

# C OASTAL RESOURCE MANAGEMENT TRAINING GUIDE



October 2004

*EcoGovernance*



Development Alternatives, Inc.

This project is implemented by Development Alternatives, Inc. with the support of its subcontractors:

- Orient Integrated Development Consultants, Inc.
- Resources, Environment and Economics Center for Studies, Inc.
- Winrock International
- Abt Associates, Inc.
- Management Systems International
- Michigan State University

*Produced by the Department of Environment and Natural Resources-United States Agency for International Development's (DENR-USAID) Philippine Environmental Governance (EcoGov) Project through the assistance of the USAID under USAID PCE-1-00-99-00002-00. The views expressed and opinions contained in this publication are those of the authors and are not intended as statements of policy of USAID or the authors' parent organization.*

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# About The CRM Training Guide

**T**he **Coastal Resource Management (CRM) Training Guide** is a synthesis of the training modules and materials used by the Philippine Environmental Governance (EcoGov) Project in assisting local government units (LGUs) in CRM planning and implementation. These training modules and materials incorporate EcoGov's two-and-a-half years of experience in providing CRM technical assistance to some local government units (LGUs) in the EcoGov regions. To some extent, this Guide documents some of EcoGov's "best practices" in putting into place a governance-enhanced CRM process.

This Guide is intended for service providers<sup>1</sup> tasked to assist municipal and city LGUs in preparing and implementing governance-enhanced coastal resources and fisheries management plans. It serves as a reference to broaden their understanding of the EcoGov technical assistance approach, help them develop CRM training programs for LGUs and allow them to use EcoGov-developed analytical and decision-making tools that promote transparency, accountability and participatory decision-making.

This Guide is divided into four major modules:

- Module 1: Governance in Coastal Resource Management
- Module 2: Coastal Resource Management Planning
- Module 3: Marine Protected Area Establishment and Management
- Module 4: Enhancement of Municipal Fisheries Management

These major modules are divided into several sub-modules. Some sub-modules contain various activities. Each module and sub-module is described in terms of coverage, objectives, approach, major activities involved, expected final outputs and duration. It should be noted that the modules do not refer only to the formal or classroom-type training activity. They cover field activities as well, where participants get to apply or test newly-acquired knowledge or skills.

Highlighted (in boxes) are some of the governance principles applied in each module, sub-module or activity and some Project innovations to promote informed decision-making, increase stakeholder participation and establish clear accountabilities. Also highlighted (in boxes) are some important notes and reminders to Guide users regarding key actions that should be (or have been) taken in relation to other modules, sub-modules or activities. The Guide allows for ample discussion of the contents of the technical inputs or presentations to make sure that concepts, policies, processes and tools relevant to the modules are clearly communicated to the training participants. To achieve this, recommended lecture notes are provided at the end of each module, sub-module or activity. These notes need not be sequentially discussed.

A set of annexes is also provided, with each module having a corresponding annex (i.e., for Module 1, we have Annex 1A and Annex 1B; for Module 2, Annex 2A, and so forth), containing the definitions used, illustrations of the process followed, and the guidelines, source books and templates that have been developed by the EcoGov CRM Team for that particular module. This Training Guide does not include detailed training schedules and presentation materials used in previous training to allow users some flexibility in designing their own training activities.

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<sup>1</sup> These service providers include Department of Environment and Natural Resources (DENR) and Bureau of Fisheries and Aquatic Resources (BFAR) field offices, provincial governments, non-government organizations (NGOs), consulting firms, academic institutions and individual professionals.

# Project Background

**T**he country's rapidly growing population has resulted in a dramatic increase in the use of natural resources, bringing about adverse pressures on the environment. The stiff competition among resource users, often motivated by conflicting interests, has been aggravated by their unsustainable practices. This presents a great challenge to the government, with its limited capacity and resources, to provide innovative mechanisms directed at shifting the users' attitude towards sustainability.

It is in this light that the Philippine Environmental Governance (EcoGov) Project is strengthening LGU capacity in incorporating good governance principles and practices in Coastal Resource Management (CRM), Forests and Forest Lands Management (FFM) and Solid Waste Management (SWM). Specifically, the Project is assisting LGUs address the threats of over fishing, illegal and destructive fishing practices and degradation of coastal habitats; illegal cutting and forest lands conversion; and unmanaged solid waste. This is done by training, coaching and mentoring LGUs in the conduct of resource assessments, evaluation of options, planning, and initial implementation activities using processes and tools that pay particular attention to the transparency, accountability and participatory decision-making elements of good governance.

At the national and regional level, the EcoGov Project provides policy and advocacy/information/education/communication (IEC) support through the review and enhancement of existing policies, conduct of policy studies, development of decision-support tools and planning guidelines, and production of source books, primers and information materials. National policy support specific to the CRM sector includes the review of the Philippine Fisheries Code of 1998 (RA 8550) to enhance good governance provisions; policy studies on coastal and marine tenure arrangements/instruments; the development of a bio-economic model as a support tool for making informed decisions on municipal fisheries and CRM management; preparation of an LGU guide on foreshore management; and the development of a source book on incentive systems for CRM and fisheries.

All these local, regional and national interventions are designed to foster improved management of our coastal resources and, thus, contribute to the long-term economic development of the country.

The EcoGov Project is being implemented by the Development Alternatives, Inc. (DAI), in collaboration with the Department of Environment and Natural Resources (DENR). Technical assistance services to LGUs are being provided by EcoGov CRM national specialists and Project Regional Teams; DENR, BFAR and provincial government partners; and a number of institutional and individual service providers. Among the local institutions tapped to provide services in CRM were the Marine Environmental Resource Foundation (MERF) of the University of the Philippines Marine Science Institute (UPMSI), Mindanao State University (MSU) at Naawan, and the Zamboanga State College of Marine Science and Technology (ZSCMST).

# The CRM Modules in Summary

**F**igure 1 shows how the four CRM training modules are currently organized. Module 1 provides the introductory and conceptual framework for good governance in the context of coastal and fisheries resources management. Module 2 covers a participatory, municipal-wide CRM planning process, while Modules 3 and 4 are designed for the implementation of two specific CRM interventions: marine protected areas (MPA) and fisheries management, respectively. Modules 2 to 4 need not be done sequentially. They present three EcoGov CRM components or options, from which an LGU can choose on the basis of its needs, priorities and available resources. An LGU may be provided assistance in one or more modules, depending on its most strategic need that can be addressed. Selected LGUs, which are highly motivated and show potential for sustainability are provided technical assistance for all modules. They are potential model sites for adjacent LGUs. Modules 2, 3 and 4 are designed in such a way that they can be pursued independently. The sub-modules in Module 2, such as that on participatory assessments, can be modified to generate specific data for MPA and fisheries management operational planning and implementation.

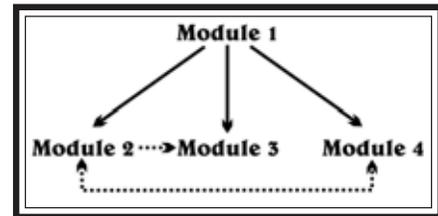


Figure 1- Module Organization

<b>Module 1:</b> <i>Governance in Coastal Resource Management</i>	<b>Module 2:</b> <i>Coastal Resource Management Planning</i>	<b>Module 3:</b> <i>Marine Protected Area (MPA) Establishment and Management</i>	<b>Module 4:</b> <i>Enhancement of Municipal Fisheries Management</i>
<p>This is an introduction to governance in CRM. It presents the concept of environmental governance and its elements, which include transparency, accountability and participatory decision-making. It provides a discussion on the key CRM issues and how governance can be made part of the solution for sustainable coastal resource use. This module includes a presentation of the EcoGov Project focusing on its entry points and approaches in providing technical assistance to LGUs.</p> <p>Module 1 also serves as an introductory module to the three other modules. It can very well be used for presenting the CRM component in LGU interactive assemblies, project briefings, orientation and presentations.</p>	<p>This provides a step-by-step guide in training and coaching LGUs on participatory, municipal-wide CRM Plan development. The planning process starts with a participatory coastal resource and socio-economic and cultural assessment and ends with the legitimization<sup>1</sup> of the plan. A preliminary sub-module on municipal water delineation has been included to highlight the importance of establishing the boundaries of the resources that the LGU intends to manage.</p> <p>This module consists of three planning sub-modules, each representing a major step in the planning process. These sub-modules are conducted sequentially, as the outputs of the previous sub-module serve as inputs to the succeeding sub-module.</p>	<p>This outlines the key steps in the establishment of a coral reef MPA and the preparation of an MPA management plan. Module 3 is divided into five sub-modules.</p> <p>Sub-module 3A calls for the orientation of the technical working group on MPA establishment and management process. Sub-module 3B (which is optional) discusses exposure trips to successful MPAs, while Sub-module 3C talks about various activities involved in site assessment and selection.</p> <p>Sub-module 3D has two major activities: formulation of the MPA plan and its legitimization. The last one, Sub-module 3E is on MPA monitoring and evaluation. This sub-module is recommended for areas where there are established and already functional MPAs.</p>	<p>This module tackles the formulation of a fisheries management plan, identifying interventions to sustain the multiple-fishery zone.</p> <p>This is divided into two sub-modules: Sub-module 4A (Municipal Fisheries and Management Plan Formulation and Drafting of Ordinance) and Sub-module 4B (Inter-LGU Fisheries Management Plan Development).</p> <p>The Sub-module 4A process involves such activities as fisheries assessment, fishery enforcement, fisheries management intervention identification, plan development and ordinance formulation. Sub-module 4B follows the same process, but it requires more efforts in ensuring collaboration between and among LGUs.</p>

Figure 2 – Module Summaries

<sup>1</sup>The process of legitimization starts with community validation of the assessment results, zoning scheme and recommended management options per zone, continues with the validation of the draft plan and ends with the adoption of the plan either through a resolution by the Sangguniang Bayan or the enactment of an ordinance.

# Module 1

## Governance in Coastal Resources Management

### Module Coverage

This module aims to introduce the concept of *environmental governance* to the participants, emphasizing the increasing recognition that weak or failure of governance, and not only the lack of technical solutions, is a key cause of environmental degradation.

Environmental governance is discussed in relation to the principles of decentralization, devolution, and subsidiarity and other related concepts such as inter-generation and inter-spatial equity and social justice. Highlighted are three elements of good governance: transparency, accountability and participatory decision-making or TAP (See **Lecture Notes, Environmental Governance Elements**, page 7, for TAP definitions and examples). Examples are provided on how TAP practices, when integrated into technical solutions and processes, can enhance the sustainability of the resource management efforts of LGUs and local communities.

Part of this module is an overview of the EcoGov Project and its CRM component, focusing on the objectives, approaches and performance indicators of the EcoGov Project and the general process in the selection of LGUs and the modes for the delivery of technical assistance. The three CRM entry points (CRM planning, marine protected area or MPA establishment and management, and fisheries management) are discussed to clarify the scope and nature of the technical assistance provided by the Project. Also, the contents of the other modules are briefly discussed.

The planning process is outlined, pointing out the innovative approaches introduced (e.g., multi-criteria analysis, incentive systems) and governance practices applied (e.g., joint analysis and informed decision-making) to specific planning and implementation activities. Further emphasis is given on the need to harmonize the CRM plan with other municipal development plans, and to collaborate with adjoining LGUs in pursuit of common goals, such as in municipal water delineation and fishery law enforcement.

This introductory module may be completed in a day.

#### **LGU mandate**

*LGUs are mandated by law to practice good governance in conducting CRM activities to address major threats to coastal resources, specifically over fishing, use of illegal and destructive fishing methods and destruction of coastal habitats.*

*Coastal resources have numerous stakeholders with different vested interests, that is why decisions and actions with respect to these assets have to be made only after conducting thorough consultations and a sound analysis of all available information.*

*LGUs and communities are urged to take collective and concrete actions that will ensure the long-term sustainability of fishery and coastal resource management.*

## Module Approach

This introductory module will be useful in interactive assemblies (IAs)<sup>2</sup> that are conducted with concerned LGUs interested in availing of EcoGov technical assistance. This module may also be used in Project orientations and briefings. Activities using this module can be held prior to the signing of a Memorandum of Agreement (MOA) between the LGU, DENR and the EcoGov Project or just before the start of the other three modules (See **Annex 1, Sample MOAs**).

The module consists of at least three input sessions. The resource person for each session will make a presentation on the assigned topic and will respond to questions that may be raised (See *recommended Lecture Notes, pages 6 to 10*).

The design of the module may be modified to incorporate group or plenary activities in between the technical inputs, such as sharing by participants on local CRM issues and challenges, assessment of past CRM efforts and achievement, and a preliminary analysis of the status of current environmental governance practices in the LGU. An action planning activity can also be added at the end of the module for the identification of, and consensus on, the next steps, schedules and responsibility centers leading to the signing of the MOA (if module is held before MOA signing) or the conduct of the succeeding modules.

## Participants

Participants of IAs may include local chief executives (LCEs), Municipal/City Planning and Development Coordinators(M/CPDCs), Municipal/City Environment and Natural Resources Officers(M/CENROs), and Sangguniang Bayan/Panglunsod (SB/SP) Chair of the Environment Committee. The IAs provide a venue for discussing local CRM issues and possible assistance from the Project.



During Project orientations for LGUs, participants may include members of the Technical Working Group (TWG) of an LGU, its local officials and community representatives. Briefings for other partners, such as personnel from DENR and BFAR and local service providers or LSPs, may be conducted to level off on the environmental governance concept and principles and the EcoGov technical assistance approach.

### **Creating a multi-sectoral technical working group (TWG)**

*After a MOA is signed, an LGU creates a multi-sectoral TWG that may be composed of 8 to 25 persons.*

*Members include: the Municipal Agriculture Officer (MAO); the Municipal Planning and Development Coordinator (MPDC); the Municipal Environment and Natural Resources Officer (MENRO); SB chair or committee member(s) for Agriculture and Fisheries or Environment; representatives from the Bantay Dagat, municipal/barangay Fisheries and Aquatic Management Councils, Association of Barangay Council (president or barangay captains), fisher folk organizations, NGOs, business sector, academic institutions and the Philippine National Police. In other LGUs, representatives from the religious sector, the military and municipal employees have been included.*

<sup>2</sup>At the start of EcoGov Phase 1, a series of regional/provincial IAs were held in the EcoGov regions to orient potential LGU partners on the EcoGov Project.

## Lecture Notes

### Environmental Governance

#### I. What is Environmental Governance?

“Role of government in managing the inter-relationships between the various subsystems in nature, such as those within and among different species and ecosystems, including the economic, social and cultural subsystems” (Victor Ramos, 2001)

It is about:

- Making decisions and carrying out supporting actions. First and foremost, the LGU has to define a clear CRM vision and mission, with a sound basis. Supporting actions will include
  - a. Issuance of sound policies
  - b. Recognition of customary rights
  - c. Mobilization, realignment and approval of funds
  - d. Law enforcement
  - e. Monitoring performance after decisions and actions were carried out
- Upholding and supporting the rule of law
- Leveling the playing field for stakeholder participation, demand for accountability, access, incentives and penalties, investments, competition and enforcement
- Resolving disputes and conflicts
- Convergence of good governance and technical solutions

*Technical Solutions to Resource Management (TSRM)*  
+ *Good Governance (GG)*  
+ *Performance Indicators based on Standards (PIS)*  
= *Improved and Enhanced Environmental Conditions*

#### II. Environmental Governance Vision

- Effectiveness of governance - decisions and actions are all in support of a defined “VISION AND MISSION”
- Efficiency of governance - decisions and actions are achieving the objectives of “TASKS”
- Consequence of governance - decisions and actions impact on “RELATIONSHIPS”

#### III. Environmental Governance Actors

- Decision-makers and implementers/actors, at different levels. Their legitimacy and credibility are important.
- Those affected by decisions and actions
- Those providing information, analysis and recommendations to decision-makers and actors
- Those acting on behalf of “vested interests” to influence decisions and actions

#### IV. Prerequisites of Effective Environmental Governance

- Presence of accountable institutions, with clear vision and strategy to achieving the vision.
- System for eliciting participation in decision-making, from planning to implementation; also in monitoring and evaluation
- System to ensure transparency of decisions and the basis of those decisions
- Existence of rule of law
- Presence of persons representing the “conscience industry” – media, civil society organizations, church, schools

#### V. Environmental Governance: Key Concepts and Principles

- Decentralization (spell out AAR), de-concentration and devolution. The central government formally cedes powers to actors and institutions at lower levels (devolution or democratic decentralization and administrative decentralization).
- Subsidiarity and local organizational capacity. Decisions should be made at the lowest possible level where competence exists. In CRM, this applies to Community-Based Resource Management (CBRM), co-management and private sector
- Inclusion and participation
- Accountability
- Transparency and access to information
- Social justice. Forms of justice: community, retributive, procedural and distributive justice. Property rights: “Access right to a stream of benefits from a given set of resources” such as coastal resource assets

- Collaboration and partnership
- Stable and secure property rights
- Intergenerational and inter-spatial equity
- Trade-offs, externality and opportunity costs

#### VI. Environmental Governance Elements

- **Transparency** = The extent to which the general public has current, complete and reliable information about decisions and actions taken by a government unit or public agency.

##### Key Result Areas

- a. Manner of generating, analyzing and disseminating information on LGU actions and decisions to the public
- b. Access to this information
- c. Period of information dissemination; timeliness required (before the decision/action; after the decision/action; when demanded)
- d. Quality of information provided: updated, complete and accurate

##### Examples of Transparency Practices and Mechanisms

- a. Posting of plans/zoning maps, ordinances and proceedings in public bulletin boards
- b. Periodic publication of performance audit reports, financial statements, reports on license/permit issuances, results of transactions/bidding
- c. IEC on local legislations enacted
- d. Regular feedback on M&E results

- **Accountability** = The degree to which the officials and staff of a government unit or of an agency are held responsible for their decisions, actions and performance. State officials, public employees and those from the private sector are answerable to their constituents for policies, actions and use of funds.

