Engagement, Search Arrest, Seizure and Custodial Investigation in Maritime Law Enforcement.

- Know the use and importance of Global Positioning System (GPS) units.
- Know the current trends and innovations of coastal law enforcement in Region 7.
- Come up with a collaborative coastal law enforcement operations plan.

The first training was conducted in January 2011 for the towns of Tuburan and Tabuelan while the second training was held on March 2011 for the towns of San Remigio and Medellin. The activity was coordinated with the Bureau of Fisheries and Aquatic Resources (BFAR) technical staff and Philippine National Police (PNP) who were resource speakers during the activity.

Hands-on training on seaborne patrol operations was experienced by the participants the night before the end of the activity. Coastal Law Enforcement Teams were organized in each municipality to function as front-liners in the implementation of local and national laws. For the year, there have been 171 trained and deputized fish wardens in all the concerned towns. For legitimacy, the Municipal Mayors of the respective towns issued certificates of appointment and official identification cards to the newly trained fish wardens right after the training.

3. Acquisition of cluster wide patrol boat

The ceremonial turnover of the patrol boat was conducted on August 31, 2011 and was attended by various stakeholders from the office of the PNP, MAO, MPDO, fish wardens, coastal barangay captains and others. A ceremonial blessing was also done. The patrol boat will serve as back-up to the existing patrol boats in each municipality.

As a counterpart, the LGU hired two personnel (job order employees) to do regular maintenance of the boat and to conduct regular seaborne patrol operations 24/7. Mayor Rex Casiano T. Gerona also allotted a Php10,000 budget for the blessing ceremony.



Fig.6. The Far North Cebu CRM Councils Patrol Boat

G. Technical Assistance to Far North Cebu CRM Council in MPA network management plan adoption and implementation

1. Regular meetings of the IFARMC and FNCCRM Council to discuss implementation of MPA network management plan

The project provides technical assistance to the FNCCRM Council and IFARMC during regular meetings of these bodies especially in discussing MPA networking plan implementation issues. A joint meeting between the FNCCRM Council and IFARMC was organized together with the Province of Cebu to discuss possible technical assistance for the 17 MPAs within the inter-LGU cluster, especially on developing ecotourism and livelihood activities, enhancement of marker buoys delineating the MPAs, provision of equipment for MPA guards, coastal law enforcement

issues, and the like. The project conducted these meetings with representatives from the four LGUs last February 13-14, 2012.

2. Organization and strengthening of Municipal Coastal Law Enforcement Team

As a primary aspect of MPA network management plan, the project focused on organizing and strengthening the municipal coastal law enforcement team in order to implement the MPA network management plan as well as other fishery laws and other related ordinances. The selection and appointment of fish wardens were based upon the decision of the municipal mayors. Since, being a fish warden is voluntary, it is not mandatory for the LGU to pay their salary. However, some LGUs, particularly in the municipalities of Tuburan, Tabuelan, Medellin, and San Remigio, are giving minimal incentives/honorarium to fish wardens for their voluntary work. The table below shows the honorarium contributions of the LGUs to their fish wardens.

Table. 1. Honorarium contribution of LGUs to their respective Municipal fish wardens

MUNICIPALITY	NO. OF DEPUTIZED FISHWARDEN	HONORARIUM CONTRIBUTION		
		Municipal Paid (Peso)	Brgy/Village paid (Peso)	Volunteer
Tuburan	62	11 pax X 150.00/day	20 pax X 500/month	31 pax with no pay
Tabuelan	33	20 pax X 500.00/month	None	13 pax with no pay
San Remigio	58	11 pax X 170.00/day	24 pax X 650/month	23 pax with no pay
Medellin	21	21 pax X 120.00/day	None	None
Note:				
1. All fish warden in four towns are with insurance paid by the Provincial Government of Cebu.				
2. Those volunteer fish wardens were also a deputized barangay/village police and entitled to have honorarium from the barangay.				

The project also assisted in the strengthening of municipal fish wardens. The project COs constantly encourage local government units to support the fish wardens in their coastal law enforcement campaign by conducting regular meetings and providing good incentives. For the duration of the project, regular meetings have been conducted by the municipal fish wardens of the four towns. The primary task of the fish wardens is to ensure day and night sea-borne patrol operations within municipal waters and around MPAs, while the team of the Philippine National Police is in charge of the entire municipal water jurisdiction and facilitates the blotter entries and filing of cases.

3. Inter-municipal wide Seaborne Patrol Operation and Apprehension

As proof of FANOCLET's effectivity in the area, regular seaborne patrol operations have been conducted daily in the municipalities of Tabuelan, Medellin and Tuburan while only twice a week in the case of San Remigio. The town of Medellin has eight patrol boats, seven of which are purchased by the LGU while the mother boat was donated by the provincial government. San Remigio has four patrol boats, three of which are purchased by the LGU while the mother boat was donated by ICRM Project of BFAR. The town of Tuburan has two patrol boats (one speed boat, one mother boat) while in Tabuelan there is one patrol boat. During seaborne patrolling, gasoline expenses are provided by the LGU. An average of 20 liters of crude oil and special gasoline is consumed during every patrolling operation.

For the year, there have been 21 apprehensions throughout the cluster. To sum up, five apprehensions were in Tuburan (two cases filed at the regional trial court, three were compromise/administrative fines), seven apprehensions in Tabuelan (all compromise/administrative fines), four apprehensions in San Remigio (all compromise/administrative fines) and six apprehensions in the town of Medellin (all compromise/administrative fines). A compromise/administrative fine is an option provided to violators to close the case speedily through payments of penalties prescribed by municipal ordinance. Hooka diving using compressor is at the top of the apprehension list of violations, followed by commercial fishing vessels entering within 15 kilometers of municipal waters.