##### Key Result Areas

- a. Identification of persons/groups responsible for particular actions and decisions in plan documents, ordinances and orders
- b. Performance monitoring and evaluation procedures
- c. Recognition of good performance/observance of procedures
- d. Clear sanctions for violations of standards and procedures

##### Examples of Accountability Practices and Mechanisms

- a. Clear definition of roles and responsibilities
- b. Periodic public expenditures review
- c. Clear sanctions and incentives
- d. Periodic conduct of performance audit
- e. Periodic assessment of policies
- f. Regular patrolling and reporting by responsible persons

- **Participatory Decision-Making** = The degree that the general public, especially key stakeholders and marginalized groups have access and opportunities to influence the decision or action of government or public agency

##### Key Result Areas

- a. Manner of identifying stakeholders of a particular activity
- b. Degree of representation of stakeholders in decision-making at various stages of project planning and implementation
- c. Incentive provisions for participation of stakeholders

##### Examples of Participatory Decision-Making Practices and Mechanisms

- a. Consensus-building; establishment of conflict resolution mechanisms
- b. Public consultations and hearings prior to decision-making/legitimization of plans/issuances of ordinances
- c. Multi-sectoral representation in committees, working groups, management councils, enforcement groups
- d. Participatory monitoring and evaluation; community feedback system
- e. Community report card system

## **CRM in the Context of Good Environmental Governance**

- I. Coastal Zone as a Critical Area. Many population and development centers are located within the zone; terrestrial and aquatic ecosystems are closely interrelated thus it is the impact area of activities in uplands and lowlands; some areas have high biological diversity and fishery productivity.
- II. Status of Coastal Resources. Municipal fisheries production is declining, coastal ecosystems are degraded, and use of illegal fishing methods is prevalent.
- III. LGU Mandate for Fisheries/Coastal Management: Clarify specific (NIPAS and BFAR) and convergence areas (ecosystem and fisheries management with LGU)
- IV. Types of CRM Decisions
  - Policy decisions at national level
  - Operational decisions – funding, extension support, info dissemination, research and monitoring
  - Zoning and allocation – who gets what?
  - Use rights – fishing gear, fishing permits, seasonality, restrictions, extent of use, quotas
  - Agreements
  - Ordinances
  - Incentives and penalties
- V. Bases of Decisions
  - National policies
  - Recommendations from technical analysis and studies; experts' advice
  - Political and vested interests
  - Expressed needs of stakeholders; capacities of different stakeholders
  - Key Result Areas and organizational demands
  - Markets
  - Other external factors
- VII. Why Good Governance in CRM?
  - Coastal resources produce multiple products and services with inter-generational and inter-spatial impacts. Our decisions will thus have impacts on the present and future generations – they will either benefit or suffer from our decisions. Our future as a nation and as a people depends on good environmental governance.
  - Coastal resources are natural resource assets. These assets have numerous stakeholders so that decisions and actions with respect to these assets cannot be unilateral.
  - Coastal resources are considered as a scarce “political and economic commodity.” There are vested interests, conflicts and disputes over these scarce resources.
  - The allocation, access, use and management of these assets are highly susceptible to “elite or state capture” and “rent-seeking behavior,” producing inequality and poverty.
  - There is high interconnectedness among various life support systems, between uplands and coastal areas. Sustainability, biodiversity and ecological stability, agricultural productivity and supply of water are relevant to CRM.
  - Technologically-sound solutions are not enough to sustain coastal resources productivity and its services. Weak or failure of governance has been recognized as a key cause of environmental degradation. Thus governance + technical solutions. There is also need to “fit” technical solutions with what “de-facto” and “de-jure” resource managers and stakeholders are doing.
  - Controlling illegal fishing and over fishing and destruction of habitats require local collective actions from all key stakeholders. Sound governance of coastal resources will encourage “buy-in” of responsible stakeholders who have vested interests to sustain and protect coastal resources for the present and future generations.
- VIII. Roles of DENR, BFAR and LGU Staff in Improving Governance of Coastal Resources
  - If decision makers and implementers/actor – perform tasks following sound environmental governance principles

- If providing staff work – provide decision-makers with “science-based and stakeholder supported” analysis and recommendations
- If doing advocacy work – conduct extensive and massive IEC to heighten level of CRM awareness of all stakeholders
- If doing community organizing work – organize and mobilize stakeholders for “collective action” in support of environmental governance

#### IX. Role of Advocacy

- Mobilize the “conscience industry” – church, environmental advocacy organizations, schools, media, environmentally-aware members of the citizenry
- Organize stakeholders to demand transparency and accountability from public officials particularly on the use of funds and on decisions pertaining to allocation and zoning of coastal areas
- Increase participation in periodic monitoring of key performance indicators

#### X. LGU Actions to Control Threats to Municipal Fisheries

Threat 1: Over-exploitation of fishery resources

Necessary Action: Reduction of fishing effort and limiting of access

Threat 2: Illegal and destructive fishing practices

Necessary Action: Stopping of illegal and destructive fishing practices

Threat 3: Degradation of coastal habitats

Necessary Action: Protection, enhancement and management of coastal habitats and resources



#### XI. Necessary Complementary Actions for Long-Term Sustainability of Fishery and Coastal Resources

- Prepare and implement an Integrated Municipal Coastal Resources Management Plan
- Allocate regular CRM funds
- Establish CRM Office and designation of position for a CRM Coordinator/Officer
- Form/strengthen of Fisheries and Aquatic Resources Management Council (FARMCs)
- Increase participation of different local sectors in coastal resources management and development
- Develop other sources of income for fishers
- Establish revenue-generating mechanisms for various coastal uses
- Plan and initiate solid waste management program
- Plan and initiate upland/watershed management program
- Promote inter-LGU and multi-institutional collaboration for integrated coastal and fishery management

## ***The Philippine Environmental Governance Project***

- I. The EcoGo Project: Background, Strategic Objectives and Sectoral and Geographic Scope
- II. EcoGov Strategies
  - Strengthening of national and regional policies and institutional arrangements
  - Technical assistance to LGUs and communities on coastal resource, forest and forestlands and solid waste management to enhance their capacity and support mechanisms to take on new environmental governance responsibilities
  - Capability-building of DENR and partner government agencies, local institutions and service providers to strengthen local technical support systems (to develop capabilities to support LGU environmental governance initiatives)
  - Establish creative partnerships with organizations/groups and develop supporting coalitions to help promote good governance.
- III. EcoGov Results Framework and Key Performance Indicators
  - Goal
  - Outcomes 1: Expanded application of sound environmental governance policies and practices
  - Outcome 2: Reduced over-fishing, use of destructive fishing practices and degradation of coastal habitats
  - Outcome 3: Reduced illegal cutting and forest lands conversion
  - Outcome 4: Solid waste management
  - Key Performance Indicators for CRM
- IV. EcoGovernance Actors: DENR Central Office, DENR Regional Offices, Technical Assistance Team, LGUs, Local Service Providers, Contractors, Other Partners, USAID
- V. Process of LGU Selection
  - Interactive Assemblies
  - Letters of Intent
  - MOAs and LGU commitments
- VI. Overview of EcoGov Technical Assistance on CRM
  - CRM Entry-points (Discussion on CRM planning, MPA management planning and fisheries management planning)
  - CRM Modules
    - Module 1. Coastal Resources Management Planning
      - A. Municipal water delineation and enforcement
      - B. Participatory Coastal Resource Assessment
        1. Field Assessment
        2. Barangay Consultation and Zoning
        3. Municipal-Wide Integration of Proposed Coastal Zoning and Management Recommendations
      - C. Plan Formulation and Legitimization
        1. Economic Analysis of Zone Management Activities
        2. Formulation of Policy Support
        3. Formulation of IEC Support
    - Module 2. Marine Sanctuaries
      1. Orientation and Core Group Formation
      2. Marine sanctuary Exposure Trip
      3. Site Assessment and Selection
      4. Formulation and Legitimization of MPA Plans
    - Module 3. Enhancement of Municipal Fisheries Management
      1. Components of a typical fishery sector
      2. Fishery Objectives and Management Options
        - a. Possible incentive systems
        - b. Revenue generating mechanisms
        - c. Fishery /CRM Law Enforcement

# Module 2

## Coastal Resources Management Planning

### Module Coverage

Module 2 is designed to guide LGUs through a participatory process of preparing a CRM Plan and having it legitimized. A legitimized CRM Plan is the final output of this module.

The design of the module is based on the planning process that is outlined in **Figure 2**. It is understood that before the start of the module, the LGU has already formed a multi-sectoral TWG (in consonance with the MOA among the LGU, DENR and the EcoGov Project) and that the TWG has gone through an orientation on environmental governance and good governance in CRM. It is also expected that upon completion of the module, the TWG will take the lead in presenting the completed CRM draft plan to stakeholders, the FARMC, the MDC and the SB for its legitimization.

The training activities involved in this module have been grouped into three sub-modules:

- **Sub-Module 2A. Municipal Water Delineation** - This pertains to the delineation of municipal water boundaries. It is fundamental to CRM planning as it is important for the LGU to know the full extent of the coastal area it expects to manage.
- **Sub-Module 2B. Participatory Coastal Resource and Fisheries Assessment and Zoning** - This ensures the systematic assessment of coastal habitats, fishery resources and practices and socio-economic conditions in coastal barangays. An assessment is critical to planning as it defines the current resource base (baseline) and pressing issues that need to be addressed. The results of the assessments and community consultations are to be used as bases for setting the CRM vision of the LGU and for generating coastal zoning framework and management recommendations, which at the end of the sub-module will be harmonized at the municipal level.

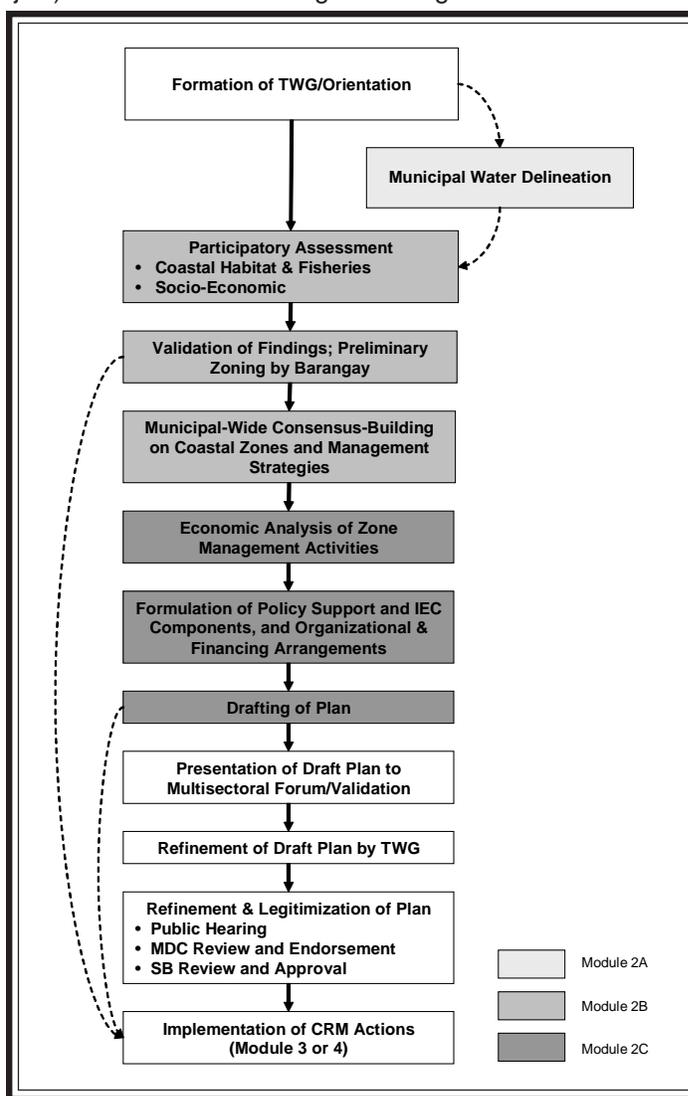


Figure 3. CRM Planning Process

- Sub-Module 2C. Plan Formulation and Legitimization** – This sub-module fleshes out the plan, building on the zoning scheme and management recommendations generated in previous activities. The planned activity options per zone are subjected to an economic analysis to determine the cost and revenue streams and the financing strategy. Policy and IEC support workshops are also organized to identify the ordinances and IEC actions necessary to support plan implementation. The outputs of these activities compose the essential parts of the CRM plan document.

The planning activities in this module are described in detail in the sections that follow. Pointed out are the innovative approaches introduced by the EcoGov Project (e.g., municipal-wide consensus on zoning, multi-criteria analysis, incentive systems) and governance practices applied (e.g., joint analysis and informed decision-making) to specific planning and implementation activities.

The sub-modules put a lot of emphasis on participatory decision-making as they encourage a significant number of local community members to participate. The process promotes information sharing and consensus-building among coastal stakeholders, broadens the participants' understanding of the issues and opportunities and makes them part of local decision-making. It builds local ownership of the plan, which facilitates implementation of activities. Being plan "owners", local communities are expected to become more motivated in demanding from LGU the proper implementation of the plan.

This module gives emphasis to the need to harmonize the CRM plan with other municipal development plans, and to collaborate with adjoining LGUs in pursuit of common goals, such as in municipal water delineation and enforcement.

The duration of the module, per the experience of EcoGov, is from 8 to 10 months.

## **Sub-Module 2A. Municipal Water Delineation and Enforcement**

### **Sub-Module Coverage**

This sub-module on Municipal Water Delineation and Enforcement aims to provide participants an overview of municipal water delineation vis-à-vis CRM planning and fisheries management, and orient them on relevant Fisheries Code (RA 8550) provisions and the technical process involved in municipal water delineation based on DENR's Administrative Order No. 2001-17 (Guidelines for Delineating/Delimiting Municipal Waters), which was subsequently replaced by Department of Agriculture Administrative Order No. 1, Series of 2004 (Guidelines for Delineating/Delimiting Municipal Waters for Municipalities and Cities without Offshore Islands).<sup>3</sup>

Municipal water delineation requires that an LGU obtain agreement from other LGUs with which it shares lateral municipal water boundaries. In effect, at least three LGUs are involved in this process. The Fisheries Code stipulates that municipal waters extend to 15 km from shore. The lateral boundaries, however, are set through negotiations between LGUs. Thus, part of the sub-module involves field validation and consensus-building among stakeholders on the proposed coastal terminal points (CTPs), the conduct of inter-LGU negotiations, formalization of agreements and the mapping of the agreed boundaries.

<sup>3</sup> This order does not contain substantial changes in the delineation procedures.

### **Doing immediate actions**

*Implementation of initial management activities does not have to wait until the integrated municipal CRM plan is legitimized. As soon as assessment findings are validated and issues are identified and prioritized, some immediate doable actions can already be initiated (e.g., conduct of IEC, formation of its CRM organization).*

*For LGUs which already have declared marine sanctuaries that need to be made functional, they can proceed to Module 3 for the development of the MPA management plan or the LGUs can proceed to Module 4 to initiate review and implementation of fisheries regulations and strengthen its enforcement units.*

Municipal water delineation has to be complemented with enforcement mechanisms, without which municipal waters cannot be effectively managed. Emphasis should be made on the management objectives of municipal water boundary delineation (e.g., as linked to enforcement). Highlighting areas for complementation (e.g., joint patrols) and sharing of resources would be an important way to enhance coordination and effectiveness. Upon achieving formal inter-LGU agreements, further assistance will be provided in developing enforcement strategies and concrete action plans so LGUs, in cooperation with the municipal fishers, can start taking responsibility in managing their municipal waters. The enforcement action plan will provide a documentation of agreements on enforcement, particularly on the institutional, organizational and inter-LGU arrangements and the financing scheme. The details on enforcement strategies are discussed in Module 4 (Enhancement of Municipal Fisheries Management).

### **Observing good governance**

*Good governance is observed in the delineation process. There is participatory decision-making as community consultations on the boundaries and negotiations are held between the concerned LGUs. The agreement between the negotiating LGUs is formalized by the mayors for transparency and accountability; the agreed boundaries are mapped; and both are established through an ordinance which spells out accountabilities of various stakeholders.*

*The ordinance must go through the usual consultations and hearings before it is adopted. Once passed into law, the ordinance shall be widely disseminated, thus, the principle of transparency is applied.*

### **Expected Sub-module Outputs**

The specific outputs of this sub-module are:

- 1) Signed validated map of the LGU with the CTPs and municipal water boundaries clearly indicated;
- 2) Joint resolutions or agreements with the adjoining LGUs; and
- 3) A draft municipal ordinance on the municipal water boundaries and enforcement mechanisms.

The LGU will need to endorse the signed map to the National Mapping and Resource Information Authority (NAMRIA) for verification. Eventually, the LGU has to submit to NAMRIA an original copy of the ordinance defining the extent of its municipal waters (See **Annex 2A, Municipal Water Delineation Process**).

In LGUs where there are no serious boundary or jurisdiction issues, this sub-module may be completed in 2 weeks (longer if ground preparations and consultations are included).

### **Sub-Module Approach**

The sub-module starts with a one-day orientation session to discuss the Fisheries Code's provisions that pertain to LGU jurisdiction over municipal waters and the technical procedure to delineate municipal water boundaries (See *suggested Lecture Notes, page 15*). With these inputs, the TWG is guided in preparing an action plan to complete the sub-module's field activities and mapping. The action plan clearly identifies the activities, schedules, and specific roles and responsibilities of the various participants.

### **Participants**

This activity is attended by members of the multi-sectoral TWG of the LGU or a number of LGUs if municipal water delineation is to cover a bay, such as Illana Bay in Mindanao. In case of the latter, the involvement of the provincial government, particularly the Provincial Environment and Natural Resources Office (ENRO) and the Provincial Planning and Development Office (PPDO) is necessary. Whenever possible, Bureau of Fisheries and Aquatic Resources (BFAR) and NAMRIA personnel should be invited as resource persons. Mapping shall be done with DENR, BFAR and NAMRIA or a local service provider.

## Subsequent Activities

Subsequent activities to the orientation session are the following (which should be in the action plan):

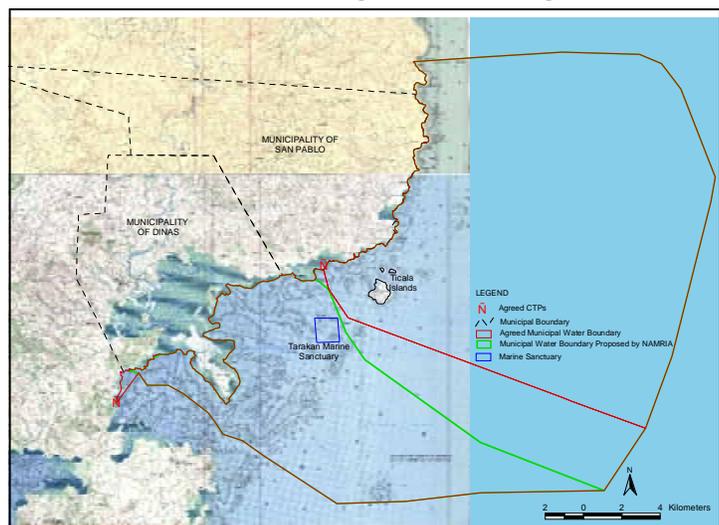
- a) Collection and review of technical documentations that show the legal boundaries of the adjoining LGU, such as the proclamation of the LGU, NAMRIA maps and DENR cadastral surveys, etc. Historical jurisdictional practices are also thoroughly studied (e.g., Where do residents of boundary barangays vote? Seek public services? Pay their taxes?). The alternative CTPs on both sides of the LGU are then mapped. Note: this activity can be made part of the orientation session if the collation of the documents is undertaken as a pre-workshop activity.
- b) Notification of the adjoining LGUs about its municipal water delineation activity, with a formal request for joint validation of the identified CTPs.
- c) Field verification and validation of the CTPs to check existing markers or, in their absence, identify possible location of CTPs. The field activity will need to be attended by the Municipal Planning and Development Officers (MPDOs) of the two LGUs, the barangay captains of the boundary barangays, TWG members and other authorized LGU representatives (e.g., SB members). GPS readings of the technical coordinates of the alternative CTPs will be taken. Alternative seaward projection of the lateral boundaries will also be mapped. Discussions and findings with respect to the status of the CTP markers, current jurisdictional practices, actual/potential issue and conflicts, and suggested alternative CTPs are documented. (See **Annex 2B, Documentation Form used in Zamboanga del Sur**).
- d) Presentation of the results of the CTP field verification/validation to concerned municipal and barangay officials and stakeholders of adjoining LGUs. Projection of alternative lateral boundaries are also prepared. If there are conflicts, further consultations/discussions and negotiations are organized until agreement on the CTPs is reached.
- e) Holding of joint SB sessions to formalize agreement (through a joint resolution) on the CTPs and lateral boundaries. These agreed boundaries are then mapped. It is important for transparency and accountability purposes that the map bears the signature of the mayor and is supported by a documentation indicating the method used in establishing the boundaries and the professionals (DENR, LGU or private individual) who did the GPS reading of the CTP and the projection of the boundaries.
- f) Endorsement of the map to NAMRIA. The joint resolution of the LGUs should also provide for this.

### Difficulty in reaching agreements

*Ideally, Sub-Module 2A should result in an ordinance establishing the municipal water boundaries and the system for its enforcement. EcoGov experience have shown that getting LGUs to agree on their coastal terminal points (CTPs) is often difficult. Consensus is not reached easily because of various issues, making inter-LGU boundary negotiations a long-drawn process. Adjoining LGUs are often hesitant to agree on their CTPs fearing these may be used to project their land boundaries. It is critical that the concept of the CTP and option of establishing a “sea CTP” (CTP located offshore) are clearly explained.*

*Non-completion of municipal water boundary delineation, however, is not an impediment to doing CRM planning and implementing management actions.*

*An LGU can proceed to Sub-Module 2B or directly to Module 4, while the process of negotiation is going on and boundary issues are still being resolved.*



CTP - Dinas-San Pablo

## **Lecture Notes**

### ***Delineation and Enforcement of Municipal Water Boundaries***

#### **I. RA 8550 Provisions Pertaining to Local Governance of Municipal Waters**

- Jurisdiction: Definition of municipal waters and the jurisdiction of municipality/city government over municipal waters
- Enforcement: Role of LGUs in the enforcement of fishery laws, rules and regulation; LGUs are authorized to seek assistance of BFAR in training Bantay-Dagat Task Force on fishery laws
- Legislation: Municipal/city governments are mandated to:
  - enact appropriate ordinances including co-management arrangements together with appropriate agencies (e.g., foreshore)
  - enact basic Municipal Fishing Ordinances
  - enact appropriate ordinances prohibiting various gears and its variations
  - register fish hatcheries, fish breeding facilities, other aquaculture-related activities (including seaweed farming) and private fishponds
  - register all post-harvest facilities
- Coordination and Consultation:
  - BFAR to coordinate with LGUs, FARMCs and other government agencies
  - Coordination among LGUs for integrated management of contiguous fishery areas
  - BFAR to coordinate with LGUs in establishment of catch ceiling and/or closed season

#### **II. Why Manage Municipal Waters?**

- LGUs are mandated by law to do so
- Need to address threats : a) near shore waters are heavily exploited, b) coastal habitats are being destroyed, and c) there is rampant illegal and destructive fishing practices
- Benefits to LGU of coastal resource and fishery management
  - improve catch, .increase fishers' income, maintain gainful employment, sustain livelihood
  - conserve/stabilize fish stocks, maintain healthy ecosystems
  - increase fish exports, maximize profits, increase cost-effectiveness, provide government revenues
  - reduce conflicts among fishers and move towards equitable arrangements

#### **III. Principles and Procedures for MW Delineation**

- Procedures in DENR DAO 17 and DA Administrative Order 01, Series of 2004
- EcoGov-enhanced procedures for MW delineation
- Coastal terminal points (CTPs) vis-à-vis political boundaries
- Seaward projection to 15 km
- Demonstration of Macaspac method

#### **IV. Some Experiences in MW Delineation**

- Successes
- Common problems encountered

## Sub-Module 2B. Participatory Coastal Resource & Fisheries Assessment & Zoning

### Sub-Module Coverage

This sub-module, which covers coastal resource assessment up to the finalization of coastal zones, aims to generate a) baseline information and an analysis of the condition of the LGU's coastal and fishery resources and of resource users and uses, and b) a zoning framework for the management of the LGU's municipal waters. Important planning inputs are generated with stakeholder participation, culminating in their agreement on what uses should be given priority.