If amicable settlements are made and payments are rendered, then 50/50 sharing is imposed. This means 50% of the penalty is directly deposited at the LGU's account as trust fund for CRM programs while the other 50% is given to the apprehending team which is composed of the Philippine National Police (PNP) and Municipal Fish Wardens.

H. Technical Assistance to LGUs in Implementing Selected EBFM control-oriented measures such as fishing gear control

1. Fisheries Registration orientation sessions and mobilization

To start the process of implementing selected EBFM control-oriented measures, the project conducted various orientation sessions and mobilization on fishery registration was conducted



in order to help the LGUs understand the importance of registration, boat color coding, as well as their role in the registration of fishing gears, boats and fishers who are actively fishing within their respective municipal waters. The activity was conducted on February 17, 18, 25 and 28, 2011 at the municipalities of Tuburan, Tabuelan, Medellin and San Remigio.

The implementation of fisher, fishing vessel and fishing gear registration was the highlight of the said activity. Thus far, four municipalities have already implemented the annual registration of all fishing boats (motorized and non-motorized), fishing gears, and fishers (gleaners and fishers).

The impact of the said activity can clearly be seen in the implementation of color-coding of all registered boats, non-motorized or motorized, and the issuance of identification cards to registered fishers and gleaners. The municipal agriculture officers of the four towns, with the assistance of their respective *Bantay Dagat* and MFARMC members, did the color coding right after payment was rendered to the Municipal Treasurer. Color-coding was based on the municipal fisheries code/ordinance approved by the respective *Sangguniang Bayan*, which was further brought to the provincial board for legislative approval. This strategy has been very effective especially in enhancing coastal law enforcement

as identification of local fishers in their towns during seaborne patrol operations have become easier.

I. Planning and Technical Assistance to Municipal CRM/MPA Managers in individual MPA management and implementation of other CRM tool

1. Mangrove Management Training

The Mangrove Management Seminar was also divided into two training batches in the municipalities of Tuburan, Tabuelan, San Remigio and Medellin. The first training was held at the Municipality of Tuburan with a total of 55 participants who were heads of offices, representative from Barangay LGUs and POs. The second training was held in San Remigio Social Hall with a total of 40 participants made up of stakeholders from Medellin and San Remigio.



As partners, the CENRO of Toledo and Carmen facilitated the topics, especially in the question and answer open forum. The presence of Mr. Fedencio Carreon, together with Ms. Rosela Trigo, Ms. Virginia Grijaldo and his planning officer, Mr. Arnold Omandam, made the activity a success. DENR Region 7, through its Coastal and Marine Management Division headed by Sir Edmondo Arregadas shouldered half of the budget during the activity, while the rest of the expenses were counter-parted by the LGUs and CCEF. Part of the activity was to plant mangrove seedlings in Tuburan and San Remigio on the last day. The participants of both batches were able to plant 2,000 mangrove seedlings.

The campaign on mangrove planting continued throughout the year. CCEF assisted POs and LGUs establish mangrove nurseries in the four towns. This initiative was incorporated in the CRM and MPA management plan, whose objective is to respond to the need of representativeness and connectivity between MPAs and the different ecosystems within. These initiatives are done to address the issues of mangrove cutting and deforestation causing siltation and sedimentation inside MPAs. This form of illegal activity, if not controlled, would result in decreasing fish yield.

To date, partner LGUs have planted a total of 60,000 potted seedlings; 25,000 seedlings (planted in the town of Tuburan), 36,000 for San Remigo, and 5,000 for the town of Medellin. In support of the campaign, the team assisted POs in establishing nurseries in the area. To date, there are six mangrove nurseries established in barangays Apalan, Bagasawe, Kawit and Tambongon. Dominant propagules that are potted and prepared in the nurseries are *Rhizophora (bakhaw)*. Nurseries are managed by the people's organizations and supported by the barangay LGUs. In addition, POs earn income from those potted seedlings through selling them to LGUs and private companies that conduct employee planting activities. Mangrove management plans were also incorporated with their respective ICRM plans of the four towns. The project also

assisted the Apalan Fishermen's Association (APFA) to secure its community-based fisheries management (CBFM) application at the CENRO Toledo.

2. Foreshore management planning-training

Informal settlers and illegal structures in the Far North Cebu foreshore areas are a continuing problem in Tuburan, Tabuelan, San Remigio, and Medellin which are all located along the Tañon Strait. Proper protection by strict implementation of laws and policies is a much-needed requirement for effective coastal/foreshore management.

A training was conducted to inform LGUs about their functions and powers in the protection of their shorelines and foreshore areas. The activity was held on April 5 to 7, 2011 at Durnhan White Beach Resort, Tabuelan, Cebu. It was participated in by stakeholders of the municipalities of Tuburan, Tabuelan, San Remigio and Medellin with a total of 65 participants. A major output during the training was the draft ordinance to harmonize coastal zoning of the participating LGUs. This proposed ordinance is subject for review by each municipality's respective MFARMC before it is approved by the *Sangguniang Bayan*. During the workshop, the Environment Management Bureau of DENR also facilitated the identification of issues and made an inventory of all existing structures, and those without Environment Compliance Certificate (ECC), from Medellin to Tuburan. This activity was made possible through a collaborative effort and budget counter-parting with CCEF, Department of Environment and Natural Resources (DENR) through Coastal and Marine Management Division (CMMD), Environmental Management Bureau and CENRO Carmen and Toledo.



Fig.9. Actual demolition conducted by the LGU of Tabuelan 1 month after the foreshore management training. May 28, 2011.

A physically powerful impact of the training was demonstrated through the demolition conducted by the LGU of Tabuelan headed by the Municipal Mayor Rex Casiano T. Gerona on May 28, 2011 at the shoreline of Barangay Maravilla, Tabuelan, Cebu. According to the Mayor, the structure in question had existed for 10 years and DENR had already summoned the owner three times to rid of it. The owner, however, was not responsive to the summons. After the foreshore training, the Tabuelan mayor gathered all documents from the DENR and wrote the owner to voluntarily demolish the structure. Continued unresponsiveness of the owner forced the Mayor to create a demolition team that demolished the structure, thus demonstrating LGU-Tabuelan's seriousness in implementing its local laws.

3. Enterprise & Livelihood Development

3.1. Rice Retailing in Apalan Fishermen's Association (APFA) and Bagasawe Fishermen's Association

With a starting capital of Php10,000 (seed fund), the people's organization, Barangay Apalan Fishermen's Association (or APFA) established a rice retailing livelihood at their barangay. Initially, only PO members were given top priority and could avail of rice retailing as agreed in

the approved internal policy of the organization. However, later it expanded to the community level as the demand for rice increased.

For the year, the PO negotiated for a vacant stall in the public market to establish a bigger space for rice retailing. To safeguard money earned through rice retailing, the PO decided to open a depository bank account at the town proper. A project management committee was created to manage the business. Capital build-up (CBU) was implemented in order to encourage member investment and generate more funds for another community-based enterprise venture in the future. Recently, the private company Accenture, Inc. extended financial assistance, through a Memorandum of Agreement with CCEF implementing an adopt-a-mangrove scheme, to the PO in Bagasawe and provided a total of Php60,000 capital.

3.2 Oyster culture in Tambongon Fishermen Association (TFA)

This oyster culture project was originally initiated by CCEF during a past project in 2009 supported by NOAA and it was enhanced by the Bureau of Fisheries and Aquatic Resources (BFAR) which extended technical and financial support. With the entry of the NFWF project, PO leaders managing this project were strengthened in terms of the management capacity and better organization of the management committee. At present, the oyster culture is still productive and functional, and the harvest has gradually increased. Municipal and barangay local government units have also extended technical and financial support to the PO.

3.3 Project Proposal writing for Bancasan Multi-Purpose Cooperative

A proposal was drafted concerning catering services as a source of alternative livelihood of the Bancasan Multi-Purpose Cooperative. The overall budget of the proposal was Php 500,000. The Aboitiz Foundation was identified as the possible funding agency since the cooperative is already one of their beneficiaries and it is currently an assisting organization in the site.

4. Creation of the Coastal Resource Management Office in the Municipality of Tuburan

Through an Executive Order, which was drafted by the project staff, the Municipality of Tuburan endeavored to create its Coastal Resource Management Office. The office is composed of the CRMO head, CLE officer, CO, MPA Mgt Board officer, and MFARMC Officer.

J. Development and Installation of Sustainable Financing Mechanisms of MPAs

1. MPA Budget Allocation

Barangay Development Councils have allocated annual budgets for marine sanctuary management and development in the four towns. As a result, there are now 17 barangays allocating annual budget for MPA management and development. A minimum of Php5,000.00 and a maximum of Php20,000 (dependent on IRA) have been allotted

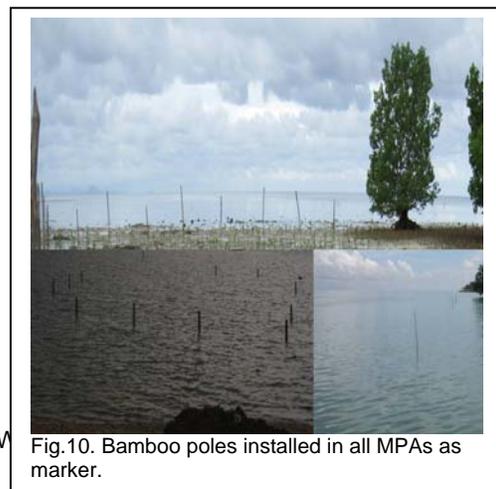


Fig.10. Bamboo poles installed in all MPAs as marker.

Reef Governance Project CCEF-NFWF

from the 20% development funds of the barangay/village.

Further, the four municipal LGUs also approved budget allocations intended for the purchase of materials like bamboos, flag, rope, wire, marine plywood, paints, nylon, cement, pipes, and bulbs for providing electricity to MPA guardhouses and areas. The following LGUs allotted budget are: Tuburan worth Php100,000, Tabuelan with Php50,000, San Remigio with Php120,000 and Medellin with Php 25,000.

2. Policy Formulation for Municipal Waters' Users Fee Ordinance

The project facilitated the formulation of the Municipal Waters' Users Fee Ordinance with the input on the user fee system of Apo Island and Moalboal as good models. This was made during the assessment workshop on fishery policy harmonization last December 2011 which was participated by 60 members of the MFARMCs and SB representatives of the four municipalities. At the end of the activity, the IFARMC members planned the drafting of a possible unified/harmonized fisheries/CRM ordinance intended for the cluster.