There are three major activities involved in this sub-module, all requiring field activities:

- a) **Participatory coastal resource, fisheries and socio-economic assessment** – This covers the assessments of the natural habitats (coral reefs, mangroves and sea grass), the fisheries practices and the general socio-economic conditions of resource users.
- b) **Barangay cluster validation and zoning workshops** – During this activity, results of the assessments are validated and enhanced by community mapping, and used as basis for generating proposals on zoning and management actions. This is a critical step in increasing involvement of coastal communities consistent with the principles of TAP. This is also the first level of consensus building among adjoining barangays.
- c) **Municipal-wide integration and consensus on coastal zones-** This activity integrates and harmonizes, on a municipal-wide level, the coastal zones and resource management strategies discussed and agreed upon during the barangay validation/consultations.

Key coastal stakeholders will be involved in data collection and analysis, and in making decisions on the coastal zones. Participants are provided the opportunity to gain first-hand knowledge about the key CRM issues and opportunities in their municipality. They acquire skills on applicable participatory assessment methods which they can use in the future when they monitor plan implementation. More importantly, they contribute to the formulation of recommendations to address critical CRM concerns. The process is an effective community empowerment technique for informed decision-making.

Broad and multi-sectoral local participation is a must in the activities. The activities are sequentially linked so it is critical that there is continuity in the involvement of key stakeholders in the process. Some aspects of the assessments entail sound scientific inputs, so technical expertise in the fields of habitat and fisheries/socio-economic assessment will be provided by the EcoGov Project to enhance local knowledge and skills.

#### **Expected sub-module outputs**

The main outputs of this sub-module will be the participatory coastal resource assessment report and the coastal zoning scheme, reflected in a map and with proposed management recommendations. Assessment highlights and barangay-level zoning proposals are intermediate outputs, serving as the building blocks to municipal-wide zoning.

Estimated duration of the sub-module is 1 to 2 months.

#### ***Zoning as a Planning Tool***

*Zoning is a planning tool to rationalize and harmonize various uses. It rationalizes present and future use of both living and non-living coastal resources. The zoning scheme provides a spatial framework for planning coastal management interventions. Coastal zoning can be embodied in the formulation of the municipal development plan.*

*Examples:*

- *Fishing Zone*
- *Fishery Development/Settlement Zone*
- *Marine Protected Areas*
- *Navigation Zone*
- *Tourism Zone*
- *Aquaculture Zone*
- *Others (e.g., commercial and trade, ports and recreation)*

## Activity 1. Participatory Coastal Resource and Fisheries Assessment

### Activity Coverage

This activity aims to assess the status of coastal habitats, current fisheries practices and existing socio-economic conditions in the coastal barangays to provide the starting point for CRM planning.

The assessment makes use of both primary and secondary data. Primary data are generated from actual site assessment of existing coral reefs, sea grass beds and mangroves, and from household surveys and focus group discussions (FGD). Secondary data will be derived from the LGU's socio-economic profile, Comprehensive Land Use Plan (CLUP), development and investment plans, fishery/CRM ordinances and other relevant project reports (i.e., resource surveys and inventories, executive agenda or strategic plans).

The habitat assessment will make use of standard habitat assessment methodologies to establish baseline data on coral, sea grass and mangrove cover, the abundance of fish and macro-invertebrates, and the species diversity of marine flora and fauna. The household surveys will generate a socio-economic information related to resource users and uses, including details of their income-sources, livelihood and expenditures. The FGDs, meanwhile, will complement the household survey and validate some of its results. It will be source of information for mapping gear use and other trends in fishing activities, fish marketing systems, commodity flows, and incentive and financing schemes.

#### **Fisheries and socio-economic assessment**

*In EcoGov sites, fisheries and socio-economic assessments are integral parts of the assessment. They are simultaneously conducted with habitat assessment to highlight the interrelatedness of the bio-physical condition with fisheries and other socio-economic variables. It helps the participants see the bigger picture by understanding the effects of socio-economic activities on fish harvest and the overall state of fisheries in the LGU.*

*Opportunities for livelihood development are identified and basis for multi-criteria decision making in assessing management options is established.*

### **Expected Activity Output**

Output of this activity is a coastal resource and fisheries assessment report that contains the baseline information and a situational analysis, wherein the key assessment findings are summarized and expressed as CRM issues and opportunities. In view of the short period within which the different activities are to occur, a pre-training activity is necessary for leveling off of expectations and roles among members of the TWG, for identifying participants, for contracting technical resource persons/experts and planning the logistics requirements, particularly transport to assessment sites, supplies and equipment for underwater assessments.

This activity feeds into the next activity. Since communities were involved in the assessment, it is considered part of good governance practice to inform them of the results and validate these with them. Thus in preparing the activity output, priority is given to the situational analysis part so that barangay validation can proceed even as the formal assessment report is still being completed.

Based on EcoGov experience, the data collection part takes about 1 week. The consolidation of the various assessments and preparation of the integrated report takes 2-3 weeks.

### Activity Approach

The field assessment is programmed for completion within 4-5 days. The first day is devoted to the orientation of the participants on the general participatory CRM planning process, on the objectives of the assessment, and of the scope and mechanics of each component of the assessment. (*See suggested Lecture Notes, pages 22 to 25*). The remaining period of the first day is spent on the organization of the four sub-teams and preparations for their respective activities. The four sub-teams are: Coral Reef Team, Sea

Grass Team, Mangrove Team and the Fisheries and Socio-Economics Team. Ideally, each sub-team is composed of 8-12 members. The Fisheries and Socio-Economics Team, however, may have more members since the group will be covering all coastal barangays.

The succeeding days are for data collection, which will involve actual site investigations, interviews and discussions. The initial results or findings of each sub-team are then reported on the final day in plenary to all the other teams, followed by a planning workshop for the next steps (See **Activity 2 of Sub-Module 2B**).

## Participants

The participants to this assessment will include members of the TWG, FARMC, DENR and BFAR field staff, barangay officials, representatives of relevant NGOs and academic institutions, and community representatives of different sectors (e.g., fisherfolks, youth, education, religious, etc.). The Provincial Government may be invited to take part in the activity.

The local team will be complemented by a Technical Assistance Team, composed of EcoGov CRM specialists and EcoGov-hired service providers.<sup>1</sup> The EcoGov Technical Assistance Team will lead the four sub-teams in their assessment activities thus it is necessary that they include experts on the four fields: coral reefs (with associated fish communities), sea grass, mangrove and fisheries/socio-economics. They will train the four sub-teams in the assessment techniques and methods, and guide them in using the protocols and instruments, as well as in the collation and analysis of both primary and secondary data gathered. Also, they will facilitate the daily reporting, evaluation and planning of activities during the period of the assessment and coach the sub-teams for the presentation of their respective assessment reports. It is expected that the coastal habitat specialists will conduct their own technical field assessment of the habitats to validate that done by the local participants.

One member of the TA Team is designated by EcoGov as Assessment Team Leader, whose responsibilities will include the consolidation of sub-team reports and preparation of the integrated assessment report.

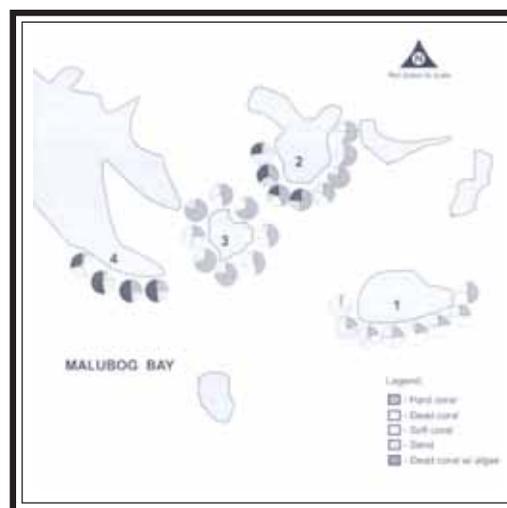
The activities involved and the methods to be used in the four field assessments are described in the succeeding pages. The FGD Facilitators Guide is in **Annex 2C**, while the household survey instrument is in **Annex 2D**.

## Coral Reef Assessment

The Team will use three assessment methods:

- a) **Manta tow** - to estimate relative area of the reef and gain an overview of the general types and conditions of reef areas. The number of sites for the manta tow survey is selected based on a nautical/topographic map, available secondary data and previous discussions with local communities;
- b) **Underwater fish visual census** - to estimate variety and abundance of various reef fishes and to evaluate the condition of fish assemblage and possible threats in the area; and

<sup>4</sup> When available, DENR and BFAR senior staff may be tapped as resource persons and thus may be considered as members of the Technical Assistance Team.



*Map of Malubog Bay in Dinas showing percent cover (hard coral, dead coral, soft coral, sand and dead coral with algae) using manta two survey*

- c) **Quadrant with line transect method** - to estimate the relative bottom cover of hard corals, dead corals, algae and various reef substrates and abundance of macro in selected sampling sites (e.g., prospective marine protected area site).

The number and site selection for the last two assessment methods are based on types of reef condition and zones derived from the manta tow survey.

**Expected Activity output.** Report containing data on identified relative benthos habitat cover in various reef sites; abundance and variety of coral and reef fish species; and abundance of various reef substrates and macro invertebrates, particularly locally important species. The report will include an analysis of these data as well as corresponding recommendations.

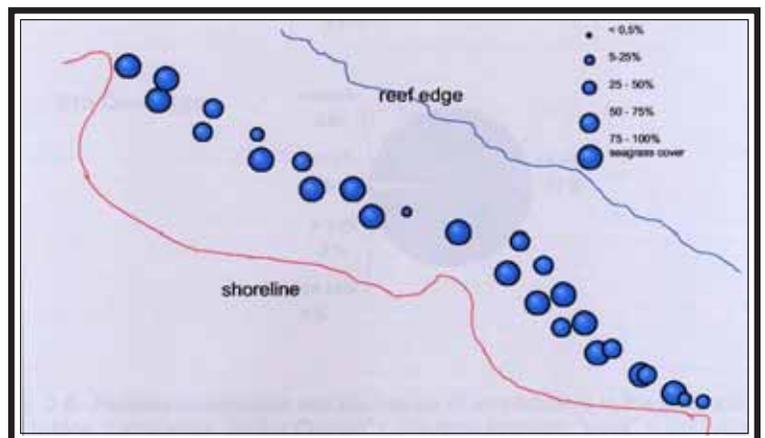


*A participant to the PCRA training in Poro was towed using the manta board to estimate benthic forms*

### Sea Grass Assessment

The Team will do a preliminary assessment using the line quadrat to identify the different sea grass species to be quantified, types of substrates and local names of macro-invertebrates and to practice the line quadrat method. Based on this preliminary assessment as well as the results of the manta tow, and on information gathered from secondary data and discussions with communities, the team can then determine the number of sites for study

**Expected output.** Report containing sea grass species composition and percentage cover of sea grasses, type of substrates, and different commercially important macro-invertebrates species and their relative abundance in each site. The report will include an analysis of these data as well as corresponding recommendations.



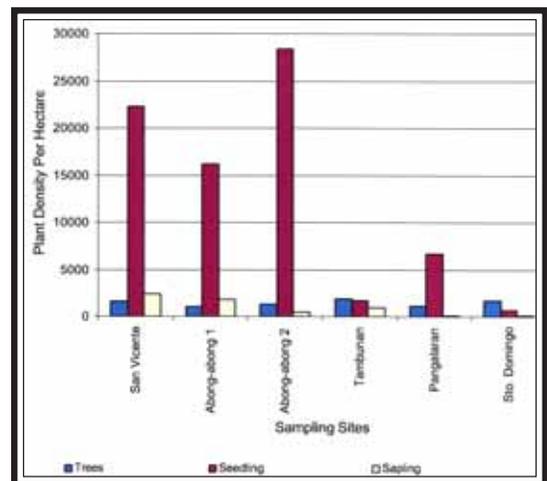
*Relative seagrass cover using abundance scale at Barangay Malim, Tabina, based on the manta tow path.*

### Mangrove Assessment

The Team will need first to identify the local names of mangrove.

Procedures on how to measure breast height and basal area of trees will be demonstrated. The number of sites for the assessment is determined based on a map of existing mangrove stand, the sampling design using the transect plot and discussions with local communities.

**Expected output.** Report containing list of common names of mangrove species and density estimateds of mature mangrove trees (including circumference), saplings and seedlings. A record of natural and human impacts on mangrove area is covered by the assessment. The report will include an analysis of these data as well as corresponding recommendations.



*Plant density of different life-stages in the sampling sites of Tabina, Zamboanga del Sur.*

## Fisheries and Socio-Economic Assessment

The Team is divided into sub-teams, each assigned to cover either a barangay or a cluster of at least two adjacent barangays. Each sub-team is then divided into two groups: one to conduct the FGDs; the other to do the household survey. The groups are given guidelines and a brief training on how to conduct FGDs and household surveys. The actual conduct of an FGD for one site, can take half a day. The household survey can be conducted simultaneously in the same site.

For FGDs, the group selects a facilitator, note taker and a documenter, who are mostly locals. Facilitators use the guide developed by the EcoGov Project (See **Annex 2C**). Attendees, selected in consultation with the local TWG, include representatives of major stakeholders in a barangay or cluster of barangays.

For household interviews, the assigned group members systematically selects a number of households to be interviewed from selected sitios in a barangay. The selection and households depend on the distribution patterns of households and this is usually discussed with a TWG member familiar with the area or with local leaders. The number of respondents varies depending on the spread of households and the time allotted to data collection in the barangay (it may range from 20 to 30). It is recommended that respondents include representatives of various economic activities in the barangay (e.g., fishers, farmers, employees, others).

EcoGov-prepared household survey instruments are in **Annex 2D**. Interviewers must familiarize themselves with the instrument before doing the actual interview to ensure that the needed answers to the questions are obtained.

**Expected outputs.** The fisheries assessment, through the FGD, will have the following outputs:

- 1) Estimate of fishery population and spatial distribution (by barangay) of fishing gears and fishing practices.
- 2) Fishery seasonal calendar, which will serve a number of purposes: a) as a tool for documenting regular cyclical periods and significant events occurring during a year, b) give a general picture of important environmental, cultural and socio-economic periods throughout the year, c) identify particular periods of high work activity and/or income vulnerability; and d) complement the gear inventory and mapping.
- 3) Trends in fishery resources productivity, using fish catch and income from fisheries as main indicators. The factors affecting existing fishery resources in the area will be identified, including present fishery management activities initiated by the LGU and their impacts on existing fishery resources.
- 4) Market assessment including fish marketing structure, commodity flow of fish products, product destinations and demand centers. Available support financing mechanisms will be identified.
- 5) Major types of livelihood.
- 6) Problems and issues related to resource and resource user activities; and
- 7) Recommendations for improved fishery management.

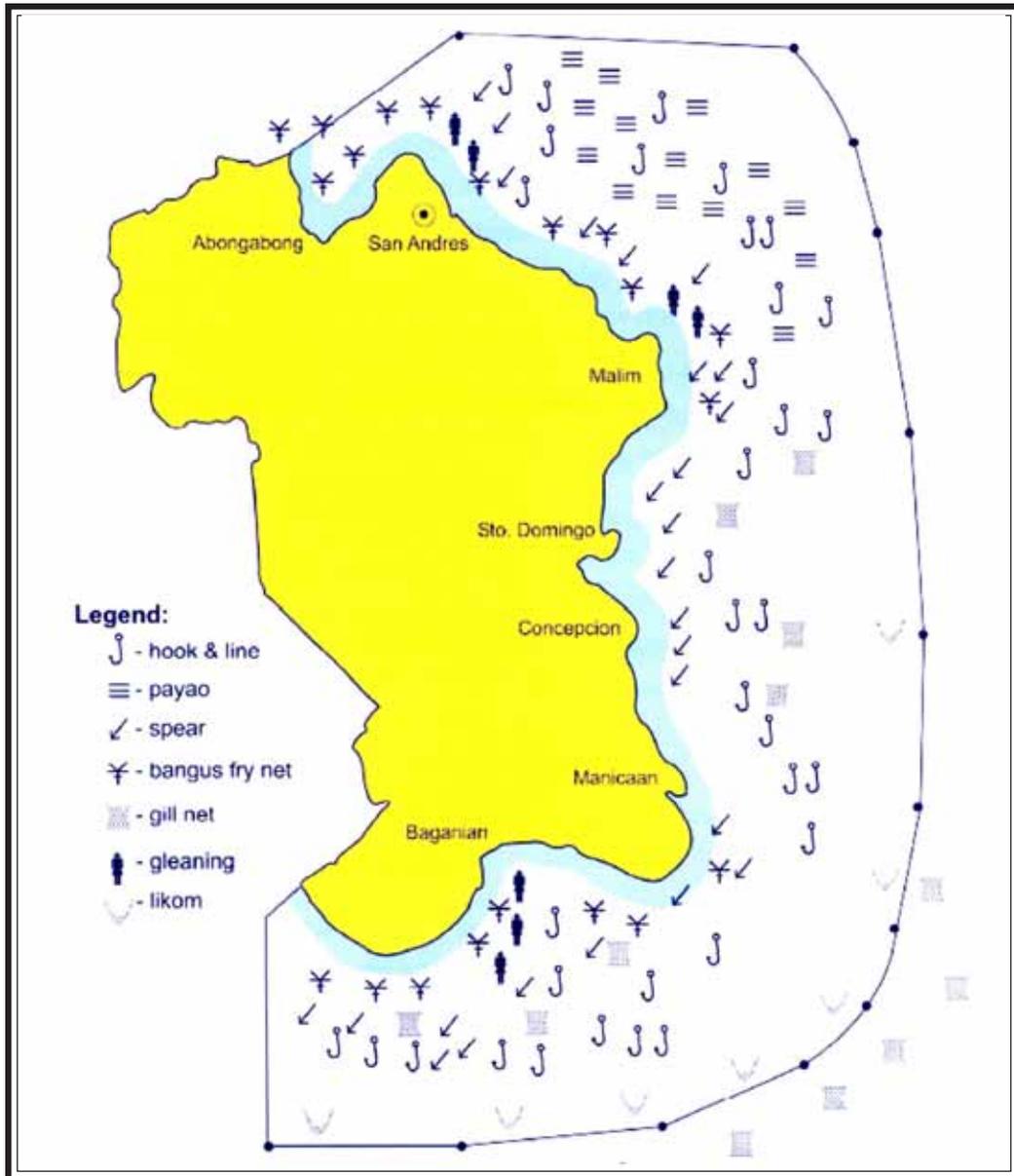
The main outputs of the socio-economic assessment, generated from FGDs and household survey, are:

- 1) Socio-economic profile of the community that includes demand for goods and services (i.e., production and consumption) from coastal resources related production activities. This will point to possible alternative livelihoods.



*Toledo TWG member interviewing a fisherfolk during the conduct of the PCRA in Toledo City.*

- 2) Different livelihood activities in the locality, covering fishery, local industries for coastal-resource-related production activities, and complementary or alternative livelihood. This will determine the level of dependence of the population on fishery resources of the area and indicators of the rate of economic growth in the coastal areas.
- 3) Incomes from fishery and other livelihood activities and expenditures. This indicates demand for fishery resources and potentials for increasing income of resource-dependent households. This will also discuss the effect of government interventions on livelihood.
- 4) Proposed projects/programs for socio-economic improvement in coastal communities
- 5) Credit and financing scheme available to communities. This will indicate potentials for improving livelihood technology, as well as mechanisms for providing alternative or supplementary livelihood activities.
- 6) The types of incentives available. This provides indications of possible incentive policy or strategy for improving coastal resources management.