K. Capacity building of municipal and community CRM/MPA managers on cetacean and marine turtles conservation.

1. Seminar on Cetacean and Marine Turtle Conservation

This seminar was conducted on December 9 to 10, 2010 at Cebu Business Hotel. It was participated in by the stakeholder representatives from Tuburan, Tabuelan, San Remigio and Medellin. A total of 25 participants attended the training which had the following objectives:

- To inform the participants about the biological and ecological characteristics of the cetaceans and the marine turtles, especially the species found in the Philippines.
- To increase the awareness of the participants in regard to the ecological importance of the cetaceans and marine turtles for the marine ecosystems.
- To teach the participants different strategies for the conservation of cetaceans and marine turtles, including the corresponding legal frameworks.
- To identify the presence of species of whales, dolphins and marine turtles in the area (Northern Cebu).
- To know the frequency of stranded events in the area (Northern Cebu).
- To orient the participants on the legal framework.
- Come up with an action plan

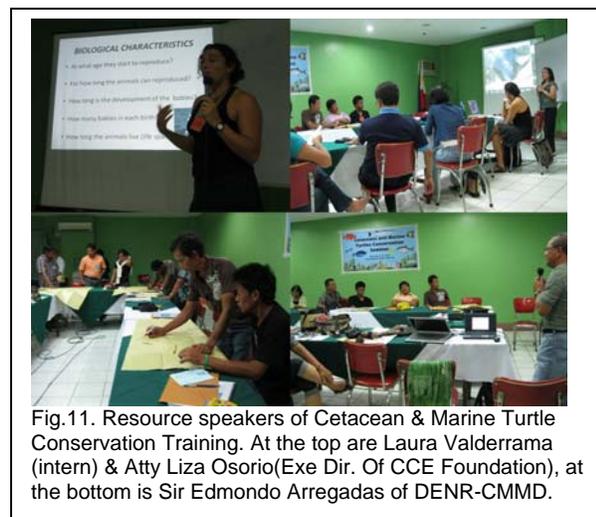


Fig.11. Resource speakers of Cetacean & Marine Turtle Conservation Training. At the top are Laura Valderrama (intern) & Atty Liza Osorio(Exe Dir. Of CCE Foundation), at the bottom is Sir Edmondo Arregadas of DENR-CMMD.

The project tapped the expertise of DENR, BFAR, and Ms. Laura Valderrama's (Columbian Intern) wherein they shared their experiences on cetacean and marine turtle conservation. One of the outputs of the activity was the formulation of an integrated action plan (alliance approach) for cetaceans and marine turtle conservation. Cross visits to cetaceans and marine turtle conservation sites, like Bataan, highlighted the activity.

2. Cross visit to Bataan Pawikan (turtle) Conservation Center

This cross-visit to the Pawikan Conservation Center was an essential activity after the December 9 to 10, 2010. It was conducted on January 26 to 28, 2011 at the Municipality of Morong, Bataan. LGUs from the municipalities of Tabuelan and Tuburan had a counterpart



Fig.12. Cross visit to Bataan Marine Turtle Conservation Center.

amount contributed to the activity, while Medellin and San Remigio gave Php1,650 (t-shirt printing). During the visit, the participants gained knowledge supplementing the training conducted in December of 2010.

Further, participants felt the importance of marine life especially when they were able to observe the actual nesting of leatherback marine turtles (*pawikan*) and the opportunity for the group to release baby *pawikan* into the sea. A side trip to Bataan Nuclear Power Plant and Ocean Park also contributed to their knowledge on environmental protection and awareness. During the visit the IFARMC was organized and elected set of officers and scheduled regular monthly meeting.

L. Organizational and Policy Development Support to MFARMCs and MPA Management Bodies

1. Strengthening of Peoples Organization and MPA Management Board/Council

To attain strong support and strengthen collaborative efforts from the municipal- to cluster-wide-intervention level, there was an emphasis to organize and strengthen all inactive and non-functional people's organization and MPA management bodies. These organizations play a vital role in the management and protection of coastal resources, particularly the MPAs in the area.

At present, a total of seventeen management boards/councils have been strengthened throughout the towns of Tuburan, Medellin, San Remigio and Tabuelan. They have become active and functional with regular meetings conducted. However, seven (7) POs have been organized and strengthened by the project in the towns of Tuburan, San Remigio and Tabuelan. The project staff with the help of the municipal fishery technicians re-organized the fishers in the remaining barangays of the four (4) municipalities.

2. Strengthening of Municipal Fisheries and Aquatic Resources Management Councils (MFARMCs)

The creation of the MFARMC in each town plays an important part in the implementation of the fisheries and coastal resource management program. The institutionalization of this organization is governed by the national law “Republic Act 8550” and functions as the consultative body of the municipal local legislative members, especially in the implementation of CRM-related activities.

For the year, four MFARMCs were organized and strengthened in the four towns of the northern cluster municipalities. It is a multi-sectoral council composed of representatives from fishers, women, youth, fish wardens, the barangay captain, the municipal agriculture officer (MAO), the municipal planning and development officer (MPDO), and the *Sangguniang Bayan* (SB) Committee on Fisheries or Environment. The LGU of San Remigio allocated an amount of Php150 per meeting/per member of the MFARMC as honorarium. Other towns are still in discussing possibilities of this type of incentive with their respective Mayors. Recently, the MFARMC of San Remigio was awarded as Outstanding MFARMC Organization in the entire region (Region 7). A plaque of appreciation was awarded, including Php80,000 cash to the organization by the officials of the Bureau of Fisheries and Aquatic Resources.