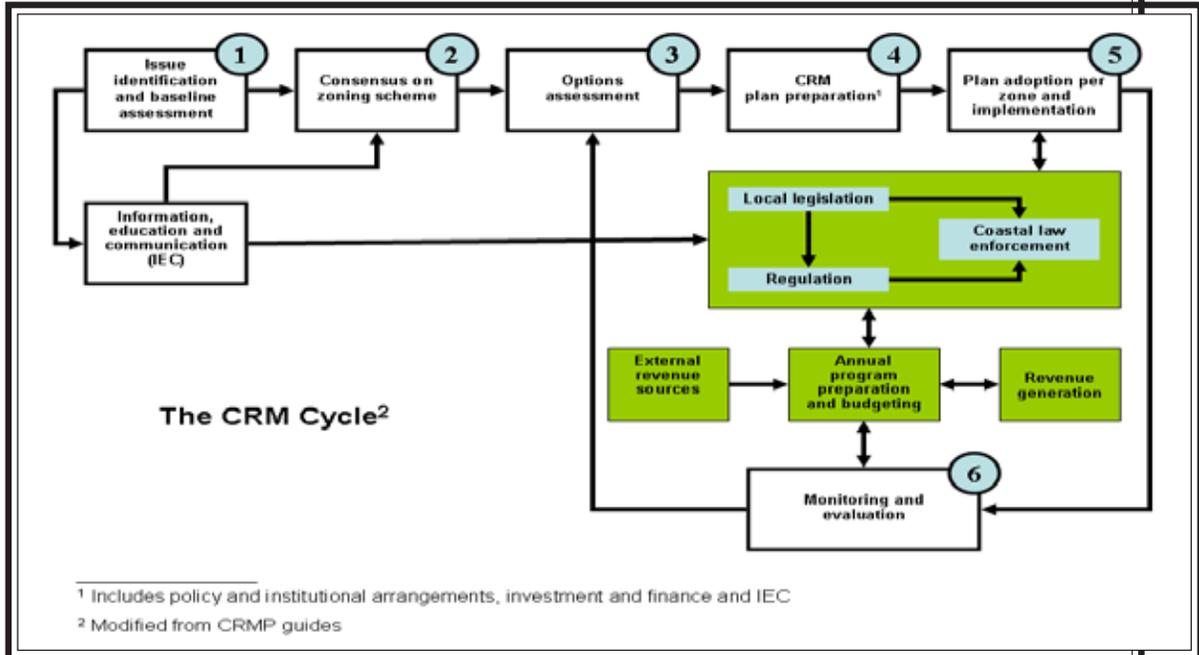
Map of Tabina showing the location of major fishing gears, integrating the information obtained during focus group discussions in Barangays Abong-abong, Poblacion, Malim and Baganian.

## Lecture Notes

### Participatory CRM Planning

#### I. CRM Cycle

- Issue identification and baseline assessment
- CRM Plan preparation and adoption
- Action planning and project implementation
- Monitoring and evaluation



#### II. Participatory Coastal Development Planning Approach

- Joint data gathering and situational analysis (on resource base, resource use and users, and governance mechanisms)
- Delineation of zones for priority uses
- Addressing conflicting interests among resource-users
- Pro-active participation of various stakeholders
- Identification of development opportunities

#### III. Participatory Coastal Development Planning Objectives

- Harmonization of resource uses
- Protection of important habitat or ecosystem and endangered species
- Reservation of suitable areas for particular human activities
- Provision of policies and guidelines in CRM good governance

#### IV. Participatory Coastal Development Planning Guiding Principles

- Sustainable use of resources
- Equitable use and allocation of benefits
- Promotion of transparency, accountability and participatory decision making
- Holistic and integrated approach

#### V. Participatory Coastal Development Planning Requirements

- Commitment and willingness of LGUs and communities
- Identification of environmental, socio-economic, cultural and legal-institutional issues
- Defined management unit
- Identification of resources, resource-uses and resource-users
- Understanding of basic ecological principles, nature of coastal ecosystems and marine populations

## VIII. Possible Resource Management Options

Different types of resource management interventions

1. Strengths
2. Weaknesses

## VI. Overview of Planning Process

- Formation of multi-sectoral TWG
- Orientation on participatory CRM planning and coastal zoning
- Training and conduct of PCRA
- Barangay-cluster community consultations and zoning workshops
- Municipal-wide consensus on municipal coastal zonation scheme
- Formulation of CRM plan (with management plan per zone)
- Presentation of draft CRM Plan in multi-sectoral forum
- Refinement of draft CRM Plan by the TWG
- Legitimization of CRM Plan by MDP/CDP and SB/SP
- CRM Plan implementation, monitoring and evaluation

## ***Participatory Coastal Resource and Fisheries Assessment***

### I. Basic Ecology and Ecological Principles

- Carrying-capacity
- Ecological balance vs ecological backlash
- Interconnectivity
  - Life cycles of marine organisms
  - Ecosystem linkages: vertical and horizontal linkages
  - Patterns of resource use

### II. Objectives of Participatory Coastal Resources and Fisheries Management Sub-Module

- Familiarization of participants with participatory methods on coastal habitat, fisheries and socio-economics assessments
- Compilation of coastal environment and socio-economic and cultural data and profiles
- Analysis of results for issue prioritization and possible management recommendations

### III. Importance of PCRA (in the context of good governance in CRM)

- Tool for informed decision-making
- Venue for development and enhancement of knowledge of coastal communities
- Tool for community empowerment
- Tool for enhancing ownership in decision-making
- Venue for consensus-building and information dissemination

### IV. PCRA Intermediate Outputs

- Spatial and temporal profile of coastal habitats and fisheries
- Socio-economic profile of resource users
- Issues and problems to be addressed
- Preliminary recommendations and possible management guidelines

### V. Scope of PCRA

- Coastal ecosystems (coral reefs, mangroves and estuaries, sea grass beds)
- Fisheries and socio-economic conditions

### VI. Coral Reefs

- Characteristics
- Life Cycle
- Types, Common benthic life forms
- Benefits
- Assessment Methods
  - Manta tow: description and expected outputs
  - Line transect quadrant methods: description and expected outputs

- Underwater fish visual census: description and expected outputs
- Common reef fish families

#### VII. Mangroves and estuaries

- Characteristics
- Types
- Benefits
- Assessment Method: Transect plot method - description and expected outputs

#### VIII. Sea Grasses

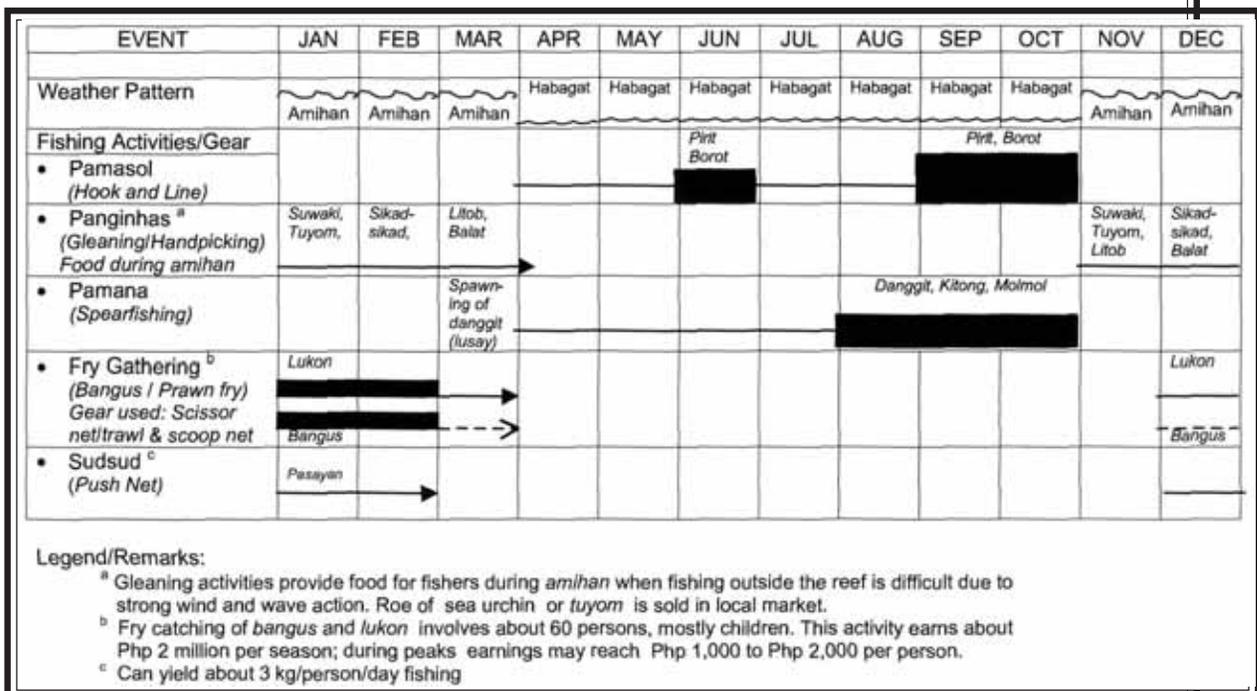
- Characteristics
- Types
- Benefits
- Assessment Method: Transect quadrat method - description and expected outputs

#### IX. Fisheries

- Status of fishery resources
- Common gear types
- Benefits
- Fisheries assessment variables (fisheries resources; number of commercial and municipal fishers; fishing activities; fishing revenues, expenses and family expenditures; fish marketing structure and survey; fishing problems; existing LGU fishery management interventions; and proposed solutions)
- Assessment Methods: Focus Group Discussions (FGDs) and household survey
- Expected outputs

#### X. Socio-Economics Assessment

- Significance
- Socio-economics assessment variables (socio-demographic profile of the community; present livelihood activities; markets, marketing and financial systems; problems on support development activities, capability-building programs and financial assistance; and proposed solutions)
- Expected outputs



Seasonal calendar generated from focus group discussion in Barangay Abong-abong, Tabina.

## Activity 2. Barangay Cluster Validation and Zoning

### Activity Coverage

This activity provides a venue for local community members to:

- a) Contribute to the community mapping of resources and resource uses and the identification of issues and concerns;
- b) Be informed about the results of the participatory resource assessment and validate these results with their collective local knowledge; and
- c) Take part in the generation of barangay-level coastal zoning proposals and management recommendations

Through the validation of the results of the municipal-wide participatory coastal resource and fisheries assessment, barangays/communities or clusters of barangays are given the opportunity to contribute to the analysis of issues, particularly on impacts of human activities on coastal resources. The process encourages stakeholders to conduct joint analysis of the situation at the municipal rather than barangay scale; this forges unity among community members. It promotes informed decision-making thus, increasing stakeholders' appreciation and ownership of the strategies and recommendations that will be included in the municipal CRM Plan

The presentation of the assessment results and the zoning workshops that are done in the barangays go beyond the barangay scale. This broadens the perspective of the communities and prepares them for the next module—the municipal-wide consensus on the zonation scheme for coastal areas and municipal waters.

### **Expected Activity Outputs**

Expected outputs are: validated resource and resource use/livelihood maps showing coastal habitats, and other resources and ecologically important areas (e.g., spawning grounds) in the LGU; list of issues and problems; and proposed zonation scheme for the LGU's municipal waters and management recommendations. The latter is to cover both resource management and socio-economic improvement programs. Each barangay or cluster of barangays will have one set of outputs thus there will be as many sets of outputs as the number of barangay consultations held.

A barangay validation and zoning workshop can be completed in a day. The period needed to complete the activity will depend on the number of consultations that will be undertaken. It is preferred that coastal barangays are clustered (at least two barangays in a cluster). Not only will clustering shorten the time requirement, it also promotes sharing of information and identification of common concerns and action among adjacent barangays. In addition, working with clusters of adjacent barangays broadens the collective perspective for planning and facilitates municipal-wide consensus building.

#### **TAP in action**

*TAP principles become very evident during barangay consultations: information about the coastal resource and fisheries assessment is shared and validated with local knowledge and perceptions of their coastal resources. Those who performed the evaluation are made accountable for their actions as they are the ones making the presentation; and local communities are consulted regarding the priority issues that need to be addressed and the priority uses of the municipal waters.*

## **Activity Approach**

To put the activity into context, an overview of the whole process is provided.

The one-day activity in the barangays will have three parts: community mapping; validation of assessment results and identification of issues and problems, and zoning workshop. In the community mapping part, the participants will be asked about the barangay's important coastal and marine resources, their uses and their livelihood activities.

The information they will provide will be reflected in maps, diagrams and tables. These will then be used as reference to validate and enrich the assessment results, and to come up with what they perceive as the major problems and issues. As their final activity, the participants will be guided in generating their proposed zoning of the LGU's municipal waters, which again will be reflected in a map. Throughout the workshop, guide questions will be provided by the facilitator to systematically achieved the desired results. (See **Facilitation Guide**, page 28).

After the plenary presentation, agreements among the proposed zoning schemes of the different groups are noted. Options for areas where different priority zones were proposed are discussed and, whenever possible, agreements are facilitated. In keeping with good governance practices on transparency and accountability, participants are informed about the next steps and the indicative timetable of the remaining major activities, up to plan legitimization. This is done for all community activities.

### **Participants**

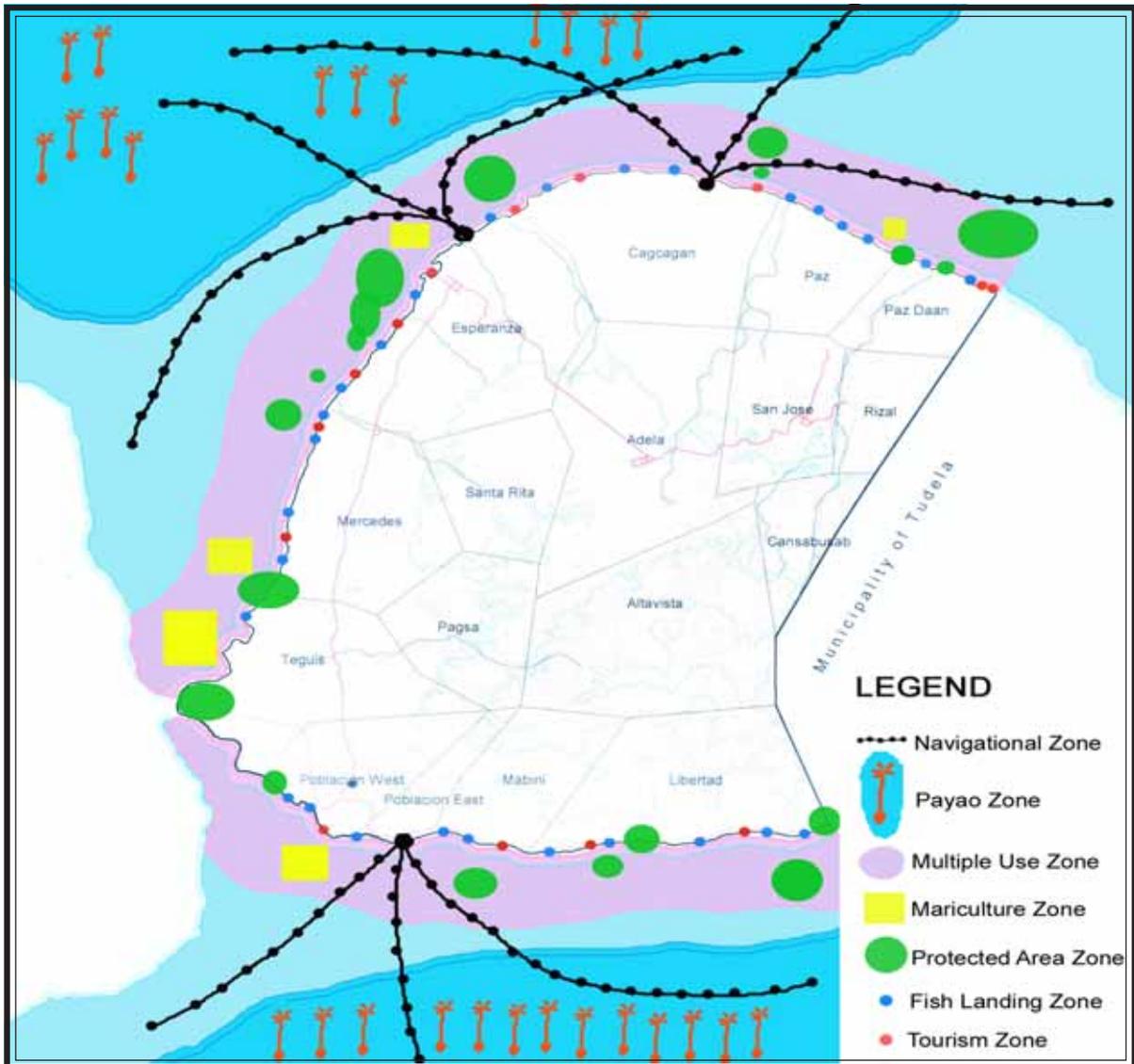
Participants in barangay consultations include local officials; members of Barangay FARMCs; fishers; fisher-farmers; representatives of transportation, tourist and business groups; and those from schools, NGOs, people's organizations and other coastal stakeholders in the respective barangays. Manageable size for this activity would be about 40 persons.

The TWG members are considered the best persons to facilitate these workshops. Thus, prior to the activity, local presentors (those who were involved in the assessment) and workshop facilitators are coached by the technical assistance team.

As will be noted, several outputs are to be generated from the one-day exercise. The success of the activity therefore is dependent on preparations that are done by the TWG prior to the conduct of barangay consultations. A two-day planning activity is thus suggested, participated in by the TWG core group members, the EcoGov Team and others who played key roles in the assessments. This is to allow them to have a run-through of the key results of the assessment that will be presented to the barangays and the design and mechanics of the barangay validation and zoning workshop. Decision points during the pre-workshop activity: clustering of barangays, schedule of workshop, criteria for the selection of participants, roles and responsibilities of specific TWG members, and logistics and documentation requirements. This may also be taken as opportunity for the TA team to coach the concerned TWG members on how to present the results, what presentation materials to use and how to facilitate the discussions .

### **Clustering as a strategy**

*EcoGov encourages clustering of barangays during consultations as this promotes sharing of information and identification of common concerns and action among adjacent barangays. Clustering considerations: similarities in physical and socio-economic features, proximity and access of barangays to each other.*



Poro Point Zoning Map

**Facilitation Guide**  
**Barangay Cluster Validation and Zoning Workshop**

A. Overview of the activity

B. Community resource and resource use/livelihood mapping

- Discuss the definitions and use of the basic parameters that will be used: habitats, resources, resource uses/livelihood, and resource users
- Divide participants into groups of 5-8. Each group should designate their leader and reporter. Provide each group with a base map.
- Let each group answer the following questions:
  - a. What coastal habitats, resources (i.e., biotic and abiotic) and ecologically important places (e.g., spawning grounds) are found in your barangay and municipality? Locate these in the base map.
  - b. How are these resources being used? Is there any seasonality in the use of the different resources? (Do simple listing of resources and description of seasonality.)
  - c. What are the types of livelihood activities in coastal barangays? (Indicate these on the map.)
- The group's output will be used as base map for the zoning workshop and will be presented to the body.

C. Validation of Assessment Results (plenary session)

- Ask local TWG/assessment participant to present assessment results
- Facilitate discussion of assessment results.
- Discuss results in relation to the resource and resource use maps they generated. The assessment results will be refined based on new/additional information shown in the resource and resource use maps and listing of issues/problems generated by the groups. These will be incorporated in the final assessment report.

D. Zoning Workshop

- Present and discuss the concept and process of coastal zoning.
- Ask each group to identify the priority issues and problems in the coastal area and whole municipal waters of the municipality.
- Ask the group to answer the following questions:
  - a) Are there specific areas where there are existing/potential conflicting uses? Indicate these areas in the resource and resource use map they prepared in previous workshop.
  - b) Are there better ways to utilize the municipal coastal resources?
  - c) How would you propose to zone the area given the various resources and resource users? Indicate in the map what the group agreed on as the best zoning for specific areas. Document why these are considered the best zone. Do these questions already provide the recommendations for the management of the proposed zones?

E. Presentation of Group Outputs and Integration of Recommendations for Zoning

### Activity 3. Municipal-wide Integration and Consensus on Coastal Zones

#### Activity Coverage

The municipal-wide integration and harmonization of the coastal zones and resource management strategies is the culminating activity of this sub-module. This activity highlights the need for the CRM Plan to be developed with a holistic approach—first, set the desired future state, then, establish the overall plan framework at the municipal scale<sup>4</sup> before working on the specific strategies.

Its objective is to come up with a municipal coastal zoning scheme that will serve as the framework for the CRM plan. The activity also aims to:

- 1) Integrate zoning recommendations and suggested resource management options;
- 2) Facilitate consensus on the LGU CRM vision, mission and goals and the municipal-wide coastal zoning as the framework for CRM Plan;
- 3) Facilitate prioritization of issues and problems; and
- 4) Integrate recommendations for zoning and resource management options for each zone.