3. Policy Development support for the harvesting of Sargassum (*samo*)

To date, the project assisted in policy development in the four towns specifically on regulating the mass harvesting of Sargassum (*samo*). Initially, this was just a problem in the LGU of San Remigio, which responded by enacting an ordinance prohibiting the collection and gathering of this species of algae. However, the problem has spread to the neighboring towns of Tabuelan, Medellin and Tuburan.

A main cause is a middleman from Cebu City who buys sargassum (*samo*) from the community at a low cost. In their efforts to make ends meet for their daily needs, the people of the coastal communities have begun to harvest this sargassum and sell it. Sargassum plays an important role in maintaining the health and balance of the marine and coastal ecosystems where it provides shelter and food for fishes and other animals.

Unfortunately, there is no specific mandate in the national law, particularly “RA 8550”, making this harvesting an illegal act, which is why coastal law enforcers are hesitant to apprehend those doing the harvesting. However, the LGUs are planning to implement the total ban of harvesting/gathering algae and seagrass through a unified fishery code by local legislation in Tabuelan, San Remigio, Medellin and Tuburan with constant monitoring to be done by the municipal fish wardens.

M. Information, Education and Communication materials produced and disseminated

1. Public Hearing, Consultation and Dissemination of Information to different sectors

The project conducted three categories of information dissemination drives to the community, namely the fisher’s sector; the academe; and the upland community. A major objective was to inform the communities about the importance of marine and coastal ecosystems so that support could be garnered from them to minimize all illegal fishing activities and mitigate decreasing fish stocks.

Throughout the year, the project has been conducting information campaigns on the importance of marine and coastal ecosystems to all fishers in the coastal barangays of the towns of Tuburan, Tabuelan, Medellin and San Remigio. This was done through barangay assemblies, PO meetings, seminars, and public hearings. The COs also conducted information drives to different elementary/primary schools in the barangays.

Since most of illegal fishers in these areas come from the upland barangays, the COs conducted information drives through barangay assemblies in the upland barangays. Hand-outs and posters were distributed during public hearings. The project also conducted information drives to refresh the 17 MPA management bodies in their roles to protect these important coastal and marine ecosystems, by giving them access to information on policies and laws related to the environment.

2. Development, Printing and Dissemination of IEC Materials

There are many strategies used to disseminate vital information through the development of posters, brochures, tarpaulin, billboards, conducting film showing, holding meetings, conducting trainings, and implementing seminars, among others.

2.1. A poster was developed and designed as a strategy to inform stakeholders of the four municipalities on MPAs as tools for sustaining and protecting the biodiversity of coastal and marine resources. For this poster, a total of 500 such posters were printed and disseminated initially to project partners in the community, municipal and provincial local government units. The posters' content is informative and clearly shows the MPA's purpose, legal framework, benefits, and map showing the location of all 18 MPAs in the cluster. It was produced and translated into the Cebuano language.

This poster served as an initial campaign tool to encourage MPA networking and the formation of the FNCCRM Council in the project sites.

2.2. Project brochures and leaflets produced and disseminated. A total of 1000 copies of each kind of the project brochures and leaflets on various topics such as MPA network, Tanon Strait ecosystem and EBFM, and cetacean and marine turtle conservation, were disseminated to the

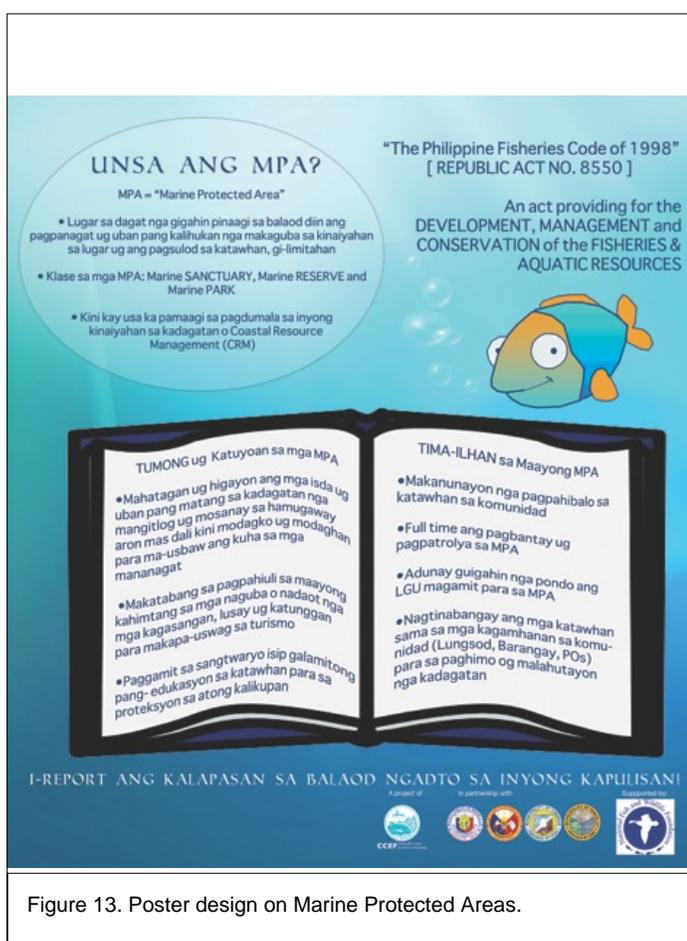


Figure 13. Poster design on Marine Protected Areas.

project stakeholders during various activities such as on-site and off-site trainings, workshops, and other community activities as related below.

2.3. 25 tarpaulin MPA billboards have been requested and set up by the project in the 17 MPAs around the project sites. The billboards show essential information such as the name and legal

basis of the MPA as well as biophysical status and conditions of the MPAs.



Figure 14. MPA billboard sign for Cansimon Marine Sanctuary in Tabuelan

3. Community Video Showing

This activity was conducted on June 16 to 17, 2011 at Tabuelan Training Center, Tabuelan, Cebu. It aimed to inform the community about the importance of coastal ecosystems and how to manage them. There were 50 stakeholders from the four municipalities that attended. Further, a quiz bowl and other games with corresponding prizes were also done after the showing to motivate the participants. Posters and other IEC materials were also distributed right after the activity.

4. Organized BANCATHON CHALLENGE during town fiesta in Tabuelan

The First Bancathon challenge of the Municipality of Tabuelan was organized and held on June 23, 2011 during the town fiesta. "Banca" means paddleboat in the Bisayan language. The activity was attended by the Mayor, Vice-Mayor, SB members and other guests including the fishers.

An amount of Php20,400 from donations and solicitations was collected and used for prizes and other activity expenses.

A total of eight contestants participated in the single paddler category while 24 contestants joined the double paddler category.

N. Formation of successor generation of MPA leaders from the youth sector

1. Youth Camp

The First Youth Camp in Northern Cebu was a venue for young leaders to internalize issues and problems in different aspects of CRM and take on leadership roles to address them. Some of the issues addressed were the degradation of coastal and marine resources, lack of participation from youth sectors, lack of funds allocated by the LGU on CRM, inactive PO leaders, continuous illegal activities in coastal areas, slow enactment of fishery-related ordinances by the SB members, and lack of enterprise development opportunities.

The youth camp activity was organized to inform the youth about their responsibilities as a key group to influence LGUs to come up effective solutions to environmental degradation and social apathy. It was a good venue to remind the new generation of their own responsibility in environment, policy-making, and in society and how problems can effectively be solved through community-based solution. Tagged as “the hope of the nation”, the activity aimed to empower this sector to become proactive in CRM.



54 young leaders were trained and educated during the activity held on June 3 to 4, 2011. It was participated in by the *Sangguniang Kabataan* and Barangay Captains of the towns. The young leaders were able to take part in a quiz bowl competition and poster-making contest right after the training activities. There were a total of 74 participants of which 22 were female and 52 were male. On the last day of the training participants planted 300 mangroves seedlings at the Poblacion River in the town of Medellin. Commitments of support were written on the streamer by the young leaders and displayed at their respective barangay hall.

O. Formation of successor generation of MPA leaders from the women sector

1. Training of women leaders

It is important to underscore the importance of the role of women in CRM and social mobilization. Information, education and communication activities were done with this sector to involve them in project activities. This was done through a workshop, interactive discussions, and a quiz bowl intended to inform women leaders about marine protected area management program. There were 55 women leaders trained and informed on the importance of coastal and marine environment and the legal framework supporting protection. It has been a prime objective to integrate gender and development into the overall program to increase participation of women to 35% in coastal resource management.

P. Annual Monitoring of MPA on biophysical, social impact and MPA management effectiveness

1. Technical Assistance on the conduct of MPA Biophysical Monitoring

The research and monitoring team (REMOTE) of CCEF assists in conducting MPA biophysical monitoring in the area (scuba diving). 16 of the 18 baselined MPAs were monitored by the project. Two MPAs are still on the proposed stages in Medellin, hence, the project decided to forego the monitoring until the LGU formally establishes these through an ordinance. For the 16 MPAs assessed, the % live coral cover (average) is 24% (Poor). This shows a slight increase in the previous year's metric value recorded at 22.03% (Poor). Reef monitoring included the core and buffer zones of the sanctuaries and the outside adjacent areas to compare if protection is effective or not. Transects were done in the 16 MPAs, both inside and outside. The table below shows the result of percent coral cover with equivalent ratings.

Table 2. Data of Percent Cover and Equivalent Rating of Corals inside MPAs.

Municipality	Name of MPA	Percent Coral Cover	Rating
San Remigio	Anapog Marine Sanctuary	14%	Poor
	Bancasan Marine Sanctuary	10%	Poor
	Busogon MPA and Fish Sanctuary	12.2%	Poor
	Kinawahan MPA and Fish Sanctuary	27.8%	Fair
	Luyang MPA and Fish Sanctuary	31%	Fair
	Maño Marine and Fish Sanctuary	18.8%	Poor
	Tabungon MPA and Fish Sanctuary	40.1%	Fair
	Victoria MPA and Fish Sanctuary	28.5%	Fair
Tabuelan	Cansimon Marine Sanctuary	24%	Poor
	Guiwanon Marine Sanctuary	29.4%	Fair
Tuburan	Antipolo Marine Reserve with Fish Sanctuary	31.5%	Fair
	Daan Lungsod Marine Reserve with Fish Sanctuary	17.8%	Fair
	Apalan Marine Reserve with Fish Sanctuary	7%	Poor
	Bagasawe Marine Reserve with Fish Sanctuary	8.6%	Poor
Medellin	Daan Lungsod Marine Protected Area	26.2%	Fair
	Gibitngil Marine Protected Area	51.7%	Good
TOTAL VALUE		24%	Poor
Equivalent rating of coral cover (Gomez, ED, PM Aliño, HT Yap, & WY Licuanan. 1994)			
<ul style="list-style-type: none"> • POOR – 0 to 25 percent • FAIR – 26 to 50 percent • GOOD – 51 to 75 percent • EXCELLENT – 76 to 100 percent 			

Generally, growth of corals is slow and growth rates must distinguish between individual colonies and the reef as a whole. Out of 16 MPAs monitored, seven (7) of which are poor condition in terms of coral cover while eight (8) are in fair condition and one (1) is in good condition (see Table 2). It appears that the poor condition of coral reefs prevailing in MPAs of

the municipalities of San Remigio, Tabuelan, Tuburan and Medellin are due to high sedimentation and siltation. Sedimentation and siltation can cause sudden death of corals since coral reef requires clear water and moderate to strong currents. Moreover, these MPAs are located in near and beside river mouth and river run-off contributed to the siltation and sedimentation in these areas.