To establish the context of the present activity, it opens with a review of the CRM planning process and of the activities and processes undertaken to date and those leading to the preparation and legitimization of the CRM plan. Also undertaken is a review of the results of the participatory assessment and barangay consultations and zoning workshops (particularly of the key issues identified) as these will be the bases for crafting the LGU's CRM vision, mission and goals, and the inputs for generating consensus on how best to zone coastal areas and municipal waters.

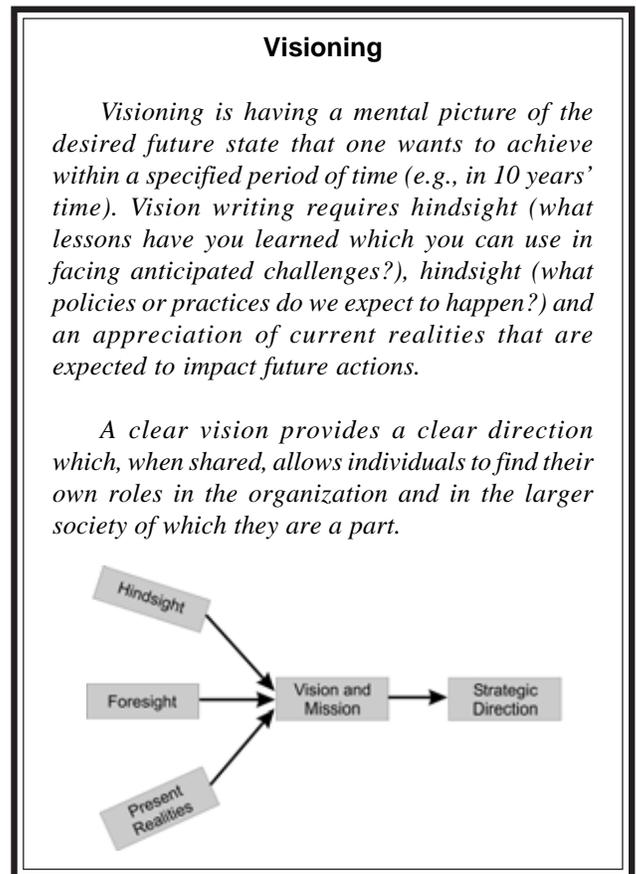
The municipal-wide integration of proposed coastal zoning and management recommendations involves the consolidation and harmonization of management recommendations and consensus on the proposed municipal coastal zoning scheme generated at the barangay level. Zoning proposals are reviewed. It must be ensured that the proposed coastal zoning and management recommendations, which will serve as the framework of the plan, support the vision, mission and goals, and that it will allow the identification of more specific actions in the next module.

#### **Expected Activity Output**

The main output is a community validated municipal-wide coastal zoning scheme reflected in a municipal coastal zone map<sup>5</sup> with delineated boundaries, and management recommendations per proposed zone. Supplementary outputs are statements of vision, mission and goals, and the prioritization of issues and problems that have to be addressed.

<sup>4</sup> It is important to highlight the significance of having a municipal-wide perspective in planning as it brings together all barangay level activities, promoting cooperation and unity among community members.

<sup>5</sup> Technical descriptions are done later. The output is just the indicative zones, with description (e.g., fronting barangay X to the reef area...).



Based on EcoGov experience, consensus on the zones can be achieved within 2 days.

The field validation of zone boundaries will be conducted at a later time; duration will depend on the extent of the municipal waters and the availability of persons who can do the GPS readings and the mapping.

The coastal zoning scheme will be the basis for the activities in Sub-Module 2C. Since the finalization of the technical coordinates will not be critical to the subsequent activities, the LGU can proceed to Sub-Module 2C even as the zoning map is still being finalized.

### **Activity Approach**

The activity consists of a 2-day workshop, which is expected to generate agreements on the coastal zones for the priority uses of the LGU's municipal waters and include conduct of the organizational meeting for the plan drafting committee. The workshop will involve discussions and negotiations as the various zoning proposals of the barangays are reviewed and harmonized to come up with a municipal-wide zoning plan.

The suggested order of workshop and discussion activities is:

- 1) Review of previous activities;
- 2) Review and consensus on priority issues and problems at municipal level. Issues and problems may be clustered into three groups: institutional and political, socio-economic, and environmental.
- 3) An exercise to craft vision, mission and goals. Consensus-building approaches such as the Technology of Participation (ToP), etc. may be used. It may be necessary to provide brief technical inputs on crafting vision and mission statements before proceeding with the exercise.
- 4) Review of barangay zoning proposals and municipal-wide consolidation and integration of zoning and management recommendations. Consensus is facilitated for areas where there are differences in recommended priority uses or for adjacent zones which are not compatible. The advantages and disadvantages of suggested options for specific areas are evaluated. Decision-making is facilitated by complementing local knowledge with expert advice from project technical staff and service providers/resource persons.
- 5) Organization of the drafting committee<sup>5</sup>. The TWG will have to agree on the criteria for the selection of TWG members (and of other stakeholder groups) who can be given writing responsibilities. There is a need to formalize their designation. The selected members of the drafting committee may opt to hold its organizational meeting during the period of the workshop or organize the meeting as a pre-workshop activity in Sub-Module 2C.
- 6) Action planning, essentially for the field validation. It is possible that consensus may not be fully achieved on the more controversial zones during the session. The action plan may include the conduct of additional data collection and validation necessary to resolve outstanding issues.

#### **Clustering of Issues**

*Issues are clustered for easy and logical discussion, and to help come up with a clear vision and goal. Examples:*

##### *A. Institutional and Political Issues*

1. *Absence of a formal organizational structure for CRM programs*
2. *Inadequate knowledge and skills of LGU staff*
3. *Lack of resources for CRM programs*
4. *Strained relationship between LGU and other stakeholders*

##### *B. Socio-Economic Issues*

1. *Limited livelihood opportunities*
2. *Absence of financing organizations*
3. *Lack of marketing facilities and infrastructure support*

##### *C. Environmental Issues*

1. *Dumping of garbage into the sea*
2. *Illegal poaching in mangrove areas*
3. *Over fishing*

<sup>5</sup> The drafting committee is usually organized into sub-committees for each management zone.

## **Participants**

The participants are the members of the TWG, representatives from the barangays or clusters of barangays (who can explain their zoning proposals), representatives of the barangay councils, M/BFARMCs, and stakeholder groups, staff from other LGU units and DENR and BFAR staff. The field validation will necessarily involve persons knowledgeable in GPS operation and mapping. Technical assistance for this activity may be sourced from the MPDC or MEO, DENR, BFAR or from the provincial government.

It is critical that the activity be facilitated by an experienced facilitator. There must also be a good documentation of issues raised, options suggested and criteria used in deciding the preferred option.

## Sub-Module 2C. Plan Formulation and Legitimization

### Sub-module Coverage

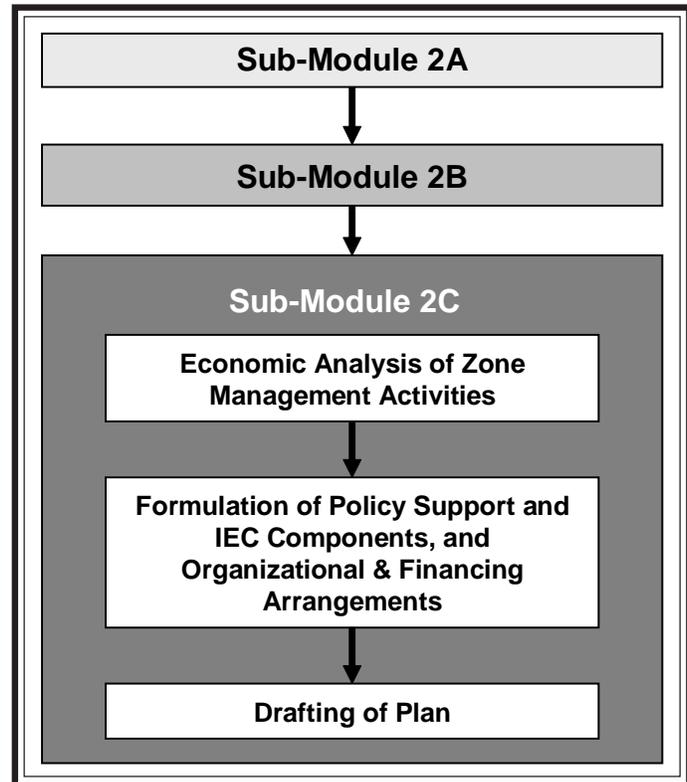
The main objective is to flesh out the proposed CRM strategies and translate them into specific implementation arrangements and prioritized activities, with timeframes, cost estimates and responsibility centers. It will cover the formulation of activity plans per zone and such cross-cutting concerns as policy support and enforcement, IEC, training, financing, and M & E. It will also define the organizational arrangements for plan implementation. Necessarily, implementation strategies and actions will incorporate good governance mechanisms.

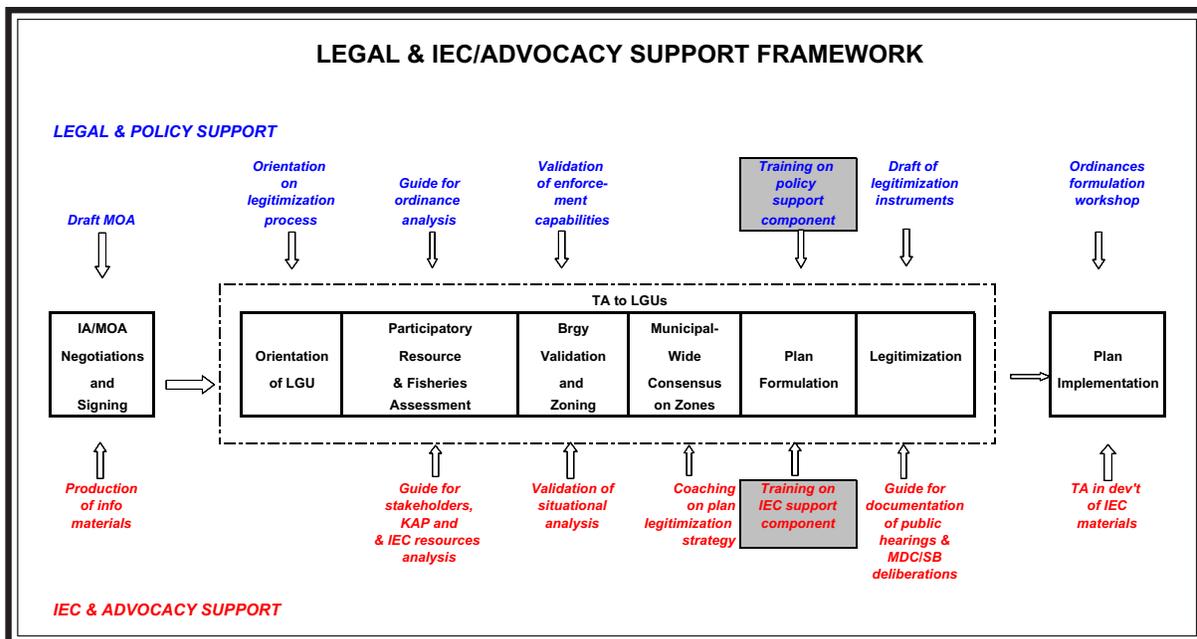
This sub-module builds on the outputs of the activities in Sub-Module 2B, particularly the situational analysis/assessment, the vision, mission and goals, and the consensus on the coastal zones. The zoning scheme serves as the CRM plan's spatial framework, and so implementation arrangements in the plan will always be in reference to such scheme

The EcoGov has been conducting three major training activities under this sub-module:

- 1) **Activity 1. Economic Analysis of Zone Management Activities**. This allows the LGU to collate and complete its management recommendations for each of the proposed zones; translate them into specific activities; and estimate the costs, revenues and net revenues per zone. In the process, it is able to identify the sectors that will be directly and indirectly affected, and those that will gain or lose as a result of plan implementation. Through a series of cost-revenue analysis iterations, the management recommendations and activity plans will be firmed up and made more doable vis-a-vis available resources and capabilities.
- 2) **Activity 2. Policy Support Formulation**. This enables the LGU to formulate the policy support and enforcement component of the plan. Based on an analysis of existing policies and ordinances and of the policy/ordinance support requirements culled from the management recommendations per zone, the LGU will be able to develop its priority policy support agenda and work out an effective enforcement strategy.
- 3) **Activity 3. IEC Support Formulation**. This identifies the priority IEC activities that will be pursued. It proposes a strategy to promote CRM awareness and support to the implementation strategies for each zone by various stakeholders. It will also guide the LGU in developing an IEC program that can be initiated immediately, prior to plan legitimization.

It is proposed that in the future, a fourth training activity be included in the sub-module—that on organizational and other implementation arrangements. It is deemed important that there be technical inputs as well in defining and developing the CRM organization and staffing scheme, institutional linkages, capacity building strategy, and M & E arrangements, and in the preparation of a one or two- year action plan.





Legal/policy and IEC/advocacy support inputs are critical at all stages of the EcoGov technical assistance to LGUs as shown in the above framework. Activities 2 and 3 pertain to the shaded boxes in the diagram.

Considering that each activity in this sub-module will tackle a specialized subject matter (economic analysis, policy analysis and communication planning), the mix of participants to these activities may differ. Other LGU officers or representatives of stakeholder groups who are performing activities related to the subject matter or who have some background on the subject matter will be encouraged to participate. Preferred participants for each activity are identified under the description of each activity.

EcoGov specialists (i.e., Resource Economist, Legal Specialist and IEC Specialist) have taken the lead in the conduct of these activities in the EcoGov LGUs. Local service providers have been hired for the facilitation of the workshop, documentation of workshop outputs, integration of plan inputs and drafting of the CRM plan. In the future, local resource persons (service providers from DENR, BFAR, NGOs and other local institutions) may be tapped but it is important that the rationale, the process, tools and outputs are well understood by them as the results of these activities will be direct inputs to the CRM plan.

**Expected Sub-module Output**

The output of this sub-module will be a draft CRM plan. The EcoGov Project has developed a suggested outline for this plan (See **Annex 2E, CRM Plan outline**). Each of the above activities have been designed to be completed within two days.

It is expected that 1 to 2 months will be required for the LGU to integrate all the inputs from the various sub-modules and activities and complete the draft plan.

The TWG and the CRM plan drafting committee will be the lead actors of this sub-module. Before any of the activities in this module is started, it is recommended that they are provided with an orientation on the CRM plan outline. It is critical that

**Assistance for plan drafting**

*In EcoGov LGUs, technical assistance was provided in the integration of the various inputs and drafting of the plan document. It was recognized that LGUs have time and skill limitations in terms of writing resource management plans, thus, this specific task was made part of the technical assistance to the LGU.*

*It must be ensured, however, that the plan reflects the consensus and agreements reached in the various planning activities, that the document is written from the viewpoint of the LGU and communities, and that the final draft of the plan document undergoes stakeholder validation before it is submitted for legitimization.*

the members understand how the plan document will be organized, what will be contained in each section, what the sources of the inputs are for the various sections of the plan (or how the outputs of each activity will contribute to the plan document), and who will be responsible for specific sections and for the integration of the whole plan document. This formal orientation can be organized as a preliminary activity (one day) in this sub-module, which will also be an opportunity for the TWG to plan the training and post-training activities in the sub-module.

The formal plan legitimization goes through the regular local legislative process of the Sangguniang Bayan/Panglungsod after public hearings, and presentation to the Municipal/City Development Council (C/MDC). The LGU is expected to take the lead in these activities. Technical assistance inputs (mainly coaching) are expected to help the TWG prepare for the presentations to the communities, C/MDC and SB and in the final review and packaging of the plan document.

LGUs which reach this stage of the planning process would have established clear directions for its CRM program and should be ready to initiate implementation activities while the CRM plan is being drafted or undergoing legitimization. Among the doable activities would be the strengthening of existing marine sanctuaries, the enhancement of enforcement activities, the creation of the support institutions, IEC and formulation of enabling ordinances.

## **Activity 1. Economic Analysis of Zone Management Activities**

### **Activity Coverage**

This activity aims (a) to develop an appreciation of the iterative process of analysis to support informed decision-making, (b) to develop the skill to perform economic analysis, (c) arrive at an analysis of costs, revenue, and financial requirements of the plan. The participants' understanding of the concepts, method and use of economic analysis in decision-making is facilitated by the hands-on approach, which allow them to review and refine the zone management strategies/activities proposed in the previous sub-module (Sub-module 2B) until they arrive at a set of management recommendations that meet set economic criteria, the most important of which, from the local government perspective, are costs, revenues and net revenues.

The activity introduces a multi-criteria decision-making framework for CRM, as it initially views CRM activities against environmental, political, social, and economic criteria. The latter is given the primary consideration in the analysis due largely to financial constraints in plan implementation. Environmental, social and political factors are used to make the LGU aware of the environmental, social and political costs of their proposed strategies/activities and ensure that these activities include the necessary measures to mitigate negative environmental impacts<sup>6</sup>.

It is a fact that LGUs have limited resources so CRM activities will have to be prioritized according to the financial, manpower and organizational capabilities of the municipality/city. The economic analysis makes sure that the implementation activities that will be embodied in the plan will be doable given available resources.

This activity allows for the adjustment of strategies, replacement or reprogramming of activities, consideration of additional external financing options, and consider alternative courses of action so that those which are deemed non-realizable due to financial and administrative constraints are addressed.

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<sup>6</sup> The attendant legal concerns (e.g., amount of fees, scope of municipal charges) and compliance to national laws are taken up in the policy support workshop.

## Expected Activity Output

The expected output of this activity is cost-revenue analysis of each proposed zone and of all the coastal zones taken together. This analysis provides the investment and financial plan (See **Annex 2F, Economic Analysis Format**; and **Annex 2G, Sample Financing Plan**) for the implementation of activities for each management zone and of the whole plan. The output will show what best sets of activities are to implement the recommended zoning scheme and how much will it cost to implement the proposed CRM activities within the 10-year plan period. Additional analysis is performed on the overall cost and revenue figures by deriving the Benefit- Cost Ratio, Net Present Value (NPV), and Financial Internal Rate of Return (FIRR).

Two days are allotted for the conduct of the economic analysis workshop proper. The activity, however, entails some pre- and post-workshop activities, thus a longer time allocation is necessary.

### Activity Approach

This activity is a guided exercise on how to perform the economic analysis of each coastal zone and of the whole coastal zoning plan. Since this type of analysis is not usually done in CRM planning, it is critical that before the workshop proper, the participants are given technical inputs on the use of economic analysis in decision-making and on the key concepts and parameters used in the analysis such as: investment and operating costs, revenues and revenue-generating mechanisms, cost-revenue analysis, cost-benefit analysis, Net Present Value (NPV), Internal Rate of Return (IRR), financing and incentives systems. It is important that technical concepts are presented in a manner that will be understood by participants who are non-economists and non-accountants. The suggested organization of the technical inputs is shown in the attached presentation outlines.

The economic analysis will be done per zone and for the whole zoning plan. For the most part of the activity, participants will be working in groups (per zone sub-committee). Ideally, one group will work on one zone (or two smaller zones or a combination of one major and one minor zone can be assigned to one group if there are not enough participants), thus, the number of groups will at most equal the number of proposed coastal zones. The groups will be guided in going through the first 5 of the 13 steps outlined in the succeeding Guide. After the completion of the economic analysis of each zone, the results will be consolidated and the next phase of the analysis will cover all the zones within the LGU's municipal waters. The plenary format is suggested for this phase of analysis, but a core group is designated to consolidate the aggregated analysis.

The activity will require inputs from the previous activities (Sub-Module 2B). Other than the listings of problems and issues, and the recommended strategies/activities per zone, the following materials from Sub-Module 2B should be made available to the participants: zoning map, resource and resource use map, livelihood map, and statement of vision, mission and goals. As needed, a review of the resource management options (e.g., fishery management) shall be provided.

It is critical for the participants to go through the whole process of economic analysis (13 steps) during the workshop period. Two days may or may not be sufficient, if so a few options are suggested. The following approaches may be considered:

- 1) Introduce a pre-workshop activity wherein the participants will be asked to do initial work on Steps 1 and 2 in the Guide. This means that detailed guidelines will have to be given to the TWG and the drafting committee ahead of time.
- 2) Add another day to the workshop. The participants will then have more time to complete the group activities.
- 3) Guide the participants through the step-by-step process using a given data set (from another LGU). The participants can then be assigned to repeat the process after the workshop when it is able to generate its own data.