MPAs that reached fair in live coral cover condition are Kinawahan, Luyang, Tambongon, Victoria in the town of San Remigio; Guiwanon in Tabuelan; Antipolo and Daan Lungsod in the town of Tuburan and Daan Lungsod in the town of Medellin. However, Gibitnil MPA was found to be the highest in rating which is good condition with 51.7% coral cover. The rating of coral cover of these MPAs (fair & good conditions) would increase if proper management and strict enforcement of the laws will be implemented considering the area is good, water quality is high, water flushing is good, and the corals are healthy. Meanwhile, the project has also encouraged the managers of those MPAs (in poor condition) to plant mangroves along and nearby rivers to control the siltation and sedimentation while strict law enforcement is encouraged.

Table 3. Fish Density and Biomass in all MPAs in the area.

Municipality	Name of MPA	Fish Density	Condition	Fish Biomass	Condition
San Remigio	Anapog Marine Sanctuary	365	Poor	7.4	Poor
	Bancasan Marine Sanctuary	549.8	Poor	9.8	Poor
	Busogon MPA and Fish Sanctuary	67.3	Very poor	4.7	Very poor
	Kinawahan MPA and Fish Sanctuary	126	Very poor	2.8	Very poor
	Luyang MPA and Fish Sanctuary	432.7	Poor	18.2	Poor
	Maño Marine and Fish Sanctuary	216	Poor	7.0	Poor
	Tambongon MPA and Fish Sanctuary	432.7	Poor	5.8	Poor
	Victoria MPA and Fish Sanctuary	222.5	Poor	6.6	Poor
Tabuelan	Cansimon Marine Sanctuary	173.4	Very poor	34.8	Moderate
	Guiwanon Marine Sanctuary	344.3	Poor	10.4	Poor
Tuburan	Antipolo Marine Reserve with Fish Sanctuary	513.3	Poor	17.4	Poor
	Daan Lungsod Marine Reserve with Fish Sanctuary	544.7	Poor	10.4	Poor
	Apalan Marine Reserve with Fish Sanctuary	137	Poor	2.1	Very poor
	Bagasawe Marine Reserve with Fish Sanctuary	222.7	Poor	6.2	Poor
Medellin	Daan Lungsod Marine Protected Area	95	Very poor	9.5	Poor

Municipality	Name of MPA	Fish Density	Condition	Fish Biomass	Condition
	Gibitngil Marine Protected Area	413	Poor	8.7	Poor
TOTAL		304	Poor	11	Poor
Hilomen V.V., C.L. Nañola, Jr. and A.L. Dantis. 2000					
Density (no. of fish/1000m ²)			Biomass (metric tons/km ²)		
SPECIES DENSITY		CONDITION	SPECIES BIOMASS		CONDITION
0-201		very poor	<5.0		very poor
202-676		poor	5.1-20.0		poor
677-2267		moderate	20.1-35.0		moderate
2268-7592		high	35.1-75.0		high
>7592		very high	>75		very high

The density and biomass of fishes in 16 MPAs in the cluster revealed very poor-poor in condition. The reef fish biomass has been recorded at 11 metric tons/km² (Poor) from the earlier recorded fish biomass at 8.23 metric tons/km² (Poor). It is not surprising that the densities of **target fishes** (those favored by the fishermen for their high commercial value and are common in the market for food consumption) are generally very low. For now, the Far North Cebu cluster/area generally relies on pelagic fishes or small oceanic fishes (e.g. tunas, mackerels, flying fishes). But with continued protection, the reef associated species will recover.

Table 4. Results on MPA Management Effectiveness Assessment

Municipality	Name of MPA	TOTAL CUMULATIVE SCORE	MPA MANAGEMENT LEVELS
San Remigio	Anapog Marine Sanctuary	25	Strengthened
	Bancasan Marine Sanctuary	56	Sustained
	Busogon MPA and Fish Sanctuary	28	Strengthened
	Kinawahan MPA and Fish Sanctuary	27	Strengthened
	Luyang MPA and Fish Sanctuary	25	Strengthened
	Maño Marine and Fish Sanctuary	30	Strengthened
	Tabungon MPA and Fish Sanctuary	28	Strengthened
	Victoria MPA and Fish Sanctuary	27	Strengthened
Tabuelan	Cansimon Marine Sanctuary	74	Institutionalized
	Guiwanon Marine Sanctuary	64	Institutionalized
Tuburan	Antipolo Marine Reserve with Fish Sanctuary	67	Institutionalized
	Daan Lungsod Marine Reserve with Fish Sanctuary	21	Established
	Apalan Marine Reserve with Fish Sanctuary	64	Institutionalized
	Bagasawe Marine Reserve with Fish Sanctuary	69	Institutionalized
Medellin	Daan Lungsod Marine Protected Area	39	Sustained