## Step-by-step Guide to the Economic Analysis of Coastal Zones

### Analysis of Each Coastal Zone

- 1) Compile results of barangay and municipal consultations on coastal zoning, i.e., problems and issues and the recommended management objectives, strategies and activities per zone. Review the strategies and activities vis-à-vis problems/issues and vision, goals and objectives. Do they sufficiently address the problems? Are there gaps? Which of the activities will have significant ecological, socio-cultural, economic and political impacts? What mitigating measures will have to be included in the list of activities to address negative impacts?
- 2) Complete the activities for each management strategy per zone on the basis of the above analysis. Classify the activities into major headings or categories: regulation and law enforcement; site development; information, education and communication (IEC); market and transport; incentive system; organization and management; and institutional capability-building, and potentials livelihood programs. Indicate the duration for implementation (within the 10 year plan period) for each listed activity.
- 3) Identify the relevant cost items for the various activities for the zone. Estimate per unit costs and annual costs, following the implementation schedule set in Step 2. Use current prices in estimating the costs. Costs will have to be classified as investment (which includes capital outlay and initial program costs) or operating cost (which includes salaries and wages, maintenance expenses, communications and travel and the like). Add up all costs per year and per major category. This serves as the cost schedule for the zone, representing the total costs to the central manager involved in establishing and managing the zone. In the process of identification of costs that are normally shared among zones are included; examples include administration, IEC, law enforcement and communications. These costs are consolidated in succeeding estimates of costs at the plenary level, when various options of overall coastal zones management are considered.

After the workshop proper, the participants should be given some time to refine and complete their workshop outputs.

- 4) Identify actual and potential revenue sources for the zone. Estimate the per unit and annual revenues, clearly noting down the assumptions made in the computations, e.g., rates of fees will increase every two years. This is the revenue schedule for the zone. Using the cost schedule in Step 3, compute the annual net revenues. This is the net revenue schedule for the zone.  $\text{Net Revenue Per Zone Per Year} = \text{Total Revenue Per Year} - \text{Total Cost (Investment + Operating Cost) Per Year}$
- 5) Perform a cost-revenue analysis, i.e., examine the net revenues and take note of the positive and negative (or net cash inflows) values. Closely examine those years when negative values are high and identify the causes for the deficit.
- 6) Present the results for discussion and possible improvement. Determine if there is a need to adjust or replace the activities or the schedules of the activities which are registering negative revenues (Can the costs still be reduced? Is there a need to spread out more the annual CRM investments? Would it still be possible to increase revenues or introduce other financing schemes?). Make the necessary adjustments and refinements, re-compute costs and revenues and come up with revised cost, revenue and net revenue schedules.

### ***Consolidating Costs and Revenue for all Coastal Zones***

- 7) Consolidate the cost and revenue schedules of all the coastal zones. Determine the overall cost, revenue and net revenues schedules.
- 8) Perform a cost-revenue analysis, i.e., examine the net revenue and take note of the positive and negative values. Closely examine those years when negative values are high. Identify which zones are cost centers and which are revenue sources. Make necessary and practical adjustment in costs or revenues.
- 9) Perform sensitivity analysis by varying costs and revenue figures (e.g., increase and decrease figures by 10% or assume exclusion of some costs). Analyze behavior of cost and revenue centers.
- 10) Complement the above analysis with an analysis of the Net Present Value (NPV), Internal Rate of Return (IRR), and Benefit-Cost Ratio (BCR). Interpret results. These measures are useful from the perspective of financing the plan i.e. where the funds will come from depends on its attractiveness to investments: investments are commonly measured using these criteria.
- 11) Present the results for discussion. Determine if there is a need to re-adjust the activities or the schedules in any of the zones, particularly the cost centers. Make the necessary adjustments, re-compute costs and revenues and come up with revised overall cost, revenue and net revenue schedules.
- 12) Finalize the strategy, activity list, implementation schedule and cost and revenue schedules of all zones.
- 13) Identify the potential sources of financing for each of the zone and for all the zones – revenues, IRA of the LGU, external financing, private sector investment. Include this as the financing strategy for the coastal zoning scheme. Consider such options as joint-ventures, build-operate-transfer and other similar options. A matrix showing the cost and revenue per zone, the financing recommendation or source of funds can be created.

### **Participants**

Preferred participants are the members of the TWG/drafting committee, the Municipal/City Planning and Development Coordinator, the LGU officer in charge of the CRM sector, and representatives of local fisherfolk organizations and other sectoral groups. The presence of the Municipal/City Treasurer, Accountant and Budget Officer are also necessary.

A resource person with a solid grasp and actual experience in Economic Analysis is desirable. An experienced facilitator and documenter will be necessary.

## **Lecture Notes**

### **Introduction to Economic Analysis of Coastal Zones and Synthesis of Information Inputs**

- I. Objectives of the Workshop and Organization of Workshop Activities
- II. Decision-Making Framework and Process
  - Decision-making framework in the context of CRM
  - Decision-making Process
    - Identification of coastal management issues in the municipality
    - Identification of financial, economic and non-economic criteria for analysis of alternative strategies/activities for identified zones
    - Identification and analysis of alternative strategies/activities for each identified zone
    - Identification of preferred/best strategy/activity
- III. Why Economic Analysis of Coastal Management Options
  - Resource constraints (environmental constraints, biodiversity and ecological considerations)
  - Social and economic considerations (Social and cultural constraints, economic context constraints, financial constraints)
  - Technological considerations
  - Legal and institutional context and characteristics
- IV. Inputs for Economic Analysis of Coastal Management Options
  - Sources of information or data about resource and socio-economic conditions: coastal habitat assessment report, fisheries and socio-economic assessment, Municipal Socio-Economic Profile, Municipal Development/Land Use/Investment Plans, other reports
  - Sources of information on issues and concerns and their prioritization: resource, fisheries and socio-economic assessments, barangay validation, municipal-wide consultations)
  - Source of information on coastal zoning (barangay zoning workshops, municipal-wide consultations)
- V. Clustering of Issues
  - Legal, Institutional and Political Issues
  - Socio-Economic Issues
  - Environmental Issues
- VI. Coastal Zones and Strategies
  - Fishing Zone (can be divided into commercial fishing and municipal fishing zones)
    1. Regulation and monitoring of fishing activities and fishing gears
    2. Generation of revenue from fishing activities
    3. Providing incentives for reducing fishing effort
    4. Improving fishing efficiency of small fishers
  - Fishery Development Zone
    1. Improved fish production and post-harvest processing
    2. Complementary facilities development
    3. Markets development
    4. Infrastructure development
    5. Organization of fishers
    6. Settlements management
  - Marine Protected Areas
    1. Delineation of areas for fish sanctuaries, sea grass reserves and mangrove reforestation
    2. Effective enforcement and incentive mechanism
    3. Development as educational and tourism site
  - Tourism Zone
    1. Develop potential for revenue generation
    2. Private investment in tourism development
  - Navigation Zone
    1. Regulation of seaborne vessels
    2. Management of trade/vessel routes
    3. Docking facilities and navigational aids
  - Mariculture Zone
    1. Delineation of areas for mariculture
    2. Develop potential for revenue generation
    3. Develop community-based livelihood
    4. Private investment in mariculture

## VI. Classifying Activities Per Zone

- Regulation, includes: ordinance formulation, public hearings on ordinances, regulation activities, conduct of regular enforcement assessment/feedbacking meetings
- Site development
  1. Infrastructure (construction and/or improvement) support activities
  2. Construction of buildings (e.g., establishment of visitor or training center), guard house
  3. Fencing of tourism zones
  4. Installation of buoys and markers (i.e., in MPAs)
- Organization and Management
  1. Formation of support groups for zones
  2. Organization of CRM Office
  3. Hiring/designation of manpower for Plan implementation
  4. Operations of CRM office
  5. M and E
- Markets and Transport Development
  1. Product transport and marketing
  2. Establishment of marketing cooperatives
  3. Product development
  4. Development of market networks
  5. Centralized transport services for fishery products
- Information, Education and Communication
  1. Knowledge, awareness, practices surveys
  2. Development and dissemination of IEC materials re zone activities
  3. Pulong-pulong, barangay assemblies
  4. Other IEC activities
- Institutional Capability-Building
  1. Formation of people's organizations
  2. PO/federation strengthening
  3. Technical capability training
- Law Enforcement and Monitoring
  1. Creation of law enforcement team
  2. Training and deputation
  3. M and E/ Performance evaluation
- Incentives Mechanisms (Incentives are mechanisms which induce stakeholders to contribute to CRM sustainability; disincentives are discouragements to stakeholders to violating CRM policies)
  1. Management incentives
  2. Production of supply incentives
  3. Trading or marketing incentives
  4. Use or access incentives

## VII. Options Analysis Methods

- Multi- Criteria Decision Analysis
  - Tool in establishing preferences between/among options in line using set of agreed indicators/criteria developed (economic, political/institutional, environmental)
  - Emphasis on the judgment of decision-making team in
    1. Setting objectives and criteria
    2. Estimating relative importance or weights
    3. Estimating the rating of each option per performance criterion
- Cost-Benefit Analysis as quantification of costs and benefits of a specific strategy/activity
- Other methods

VIII. Step-by-Step Procedure for Undertaking the Economic Analysis of Coastal Zones (refer to Guide on pages 36 and 37). This will be followed by workshops to define zones for the LGU and corresponding management strategies and activities, estimates costs and revenues and net revenues, and refine zone management activities.

## **Cost-Benefit Analysis**

- I. Cost-Benefit Analysis. It entails:
  - Identification of costs and benefits of a specific strategy/activity
  - Computing the costs that will be incurred in the implementation of activities per zone and calculating expected revenues per zone
  - Analysis of costs and benefits to stakeholders
- II. Objectives of Cost - Benefit Analysis
  - Comparison of alternative courses of action
    1. Examination of the choice of course of action in the past
    2. Evaluation of various alternative courses of actions
  - Selection of action projects and policies which are efficient in terms of use of resources
- III. Economic Evaluation Criteria: Net Present Value, Internal Rate of Return, Benefit-Cost Ratio
  - Net Present Value =  $NB_0 + d_1NB_1 + d_2NB_2 + \dots + d_nNB_n$ , where  $NB_t$  is the difference between benefits and costs (i.e.,  $B_t - C_t$ ) which accrues at the end of the period,  $t$ . The discounting weights are computed as  $D_t = 1 / (1 + r)^t$ . Decision rule: Proceed if incremental net present value from current management situation is positive.
  - Internal Rate of Return: Rate of interest, which if used as the discount rate of a project, would yield an NPV of 0. The rate of return on the resources used up in the project is to be compared with the opportunity cost of investment funds, i.e. market rate of interest. Proceed if IRR is greater than the prevailing opportunity cost of capital (e.g., market interest rate or loan rates)
  - Benefit-Cost Ratio: Ratio of discounted costs. Decision rule: Proceed if the benefit-cost ratio exceeds unity, i.e.,  $BCR > 1$ .
- IV. Stages in Cost-Benefit Analysis
  - Stage 1: Definition of the Project and its boundaries
  - Stage 2: Identification of Project Impacts
    1. Identification of positive (benefits) and negative (costs) effects of project implementation
    2. Listing of Costs and Benefits (qualitative and quantitative)
    3. Measures of costs and benefits
  - Stage 3: Applying the Net Present Value (NPV), IRR and Benefit-Cost Ratio Test
  - Stage 4: Identification of Best/Preferred Strategy
- V. Problems and Limitations of Cost-Benefit Analysis

Next Steps: Application of economic criteria to municipal-wide coastal zones.

## **Financing the CRM Plan**

- I. Major Fiscal Problems of LGUs
  - High dependency on Internal Revenue Allotment (IRA); poor operation and management of economic enterprises; under-utilization of real property tax bases
  - Outdated local tax codes; under-assessment of local business taxes
  - Insufficient utilization of available financial resources; poor planning and insufficient budgeting
- II. Recommendations for LGU Financing Mechanisms (ADB, 2002)
  - Examine and recognize macroeconomic trends: records of recent revenue collection efforts should be analyzed
  - Improve statistical information underlying revenue estimation
  - Develop mechanisms to enhance accuracy of revenue projections and the assessment of revenue impacts of tax policy changes
  - LGUs must avoid subsidizing costs when the beneficiaries are clearly and specifically identified; avoid subsidies as they tend to deplete meager resources
  - Review the tax burden of the different sectors of the economy to improve equity
  - Implement a clear, concise and regularly updated tax ordinance
  - Match penalties with implications of tax delinquency to encourage and promote tax compliance
  - Promote good governance through value formation of personnel concerned
  - Explore other areas of collaboration and partnership with the private sector and NGOs in service delivery

### III. Traditional Funding Sources

- Internally-generated revenues: real property and business taxes, fees, charges and economic enterprises
- Internal revenue allotment from the national government representing the LGU's share in internal revenue collections
- Share in national wealth utilization for natural resources located in the LGU
- Share in value-added taxes
- Financial aid from local or foreign sources; donations in kind from local or foreign sources

### IV. Non-Traditional Funding Sources

- Direct Loans from special government loan programs and government financial institutions (GFIs). Examples: (a) GFIs: LBP, PNB, DBP, PVB, (b) DOF (e.g. LOGOFIND), and (c) GSIS (for small projects)
- Private Sector Tie-Up: Build-Operate-Transfer (BOT), joint venture (JV) scheme
- Bonds Flotation: Section 299 of the LGC authorizes provinces, cities and municipalities to issue bonds to finance a) self-liquidating, income-producing development or livelihood. Projects, b) LGU-approved local development plan or public investment program

### V. Steps in Evaluating Financing Requirements of the Plan

- **Step 1:** Review the annual cash outflow (capital outlay and operating costs) and cash inflows (revenues).
- **Step 2:** Estimate the net revenue before financing, i.e., Cash inflow less Cash outflow. Determine if negative or positive
- **Step 3:** Analyze the LGU's financial situation vis-à-vis CRM Budget Requirements
  1. Total Income
  2. Total Expenditures
  3. Internal Revenue Allocation; CRM requirement as % of IRA
  4. Net worth of the LGU
  5. 20% Development Fund; CRM requirement as % of Development Fund
  6. Projected Revenues from CRM related activities; CRM requirement as % of Projected Revenues. Determine adequacy of internal sources to finance plan implementation
- **Step 4:** Adjust project activities if internal resources are inadequate
  1. Scale down the project or some components/activities
  2. Modify phasing of project investment schedules (e.g., divide into program phases)
  3. Re-schedule investment items (e.g., postpone procurement of major capital equipment)
- **Step 5:** Determine requirements for external financing;
  1. Identify negative net revenues; determine how much of IRA should annually be allocated to CRM, determine external financing requirements
  2. Unbundle financing requirements: by zone, by major investment category, by major category of activities, by category of expenditure (i.e., capital outlay, incremental working capital, operating expenses)
- **Step 6:** Determine possibility of increasing internal revenues: rents, fees, charges
- **Step 7:** Study possible external financing sources and their requirements
  1. National agencies
  2. Provincial government
  3. Loans/grants from foreign sources
  4. Bank loans
  5. Private investments
  6. Others
- **Step 8:** If Loan, Determine Loan Amount and Repayment Program
  1. Calculate annual amortization given loan period and interest rate
  2. Conduct sensitivity analysis
  3. Determine amount of loan needed
- **Step 9:** Finalize Investment and Financing Schedule
  1. Cash flow schedule
  2. Net cash flow without external financing
  3. Net cash flow with external financing
  4. Net present value of financial package
  5. Matrix of major activities and source of financing

## ***Incentives and Revenue-Generating Mechanisms for Fishery Management***

- I. Definition of Incentives – a tool commonly-used to motivate a worker to improve performance; an inducement specifically intended to incite or stimulate action or determination
- II. Rationale for Incentive-Based Instruments in CRM
  - Fisheries management, being multi-faceted, is brought about by complex interactions of socio-economic and bio-physical issues
  - One or two instruments not sufficient or capable of solving complex issues
  - Government resources (financial, administrative) and community resources are limited
- III. Development of Incentive Schemes
  - How to determine the best instruments — effectiveness and dependability; efficiency; administrative feasibility; equity (distribution of benefits); and political, societal or communal stability
  - Who are the providers and recipients of incentives — principal actors in CRM and their roles in fishery management. They include national and provincial agencies, LGUs, users of environment and natural resources, final consumers of coastal and marine products (local, national and global)
- IV. Typology of Incentives
  - Legal, economic, information, social/cultural, ecological, institutional
  - Negative or positive, direct or indirect, use or non-use, financial or non-financial (goods and services), macro or micro
  - Local or national
  - Incentive for prevention or mitigation
  - Incentives, disincentives, perverse incentives
  - Passive or active
  - Variable incentives and user enabling incentives
- V. Categories of Incentives
  - Management Incentives: Principal-Agent Model – Incentives by owner to manager of resource
    1. Incentives for effective performance of functions and accountabilities
    2. Disincentives for underperformance
    3. Innovative incentives
    4. By national agency (principal) for LGU (agent)
    5. By LGU (sub-principal) for communities (agent)
    6. Tax or revenue share incentives for LGUs
  - Production Incentives
    1. Tax or subsidy for technological innovations on inputs
    2. To control or regulate harvest
  - Trading or Marketing Incentives: By trader (principal) to fishers (agent)
    1. Preferential trading arrangement
    2. Quality standards labeling
  - Use or Access Incentives: LGU (principal) to resource users (agent)
    1. Preferential access rights
    2. Preferential harvest rights
    3. Income subsidy
    4. Livelihood support mechanisms
- VI. Practical Applications for LGUs
  - Step 1: Identify areas for application of incentives : coastal zones; resource users or fishers and consumers; coastal management; and marketing or trading
  - Step 2: Identify “principals’ and “agents.” Who are the stakeholders in fishery management? Define objectives of principal and agent
  - Step 3: Define potential incentive schemes for various stakeholders
  - Step 4: Estimate financial and economic (societal) benefits of incentives: temporal scale benefits, spatial scale benefits, externalities
- VII. Potential Incentive Mechanisms per Zone
  - Tax credits
  - Permit fee credits
  - Government subsidy
  - Centralized fish processing center
  - Centralized marketing/transport system
  - Price support mechanism
  - Concessions
  - Exclusive use rights
- VIII. Regular Monitoring and Evaluation of Impacts : environmental, social, economic, and political

## Activity 2. Policy Support Workshop

### Activity Coverage

The activity aims to facilitate the systematic development of the policy support component of the CRM plan. This component essentially consists of a policy/ordinance agenda based on an analysis of the present policy environment of the LGU and of the management strategies per coastal zone. It includes as well a description of the enforcement mechanism that is appropriate for the LGU.

In this activity, the participants will go through a process of performing an analysis of existing ordinances in the light of the LGC and RA 8550, identifying the ordinances and policy actions that will support specific CRM Plan interventions, and defining the institutional arrangements for their enforcement. By-product is the enhancement of the participants' information base on CRM policies as they will get the chance to review the CRM provisions in the LGC and the Fisheries Code and its IRR.

Considering that many LGUs still have ordinances passed before the issuance of RA 8550, this activity allows them to review these ordinances and update them as necessary. They will likewise have hands-on experience in enhancing these ordinances by integrating into them provisions on transparency, accountability and participatory decision-making or TAP. Thus, it will be insufficient to only identify the set of ordinances that need to be enacted for improved management of the coastal resources of the LGU. It is equally important to establish who will be accountable for specific decisions and actions, and to provide (among others) procedures for greater stakeholder participation in the monitoring of implementation activities, revenue generation and expenditures.

#### **TAP-enhanced ordinances**

*Participants will have hands-on experience in enhancing local ordinances by integrating into them provisions on transparency, accountability and participatory decision-making or TAP.*

*This ensures that the TAP principles introduced in the various stages of the CRM planning are carried throughout the implementation stage.*

### **Expected Activity Output**

The output of the activity is a draft policy support component, which in the CRM plan outline (**Annex 2E**), forms part of the implementation arrangements. Part of the output is a list of the priority ordinances that will have to be enacted to support implementation of the LGU CRM plan. Upon the completion of this activity, the LGU can initiate the preparation/revision of priority ordinances so that these may be issued as soon as the CRM plan is legitimized. The EcoGov has prepared templates (See **Annex 2H2, Ordinance Templates**) of these ordinances, which the participants can use as references when drafting the ordinances.

The workshop for developing the component is programmed for two days. There is a requirement for a pre-training activity and post-training activity (further development/refinement of the content of the component), thus, time needed for this activity may be longer.

### Activity Approach

The activity will require a short lecture and a series of workshops. The lecture will define the scope and provide the conceptual and legal framework for formulating the policy support component. It will provide a review of the concepts of transparency, accountability and participatory decision-making. The workshops will allow the participants to systematically analyze policies and ordinances, and work out the LGU's coastal resources and fisheries management policy agenda and enforcement mechanism, using tools and formats developed by the EcoGov Project.

An important part of the activity will deal with the analysis of existing CRM and fisheries management ordinances. The ordinance inventory and analysis will focus on four major types of ordinances:

- 1) Ordinances on the management, conservation, development, protection, utilization and disposition of fish and fishery/aquatic resource within its municipal waters;

- 2) Ordinance delineating boundaries of municipal waters;
- 3) Marine protected areas, and
- 4) Unified fisheries ordinances of LGUs bordering bays, lakes and gulfs.

It is understood that prior to the conduct of this activity, the TWG has done, as a pre-workshop activity, a compilation and preliminary review of all these ordinances and policies.

The analysis will be done in two stages. The first stage of analysis will look at gaps in existing policies/ordinances based on RA 8550 and its IRR and good governance practices. In making the analysis, the participants will make use of a guide and summary form (See **Annex 2H2, Guide to Policy Analysis**) developed by the EcoGov Project for this purpose.

The second stage of analysis will examine the policy/ordinance support requirements of the CRM plan and match these with what exist. The adopted zoning scheme and the key strategies and activities for each zone are reviewed and the ordinances which will support the establishment and management of the zones are identified. Taking into account the requirements of the plan and the applicable laws, the contents or necessary provisions of each proposed ordinance are determined and discussed, including the desirable TAP practices.

The formulation of the policy support component will take off from the results of the two analyses. The participants will have to agree on the priority policy/ordinance agenda. Then, with the use of guide questions, they will flesh out their TAP-enhanced enforcement mechanism, which will include staffing and incentives systems for the enforcement organization and performance evaluation system. The various policy/ordinance formulation and enforcement activities will then be programmed over the 10-year period, with the responsible centers (position or office) and time frame for their implementation indicated.

The first-level ordinance analysis will be done in groups. Proposed group tasking is by subject matter (e.g., organization, permits and licences, enforcement, etc.). This type of tasking facilitates the consolidation of the workshop outputs of the different groups into one matrix. The second level of analysis and the formulation of the overall component are best done in a plenary setting.

The following should be available to the participants during the training as these will be sources of critical inputs to the component:

- 1) Compilation of CRM policies and ordinances,
- 2) Municipal-wide zoning plan, and
- 3) Recommended management interventions per zone as finalized in Activity 1 of Module 2C.

This activity need not involve the whole TWG. A TWG sub-group can be formed for policy support. It is important that the workshop participants include the LGU officer who is in charge of the CRM or fisheries sector, the Chair of the SB/SP Environment Committee, more representatives of the SB as this activity will eventually lead to ordinance formulation and representatives from enforcement bodies such as the military, Bantay Dagat and M/BFARMCs and fisherfolk organizations.

## Participants

It is important that this activity have, as a resource person, a lawyer familiar with the Local Government Code, the Fisheries Code and other environmental laws, and with understanding of good governance principles. An experienced facilitator is also necessary for the plenary sessions.

### Key Elements of the Policy Support Component

- a. Objectives
- b. Analysis of the current policy environment of the LGU
- c. Components of the LGU CRM plan that will require policy support for implementation
- d. List of ordinances that will have to be enacted with description of key contents, to include provisions on transparency, accountability and participatory decision-making
- e. Identification of enforcement mechanisms: who will be the enforcers, duties and functions, process for deputation, incentives and rewards for enforcers, performance evaluation

### General Ordinance Inventory and Analysis Questions

- a. *Does the LGU have an ordinance delineating the boundaries of its municipal waters?*
- b. *Does the LGU have existing ordinances on the management, conservation, development, protection, utilization and disposition of fish and fishery/aquatic resources within its municipal waters?*
- c. *Does the LGU have existing ordinances on the establishment, management, development and protection of marine protected areas/within its municipal waters?*
- d. *Does the LGU have existing ordinances on municipal fisheries management including those on the issuance of permits and licenses?*
- e. *Does the LGU have special municipal fisheries ordinances, such as but not limited to, declaring special demarcated fisheries areas, closed season, declaring municipal waters or parts thereof as over fished and prohibiting or limiting fisheries activities?*
- f. *Does the LGU have an ordinance authorizing or permitting commercial fishing within municipal waters?*
- g. *For LGUs bordering bays, lakes and gulfs, has a unified municipal fisheries ordinance been formulated with other LGUs bordering the same bays, lakes and gulfs for an integrated resource management of the same?*
- h. *Do the ordinances conform to the provisions of RA 8550 and its IRR?*
- i. *Does the ordinance contain provisions that prescribe transparency?*
- j. *Does the ordinance clearly identify the centers of responsibility?*
- k. *Does the ordinance provide who shall be held accountable for actions and decisions?*
- l. *Were the stakeholders involved in the preparation of the ordinance?*
- m. *Does the ordinance provide mechanisms by which the stakeholders can participate in the decision-making process?*

## Lecture Notes

### CRM Plan Policy Support

- I. Objectives of the Policy Support Component
  - Ensure compliance by LGUs with the requirements and prescriptions of existing national laws and their corresponding IRR
  - Provide the necessary policy support for the implementation of LGU Plans
- II. Bases of Policy Support Component
  - National laws governing coastal resources and their IRR
    - RA 8550
    - NIPAS Act
    - RA 7160
  - CRM, MPA or Fisheries Management Plan of the LGU
- III. Review of Principles of Good Governance – Transparency, Accountability and Participatory Decision-Making-in relation to implementation and enforcement of the LGU CRM, MPA or Fisheries Management Plan
- IV. Contents of the Policy Support Component
  - Analysis of the current policy environment of the LGU on coastal
    - List of ordinances of the LGU on coastal resources management (with ordinance number, year enacted, title and major components)
    - Analysis of ordinances vis-a-vis provisions of RA 8550 and its IRR
    - Analysis of ordinances vis-a-vis TAP principles
  - Policy Support and Enforcement
    - Policies/ordinances needed based on analysis of ordinances and components and requirements of the CRM, MPA or Fisheries Management Plan
    - Enforcement mechanisms (types of enforcers, duties and functions of enforcers, process for deputation, incentives and/or rewards, performance evaluation)
  - List of ordinances that need to be enacted and their recommended provisions, based on above analyses
- IV. Processes Involved in Formulation Policy Support Component
  - Data Gathering : compilation of existing ordinances and entry into matrix form
  - Data Analysis to identify gaps in terms of RA 8550 and IRR and TAP; presentation and validation of results of analysis
  - Presentation of key components of the LGU CRM, MPA or Fisheries Management Plan and identification of interventions that will require ordinances for implementation
  - Identification of ordinances needed to comply with applicable laws and to support plan implementation, with their content and TAP provisions
  - Identification of enforcement mechanisms including identification of enforcers, duties and functions of enforcers, process for deputation, incentives and/or rewards and performance evaluation
  - Finalization of policy support component

## Activity 3. Information, Education and Communication (IEC) Support

### Activity Coverage

This two-day activity aims to facilitate the development of Information, Education and Communication (IEC) activities that will support the CRM strategies and interventions identified in the CRM plan, including policy support.

This activity provides a review of the communication process and concepts. It presents the different communication approaches commonly used in local IEC/advocacy work and explains the role of communication in promoting behavior change, networking and constituency building. It stresses the need to have a research-based communication plan, i.e., one that is based on an analysis of the information needs of particular audience segments (with data derived from studies, FGDs, surveys, observations, and secondary information), and uses field-tested audience-specific messages. It gives emphasis to the assessment of possible allies as well as opponents, of resources available versus required, and as needed, the adjustment of IEC strategies to maintain a realistic and doable communication plan.

In addition, it increases knowledge of participants on the development of creative IEC materials to help them start their IEC program. Like policy support, IEC is an “immediate doable” that can be implemented while the plan is undergoing refinement and legitimization.

#### **Promoting TAP**

*IEC plays a crucial role in promoting transparency, accountability and participatory decision-making. Information dissemination allows the public to know if the CRM program is being implemented, who are the people implementing it, and how the community can help in ensuring the success of the program. By knowing these, people – as stakeholders and direct beneficiaries – are better able to participate in decision-making and implementation. They become more motivated in making plan implementers accountable for their actions.*

### **Expected Activity Output**

The expected output of the module is a draft communication plan that fits into the chapter on implementation arrangements (see **Annex 2E, Plan Outline**). It will have the following elements: assessment of current IEC situation (communication needs, scope and current practices, current resources); objectives; key strategies; target audience, key messages and channel/media; responsibility centers; and estimated costs. Some of the elements (target audience, key messages, and channel/media) will have to be organized by zone to match the CRM plan framework.

Another output would be a one-year action plan that spells out the immediate next steps that the TWG can pursue as part of initial IEC implementation activities. The action plan will provide details on the Year 1 priorities in the overall communications plan.

### Activity Approach

The module uses a combination of lectures and group exercises and workshops. The lectures will familiarize the participants on the conceptual framework, technical consideration and analytical tools for planning IEC activities. Learning exercises (e.g., message relay, non-verbal communication, etc.) will be integrated into some topics in the lecture.

Participants are given the venue to apply knowledge gained from the lectures through the workshops. Three major workshops may be held: the situational analysis and development of the communication matrix, development of IEC materials, and action planning. The first can be organized as a series of exercises, where the participants will be first be guided in putting together information gathered from various sources to come up with a situational analysis. Then they can progressive complete the communication matrix found

in **Annex 2I**. The second workshop can be devoted to the development of a print material such as a poster, leaflet or flyer. This activity may make use of local materials or computer software, depending on the available resources of the LGU. The last workshop will produce the IEC action plan, for implementation within the first year of the project. The second workshop can be designed in such a way that the output can be used to implement the action plan.

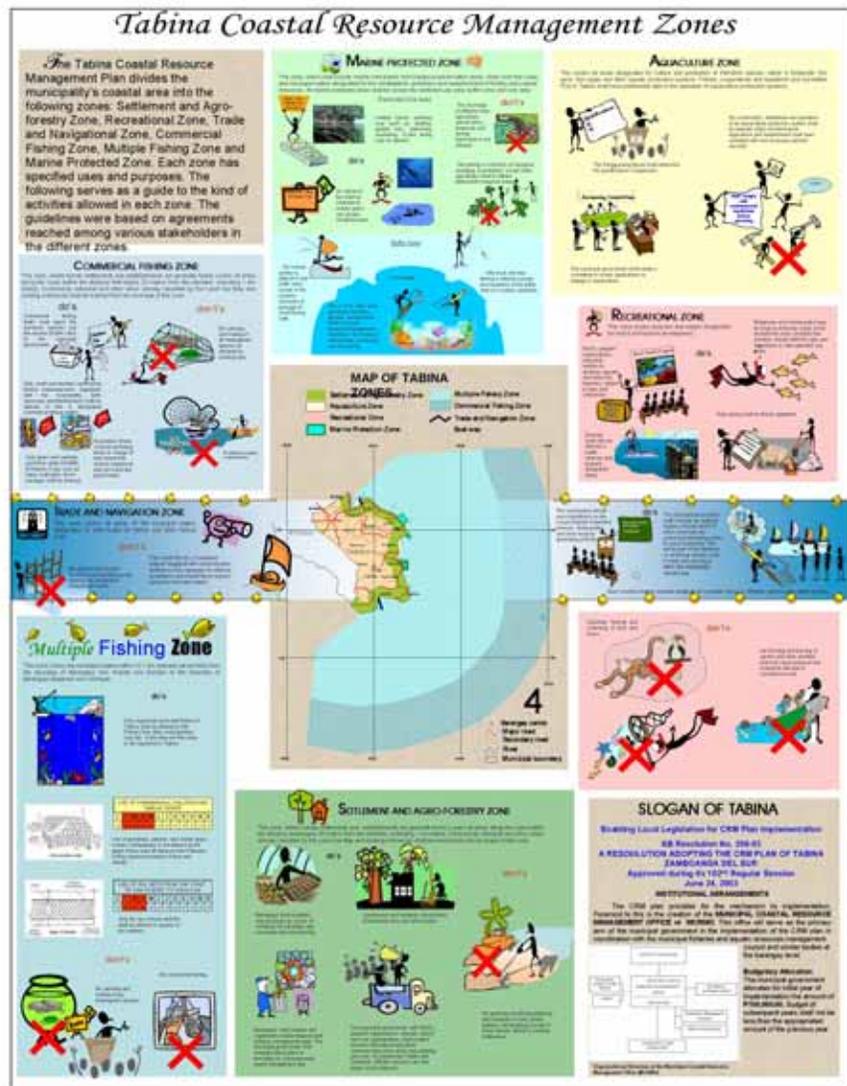
It is important that participants be armed with relevant data gathered prior to the IEC activity. These will be on the condition of coastal resources (which can be derived from such resource assessments), current coastal resource management and use practices/behavior (which can be taken from the FGDs, surveys, observations, consultations), and planned CRM activities (derived from the economic analysis and policy workshops). Specifically, the following data should be made available or gathered before the training:

- 1) Stakeholder analysis indicating different stakeholder groups per zone, conflicting interests between specific stakeholder groups, and potential groups which can be tapped to do communication work;
- 2) Assessment of current CRM knowledge, awareness and practices within LGU;
- 3) Inventory of currently available IEC materials and important information sources/channels;
- 4) Coastal zones map and summary of key recommendations, strategies and activities per zone (results of Activity 1 of Module 2C); and
- 5) Proposed policy agenda (results of Activity 2 of Module 2C).

Using the available data, the participants are tasked to identify key communication issues per zone. Based on these issues, strategic communication objectives are developed for the identified target audience per zone. Activities per objective are identified and specific messages are formulated to suit the needs of the target audience. Impacts of the proposed implementation scheme are also discussed.

The actual time required to complete this activity is more than two days in view of the pre-workshop activity and possible post-training activity to finalize the output.

The participants in this activity are selected members of the TWG, other LGU and DENR/BFAR staff responsible for IEC support activities, and members of local organizations (POs and NGOs) which can be tapped for IEC. The resource person must have had sufficient experience in formulating communication plans, and in developing and implementing community IEC activities.



Sample poster: Tabina CRM zones

## Lecture Notes0

### Planning Communication Activities

- I. Objectives of the Activity
  - Enhance participants' knowledge on important communication concepts and approaches and equip them with necessary analytical tools for planning and designing communication activities
  - Guide TWGs in the systematic development of a communication plan
- II. Outputs
  - Draft communications plan to support CRM strategies/interventions
  - Action plan for Year 1 implementation
- III. Information Users and Information Uses. CRM messages are communicated to:
  - Community (such as fisher folk) to promote certain behaviors "friendly" to CRM efforts and build a constituency for effective CRM
  - Decision- and policy-makers (such as LGU leaders) to get their support (in areas such as coming up with favorable policies, budget allocation for CRM implementation)
  - Influencers (such as the media, schools, religious/civic groups) to put pressure on the LGU leaders to do their job
- IV. The 'e' Process – Different stages in doing IEC activities:
  - Analysis - provides for the analysis and prioritization of issues/problems that IEC should address, identifies and analyzes the target audience as well as determine available and needed IEC resources.
  - Plan Preparation - calls for the development of communication objectives based on prioritized issues identified; specific message formulation, medium selection, identification of persons responsible and noting down of time frame.
  - Implementation - includes pre-testing (if developing an IEC material) or a run-through (if doing an IEC activity such as an orientation) and monitoring of IEC activities.
  - Evaluation – allows for finding out whether an IEC activity worked or didn't work, why it worked, and why it did not work.
- V. Different Communication Approaches – Commonly used communication approaches at the local level: IEC, Social Marketing, Development Support Communication, Social Mobilization and Advocacy. Emphasis given on the commonalities of features, stressing that at the local level, it is not really important to remember the right terminology to use; what is important is that you know who you are talking to, you know exactly what to tell them and know the best way to tell it to them.
- VI. Review of Communication Process and Concepts
  - Elements of communication: sender, message, channel, receiver, feedback and feed forward. Feed forward is knowing your audience (which is actually audience analysis) first before communicating with him/her.
  - Suggested Exercise: Message relay or relevant exercise that helps in demonstrating the communication process.
- VIII. Questions to Ask When Promoting a Product. This, in brief, discusses how to prepare a simple communication plan.
  - What's the situation? – Emphasizes importance of doing an analysis of the IEC situation (problems, issues, etc.)
  - What is the product? - Identifies the specific idea, tangible object or friendly/ideal behavior that needs to be promoted.
  - Who are the target audience or adopters? - Identifies the target audience, both primary and secondary, of the "product"
  - What's the profile of your target audience? Reiterates the importance of knowing exactly who your target audience is to be able to formulate a message that fits his/her needs
  - How will the product be positioned? - Discusses the need to immediately grab the attention of the target audience. Reminder: focus on product benefits.

- What's the message? – Identifies the specific message or messages. Reminder: make the message simple, specific and clear
- What channel to use? - Stresses the importance of selecting the right medium to reach the target audience
- What are your available resources? - Determines available IEC resources (such as manpower, IEC materials, IEC equipment, budget), what else are needed and how to get these. Part of this discussion is knowing your key allies.
- Who are the “contrabidas?” - Identifies the current or potential “opponents” of CRM efforts.

**Suggested Workshop:** Situational Analysis and Communication Plan Preparation (can actually be divided into several exercises such as summary of finding for situational analysis, identifying key issues per zone, writing the objectives per target audience per zone, identifying activities and formulating the messages).

#### IX. Ways People Communicate

- Verbal and Non-Verbal and Inter-Personal Communication (such as group communication like assemblies and one-on-one communication such as meetings with mayors)
- Commonly Used Media/Materials (such as posters, brochures, billboards, radio/TV plugs, community theater), including tips on use.

XI. Designing ‘Sales Kits.’ Briefly discusses how to make an IEC material. Topics include: “Making a map” (planning what to say, who to say it to and how to say it); “Writing the headline” (formulating the central message); Writing the body (writing the text that includes the sub-messages); Other Tricks of the Trade (other tips).

**Suggested Exercise:** Actual development of IEC print material (poster, leaflet, flyer) using local materials or powerpoint or pagemaker software.

**Komersyal na pangingsda sa ating bayan 'wag payagan!**

**Municipal fishing**



Mamamaya'y naghihirap dahil sa bumabang huli ng isda.

**Huli noong 1996:** 909,000 metric tons  
**Huli noong 2000:** 793, 824 metric tons

**Commercial fishing**



Huli ng komersyal na mangingsda tumaas

**Huli noong 1996:** 879,000 metric tons  
**Huli noong 2000:** 946, 485 metric tons

Panawagan sa ating mga lokal na opisyal mula sa SAMAHANG MANDARAGAT, Tel No: 123-456

*Let's protect our mangrove areas to protect our food source...*

**Report illegal cutters to barangay officials NOW!**



- ◆ Mangroves provide marine animals with habitat and protect their young until they mature.
- ◆ With no mangroves, marine animals, especially their young, will die, leaving us with nothing to catch.



Sample IEC materials developed by LGU personnel during IEC training

# Module 3

## Marine Protected Area Establishment and Management

**M**arine Protected Area (MPA)<sup>7</sup> is a general term used to describe an area under management whose primary objective is protection. It is often associated with a variety of general zones, such as a “no-take” zone and a “buffer” zone<sup>8</sup>. Under the Philippine setting, the no-take areas are often referred to as “marine sanctuaries,” and the buffer areas are usually called “marine reserves.”

This module outlines the key steps in the establishment of a coral reef MPA (i.e., marine sanctuaries) and the formulation of an MPA management plan within the jurisdiction of municipal/city government. The plan is intended to provide the operational mechanisms for the establishment and functional management of an MPA.

The MPA initiative is always placed within the integrated framework of a municipal CRM program. While the focus of this module is on MPAs, one must not lose sight of the fact that there are a host of other CRM interventions (such as sustainable fisheries management) that can be initiated, and that MPAs may not be sufficient to address various coastal and fisheries resources concerns.

In the absence of a municipal CRM plan, Module 3 may be viewed as an entry point to catalyze CRM initiatives and provide opportunities to put good governance principles into practice. In areas where there is an existing MPA initiative, module activities are geared towards strengthening the implementation and management of the MPA.

This module provides technical assistance in site assessments, preparation of the MPA design plan, management policies and operational mechanisms. When possible, the local MPA managers and other community and LGU representatives undertake an exposure trip to a successful MPA. In addition, pertinent capability building activities in support of implementation (such as fish warden deputation, enforcement training and conduct of community information campaigns) are provided. Linkages with other MPA initiatives in the region and coastal and marine components under NIPAS, when appropriate, are facilitated.

### Expected Module Output

The final output of this module is a legitimized MPA plan (adopted by the municipality usually through an ordinance or a municipal council resolution). But since enacting an ordinance takes so much time and is influenced by so many factors, a resolution may suffice to adopt and legitimate the MPA plan; however, an ordinance is still needed to give more teeth to plan implementation. It should be emphasized to LGU participants that even when the resolution or ordinance adopting the MPA plan is still under deliberation, activities (such as IEC, regular patrolling, coastal clean-up, etc.) may already be implemented.

Conducting this module, including the holding of pre- and post-activities, may take up to 3 months.

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<sup>7</sup> They are also referred to as marine sanctuaries.