Municipality	Name of MPA	TOTAL CUMULATIVE SCORE	MPA MANAGEMENT LEVELS
	Gibitnil Marine Protected Area	41	Sustained
Total Average Value		43	Sustained
<i>The MPA MEAT is a harmonized version of the MPA Report Guide of the Coastal Conservation and Education Foundation, Inc. (CCEF, White et al. 2004) as modified by the Philippine Environmental Governance Project 2 (EcoGov2), (Arceo et al. in prep), facilitated by the MPA Support Network (MSN) through the CTI (Coral Triangle Initiative) Support Project or CTSP.</i>			
MPA MANAGEMENT LEVELS		TOTAL CUMULATIVE SCORES	
1 – Established		<24	
2 – Strengthened		25-31	
3 – Sustained		32-62	
4 - Institutionalized		63-84	

Out of 16 monitored MPAs in terms of management effectiveness, five (5) of which are in level 4-institutionalized and it was located in the towns of Tuburan and Tabuelan. Another three (3) are in level 3-sustained while seven (7) are in level 2-strengthened and one (1) is in level 1-established. The total average value using the MPA MEAT (amended CCEF MPA management effectiveness rating) for assessing improved management effectiveness is 43, which demonstrates Level 3 (sustained). Effectiveness of the MPA management is a big help in the sustainability of the MPA project.

2. MPA Marker buoy installation

There are newly installed marker buoys in all MPAs in the towns of Tuburan, Tabuelan, Medellin and San Remigio, especially since previous markers were damaged by typhoons in 2010. A total of Php86,400 worth of bamboo poles, ropes, buoys (barrels and medium sized buoys) were given to the four municipalities. To supplement such marker buoys, the project has also provided MPA buoy flags with appropriate messages as shown in Figure 16 below.

The repair and maintenance committee of the MPA management boards/councils led the installation activity as part of their tasks and functions. The LGUs counter-parted transportation expenses during the purchase of the materials, labor for actual installation, food and snacks of the workers, the pump boat, and the gasoline.



Fig.16. MPA buoy flags

Q. Participatory Resource Assessment and Fishery Research

1. Conduct Fish Catch Monitoring and Training

The project conducted a fish catch monitoring training for 45 PO representatives coming from 20 coastal barangays with established MPA including the respective municipal agriculturist officers (MAOs) of the four towns last December 12-13, 2011. The participants acquired technical knowledge on how to fill up the data forms acquired by the participants during the field exercise.

The schedule for the data gathering was scheduled for the following month with the submission of data to be on the second week of January to their respective MAOs. A total of 600 respondents (120 from Tuburan, 90 from Tabuelan, 240 from San Remigion and 150 from Medellin) were to be monitored. The LGUs (municipal and barangay) committed an amount of P250 per enumerator for the conduct of the fish catch monitoring.

2. Conduct Social Impact Survey

The project tapped the same fish catch enumerators to conduct the social impact monitoring. The enumerators used a standard survey form which was translated into the Bisayan language. Fifteen enumerators each who are fishers and non-fishers respectively were identified. A total of 600 respondents were interviewed by the enumerators during the last week of December 2011.

R. Organizing of Inter-municipal MPA monitoring team

1. Organize and train cluster wide MPA monitoring team

The project organized and trained 46 participants (41 male, 5 female) from the four municipalities the cluster-wide MPA monitoring team at Durhan White Beach Resort, Tabunok, Tabuelan last September 26-28, 2011. During the training, the participants were instructed on the standard methods of monitoring and data consolidation. The highlight of such training was the creation of the Far North Cebu MPA Monitoring Team composed of the municipal monitoring team from each town. The team has a total of 28 members of which 8 are specializing in fish, 8 on substrate, 8 on MPA management effectiveness rating using the MPA-MEAT, and 4 on data management.

2. Conduct skills enhancement on MPA monitoring

To enhance the skills of the members of the Far North Cebu Monitoring Team, the project facilitated the skills enhancement training on MPA monitoring last October 9-20, 2011. During the training, the monitoring team was able to apply their newly-acquired skills together with the Research and Monitoring Team (REMOTE) of CCEF. A Certificate of Appointment as regular members of the Far North Cebu Monitoring Team was distributed to the members. The certificate was signed by the chairperson of the cluster, Hon. Ricardo R. Martinez.

Lessons Learned

- Improved management of coastal resources is contingent upon enhanced local capacities for reef governance. Local government units now have an expanded mandate to be primarily responsible for the management over their coastal zone, including the 15-

km municipal waters. There is, therefore, a need to continually build capacities of local governments and MPA managers in every way possible.

- Inter local cooperation for the shared responsibility to manage common resources is essential. Such collaborative efforts and coordination with national agencies, provincial, and municipal government units, such as joint coastal law enforcement efforts, result in good governance for coastal and marine resources and encourage sharing of resources among member LGUs.
- Protecting the resources in the Far North Cebu area is a shared responsibility between and among local government units, local community, non-government organizations, ACADEME and stakeholders. If these resources are properly managed, sustainable economic benefits will be experienced by this generation and by future generations as well.
- Building local and community organizations such as MFARMCs, MPA management councils, and People's Organizations is critical towards ensuring sustainability of coastal management programs. These organizations can be considered as equal partners with local governments in terms of protecting biodiversity of marine and fisheries resources.
- It is important to continuously monitor and evaluate the conditions of the resources through participatory and accepted methods for monitoring. Building a local monitoring team can help sustain these efforts.