<sup>8</sup> They can be called under a variety of names such as tourism zones and marine reserves, mangrove reserves and marine fisheries reserves.

Module 3 is divided into five sub-modules, namely:

**Sub-Module 3A. Orientation and Core Group Formation** – Orientation of the TWG on MPA establishment and management process and issues and the formation of the core group, which will facilitate the formulation of the MPA management plan. All or some members of this core group may eventually become part of the body that will be primarily responsible for the actual management of the MPA.

**Sub-Module 3B. Exposure Trip** — Visit to successful MPAs (may be conducted if resources of LGU will allow it)<sup>9</sup> to gain firsthand information on MPA management and other related activities. The exposure trip is optional, but LGUs are encouraged to visit successful MPAs so that they could see for themselves how these areas are managed and interact with people in charge of MPA plan implementation.

**Sub-Module 3C. Site Assessment and Selection** – This will include ecological survey to identify and assess prospective MPA sites as well as gathering of information on existing resource use and users. An initial validation with major stakeholders in the affected area is crucial to arrive at a participatory decision on the choice of the prioritized location and size of the sanctuary or MPA.

**Sub-Module 3D. Formulation and Legitimization of the MPA Plan** - This has two major activities: plan formulation, to flesh out strategies per sub-zone (reserve/buffer, recreation, etc.) and determine various activities required to be done (enforcement, IEC, capability building, etc.) and plan legitimization, which includes validation of the draft plan and submission to the Sangguniang Bayan (SB) for adoption and drafting of necessary ordinance.

**Sub-Module 3E. MPA Monitoring and Evaluation**<sup>10</sup> – This is offered to communities having advanced MPAs<sup>11</sup>. This participatory activity (involving local stakeholders as well as experts) emphasizes the need to monitor and evaluate MPA changes or improvements using established baseline information.

There are considerable variations in the design and conduct of the different sub-modules under Module 3. Since the module is essentially an implementation activity, the process is primarily driven and determined by the local partners with the technical guidance of the EcoGov Project team.

## **Sub-Module 3A. Orientation and Core Group Formation**

### **Sub-Module Coverage**

This 1½-day module covers the organizational meeting of the TWG from which members of the core group to be assigned to do MPA plan formulation will be selected. The activity will ensure that there is common understanding of what it entails to establish and operate a successful MPA.

It is important to identify the core group members this early so that they could take the lead and facilitate the conduct of the succeeding modules. Facilitating the process and formulating the MPA plan are two major roles of the core group. Another group, which will be in charge of the actual management of the MPA<sup>12</sup>, will have to be created later (the requirements for this group as well as its roles and functions are identified under Sub-module 3D).

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<sup>9</sup> Under the terms of the USAID grant, travel of LGU participants cannot be charged against the grant. LGUs in Cogon areas use their own resources to pay for their travel expenses.

<sup>10</sup> The participatory monitoring and evaluation follow the protocols of Uychianco et al. (2001). [Uychianco, A.J., S.J. Green, M.T. de la Cruz, P.A. Gaité, H.O. Arceo, P.M. Aliño and A.T. White. 2001. Coral Reef Monitoring for Management. University of the Philippines Marine Science Institute, United Nations Development Programme Global Environmental Facility- Small Grants Program, Guiuan Development Foundation, Inc., Volunteer Service Overseas, University of the Philippines Center for Integrative and Development Studies. Coastal Resources Management Project and Fisheries Resources Management Project. 110p.]

<sup>11</sup> Areas with already established and functional MPAs (i.e., with an ordinance, budget allocation, a management plan that is already being implemented).

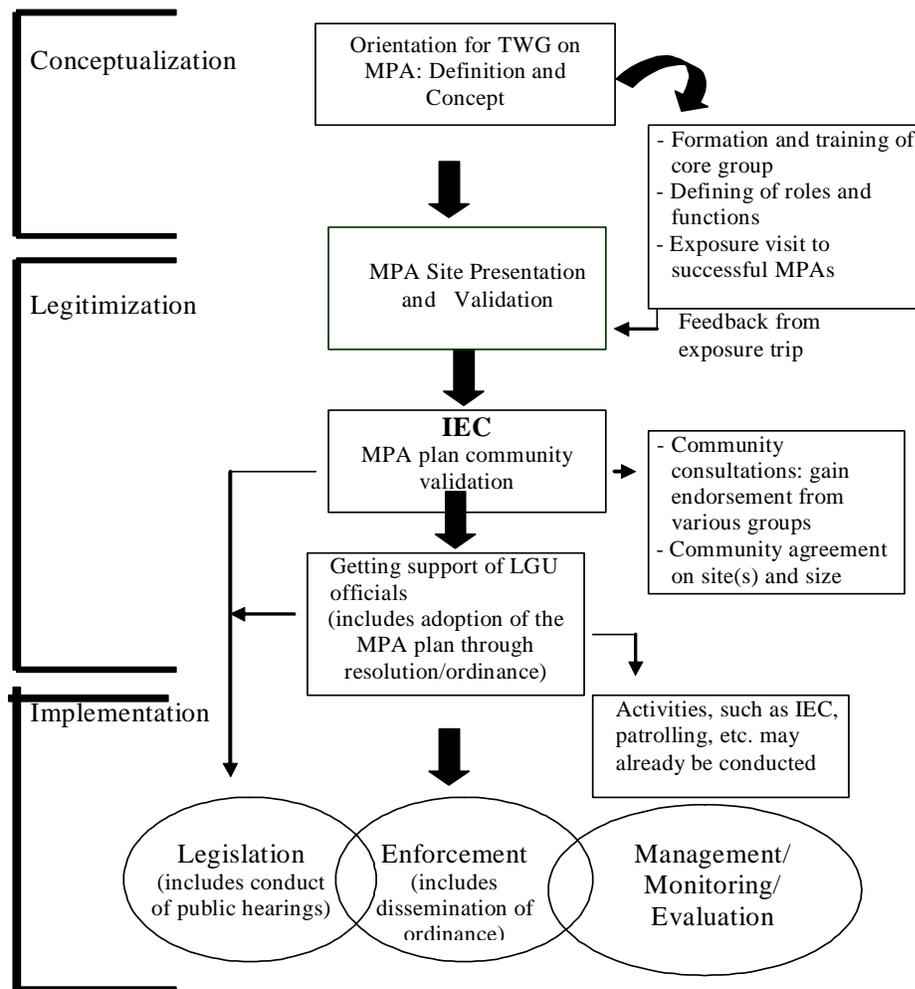
<sup>12</sup> This group refers to the MPA management body that will be responsible for the day-to-day management of the MPA (after it has been established). All or some members of the core group may eventually become members of the management body. It is a decision that the LGU has to make.

The orientation will discuss the rationale and objectives for the establishment of MPAs with respect to the local ecological, socio-cultural, economic and socio-political contexts. In addition, inputs based on scientific information and lessons learned from the establishment of MPAs in the country are presented. The best available scientific information and best practices are provided as inputs, including use of a fisheries bioeconomic<sup>13</sup> model, a parallel decision support tool to assist in the determination of the MPA size and fishing effort regulations.

The orientation discusses the overall process for establishment and management of MPAs (from its conceptualization to implementation), together with concrete examples on how good governance practices in planning through implementation can help ensure effectiveness and sustainability of MPAs. Contextual conditions may also be discussed (such as marine sanctuaries being complementary to fisheries management, and municipal-level and bay-wide marine sanctuaries).

Suggested topics to be covered by this module are discussed in the **Lecture Notes** on page 55.

### MPA Establishment Process



<sup>13</sup> Fish BE; Licuanan et al. (2004).

## Expected Sub-Module Outputs

An action plan, which contains, among others, the requirements and various activities (that consciously incorporate TAP principles) involved in developing the MPA plan, is one output of this sub-module. Another is the list of designated core group members (including their specific roles, responsibilities).

### Sub-Module Approach

Whenever possible, technical inputs and lectures should be combined with video showing of MPA case studies or sharing by resource persons from successful MPAs of their experience in establishing and managing protected areas. Discussions should also focus on existing resource users and practices, and governance mechanisms (e.g., institutional arrangements and policies for CRM) in the municipality.

After providing the technical inputs and discussing other issues and concerns, the core group members will have to be identified. This group, as mentioned earlier, will facilitate the process involved in the succeeding modules and formulate the MPA plan.

### Participants

Participants to this module are members of the TWG (from which core group members will be chosen)<sup>14</sup>. Prior to naming the core group members, it is important that the participants agree on a set of criteria to select those who will compose the group, based on a common understanding of the process and essential implementing mechanisms. Some possible criteria are: personal commitment and willingness; familiarity with the proposed sites and MPA objectives and functions, mandates related to coastal/fishery management; experience on CRM and MPA management, etc. The TWG provides inputs, lobbying and linkage to the LGU and policy making body. It provides feedback and support to the core group.

Subsequently, a work plan is developed and agreed upon in a write shop, reflecting the indicative timeframe for the key activities, roles and functions of each member to instill transparency and accountability among the participants, and the detailed logistic requirements for the next immediate activities.

#### Experience Sharing

*A similar approach can be used to facilitate sharing of experiences and fostering collaboration among LGUs to establish a network of MPAs along a contiguous coastline or within a bay. The participants are composed of representatives of different MPA management groups and LGUs. The sharing of the respective MPA initiatives can be used as a springboard to discuss ways of enhancing the management of their respective MPAs and scaling up of the potential ecological and socio-economic impacts.*

#### Observing TAP principles

*To ensure participatory decision making, the TWG discusses and agrees on the criteria for selecting core group members, whose roles and functions are identified and clarified in observance of transparency and accountability principles.*

<sup>14</sup>The TWG, mainly involved in the overall coordination of CRM activities in the entire municipal waters, will ultimately be dissolved once the CRM bodies/FARMC become functional. Members of the TWG may eventually be part of these duly mandated bodies.

## **Lecture Notes**

### **Marine Sanctuaries and Marine Protected Areas (MPAs): Establishment and Management Design**

#### **I. Marine Sanctuary**

- A. Characteristics
  1. Specific marine area reserved by law and governed by rules or guidelines that manage activities and protect part of or the entire coastal and marine environment
  2. Allows recovery of stock and rehabilitates coastal ecosystems
  3. Fishing or any other type of activities is strictly prohibited
- B. Marine sanctuaries as a strategy: tool in ensuring transparent, accountable and participatory Coastal Resource Management
- C. Advantages of establishing MPAs
  1. Reproductive reserve
  2. Protection of spawning stock
  3. Recruitment source
  4. Maintenance of natural populations and areas of undisturbed habitats
  5. Simplified enforcement
  6. Ease of policy understanding and acceptance of management
- D. Current status of MPAs in the Philippines/regions

#### **II. Considerations in Establishing Marine Sanctuary**

- A. Social factors: Degree of acceptance by local community, extent of support by locals, equitable distribution of benefits
- B. Economic factors: Number of resource users dependent in the area, revenue generated from resource-use in the area, availability of supplemental livelihood options
- C. Ecological factors: Variety of species and habitats, breeding, feeding, nursery grounds, naturalness, fish migration path
- D. Practical Considerations: manageability, presence of assertive authority to enforce rules, presence of potential key players in management, distance from sources of pollution

#### **III. Setting Objectives**

- A. Implications of ecological concerns vis-à-vis social acceptability
- B. Participation and equity of benefits
- C. Feasibility
- D. Sustainability

#### **IV. Key Factors in the Design (Discuss various implications in relation to their impacts and effectiveness)**

- A. Size: many small versus few large
- B. Location: e.g. within reach of fisheries, access and management feasibility
- C. Shape: in relation to sources and sinks of larval sources, feeding and spawning activity of species to be conserved
- D. Community participation and sufficient information feedback

#### **V. Legal Provisions for Managing Marine Sanctuaries in the Philippines**

- A. RA 8550
- B. NIPAS Act

#### **VI. The CRM Cycle**

- A. Issue identification and baseline assessment
- B. CRM Plan preparation and adoption
- C. Action plan and project implementation
- D. Monitoring and evaluation

#### **VII. Marine Sanctuary Establishment Process**

- A. Orientation on Marine Sanctuaries, definition and concepts
- B. Site surveys
- C. IEC

- D. Community consultations
- E. Lobbying for support of LGU officials
- F. Legislation
- G. Enforcement
- H. Management
- I. Monitoring

VIII. Marine Sanctuary Management

- A. Institutionalization of a management group
- B. Administrative/organizational set-up
- C. Action-planning workshop

IX. Management Planning and Program Development

- A. Enforcement
- B. Monitoring and evaluation; feedback and response
- C. Community participation
- D. Capability-building/organizational strengthening
- E. Financial considerations

**Incorporating TAP**

*Users of this Guide should always be conscious of incorporating TAP principles in all phases of the MPA management planning and implementation process.*

*During the orientation, these TAP-enriched procedures should be highlighted by citing specific instances when good governance principles should be observed (e.g., when discussing community consultation in site selection, it should be emphasized that appropriate notices should be made to those who will participate in the activity, be very clear when discussing roles and functions of the groups to be created).*

## Sub-Module 3B. Marine Sanctuary Exposure Visits (Optional)

### Sub-Module Coverage

When possible, an exposure trip to successful MPAs shall be organized to allow participants to gain firsthand knowledge on how LGUs and community members establish and manage MPAs. During these trips, the participants see for themselves the concrete benefits (such as improved fish biomass and abundance of fish) of such undertakings. The host LGU provides inputs on various topics of interest (**see Box**) during discussion sessions (direct interaction with people in charge of managing the MPA, such as those in charge of guarding the area) and the open forum. This sharing of experience enhances teamwork and collaborative efforts between and among LGUs.

The duration of the exposure trip depends on the distance and number of sites visited. Overnight stay in the area is recommended to enrich discussion with local site managers.

Exposure trips to successful MPAs will be very useful and most effective in establishing possible networking arrangements. If done before the plan formulation stage, these cross visits could enrich the understanding of the participants regarding establishment, management and sustainability of MPAs.

### **Expected Sub-module Output**

The participants are expected to come up with a list of recommendations, which will be formulated based on key lessons learned (such as recommendations on the size and location of MPAs, process of management planning, enforcement and operations procedures, etc.).

### Sub-Module Approach

Aside from the inputs provided by the host LGU and discussion sessions with local site managers, the participants are taken to an ocular visit of an MPA. Time for snorkeling (in the case of coral reef protected areas) is allotted for the participants to “get a feel” of the MPA, as they see for themselves the abundance of fish and good condition of the corals reef and learn to appreciate the outcome of the development efforts that went into the MPA management.

An open forum is later held for the group to discuss marine sanctuary issues with the host LGU. By the end of the marine sanctuary exposure trip, an evaluation of the activity is held to synthesize lessons learned by participants, who are expected to come up with recommendations regarding the establishment of their own MPAs.

#### **Specific aspects of interest:**

- *Location of MPA site and criteria for selection*
- *Management structure and process of formulation and implementation*
- *LGU support and procedures*
- *Community support and participatory decision-making process*
- *IEC support*
- *Enforcement arrangements*
- *M and E*
- *Ordinances*
- *Incentives*



This activity needs to be coordinated by a service provider, who can do arrangements, conduct preliminary briefing on the area, facilitate discussions and document learning. It would be good to have the activity documented (bring equipment such as cameras and video cameras with underwater housing).

Upon the participants' return to their LGU, the knowledge they gained is shared with other members of the community during subsequent community consultations and during the plan formulation for their own MPAs.

**Promoting transparency**

*To promote transparency, participants to the MPA site visit are encouraged to share what they have learned during the trip with people in their own community.*

## Participants

Participants involved in this tour shall include members of the TWG, LGU officials, (e.g., president of the Association of Barangay Captains, municipal planning and development coordinator, municipal agriculture officer), fisher representatives and members of the local MPA core group<sup>15</sup>.

The following is an example of an open forum program:

### Inter-LGU MPA Open Forum Schedule

8:00 – 9:00 AM	Registration Opening Ceremonies <ul style="list-style-type: none"> <li>▪ Invocation</li> <li>▪ National Anthem</li> <li>▪ Welcome Address</li> <li>▪ Messages</li> </ul>
9:00 – 9:30	Information, Education and Communication (IEC) Activities
9:30 – 10:00	Formation of Technical Working Group (TWG)
10:00 – 10:30	SNACKS
10:30- 11:00	Drafting of the MPA Ordinance
11:00-11:30	Technical Delineation and Physical Establishment of Sanctuary Boundaries (Buoys Establishment)
11:30-12:00	Formulation of Marine Sanctuary Management Plan and Management Structure
12:00-1:00	Lunch
1:00-2:00	Enforcement of Marine Sanctuary Management Plan
2:00-4:00	Group Discussion and Sharing (This could be done in break-up groups)
4:00-5:00	Impression and Closing Program

<sup>15</sup> Most often than not, it is the LGUs which select what sites to visit.

## Sub-Module 3C. Site Assessment and Selection

### Sub-Module Coverage

This sub-module includes ecological survey to identify and assess prospective MPA sites using primarily the participatory coral reef assessment methods previously described in **Module 2, Sub-Module 2B, Activity 1**. In addition, information on existing resource uses and users are gathered and collated. These, together with inputs from the local community (gathered through interviews and FGDs), provide the basis for decisions on the location and site of the MPA(s).

A recap of the criteria for selection of the MPA presented during the orientation is made. Lessons learned and recommendations from the exposure trip are also discussed. A multi-criteria framework, which includes ecological, economic, social and practical considerations (*See Considerations in Establishing Marine Sanctuary, Lecture Notes of Sub-module 3A*), is used to facilitate agreements on location, size and management recommendations for each sub-zone (e.g., core zone, buffer zone).

The whole sub-module may be completed in a week.

### **Expected Sub-module Outputs**

The main output is a site map (identifying the location, size and shape of the proposed MPA), accompanied by a report containing information on resource uses and users; results of the interviews and the FGDs, paying particular attention to ecological, economic, social and practical factors; as well as the results of the assessment methods employed (e.g., manta tow, underwater fish visual census, quadrat line transect method). This map shall be presented to, and has to be initially validated, by the FARMC and the community leaders and representatives of major stakeholders. If the FISH Be decision tool is run in the area, it is preferred that the results are shared with the core group, the FARMC and the SB committee on environment and fisheries.



*A TWG member assesses the reef condition of a prospective MPA site.*

### Sub-Module Approach

The ecological surveys involve the use of the manta tows, which are conducted with members of the core group to determine the relative status of coral reefs within the municipal waters. It is important that a coral reef and fish specialist serves as resource person.

In addition, underwater fish visual and line transect methods are conducted in prospective MPA sites to estimate variety and abundance of various reef fishes as well as evaluate the abundance of the associated fish communities. These methods will also help in estimating the relative bottom cover of hard corals, dead corals, algae and various reef substrates and abundance of macroinvertebrates in selected sampling sites.

#### **Considerations in determining MPA location, size**

- *Good condition of coral reef area and distinct function*
- *Size that is socially acceptable and manageable*
- *Distance and area that are enforceable*
- *Resource use and users (either affected or those managing the area)*

A rapid assessment of the adjacent seagrass areas and mangrove forests can also be conducted to gain a more holistic perspective of the ecological value of the proposed sites. The same methods described in **Module 2, Sub-Module 2B, Activity 1** can be used.

The core group and the assisting organization initially identify potential marine sanctuary site(s) based on the biophysical assessment conducted. In addition to the ecological surveys, gathering of information on resource users and existing uses and potential threats and opportunities in the prospective site(s) is conducted (either by using secondary information or holding interviews or FGDs).

The results of the assessments are validated in a community consultation meeting with major stakeholders (e.g., communities directly adjacent to the barangays, regular resource users in the prospective MPA sites, etc.). It is important that during this initial validation with this group, agreement on the site(s) where the MPA(s) will be established is reached after the pros and cons are jointly analyzed and weighed quantitatively using a mix of ecological, socio-cultural and other practical criteria decided by the group. A similar approach is used to facilitate other agreements (e.g., size, allowable activities in the buffer zone).

Results of these deliberations are taken into consideration in the formulation of the operational mechanisms to be embodied in the plan.

Use of other available tools (such as FISH BE) and information (e.g., available development plans, such as tourism or mining; and research and development uses of the area) is encouraged.

### Getting community support early on

*It is important that during this initial validation with key stakeholders, agreement on the site(s) where the MPA(s) will be established is reached. This will help avoid complications later (especially during the presentation of the draft MPA plan to a larger group of community leaders and members).*



*TWG members identify potential MPA sites on the map.*

## **Sub-Module 3D. Formulation and Legitimization of the Marine Protected Area Management Plan**

### **Sub-Module Coverage**

The formulation of the MPA Plan is the next crucial step in the process. The participatory approach is ensured by the involvement of MPA core group members, fisher representatives, NGOs, POs, LGU officials and other stakeholders in the activity. The process underscores that MPA establishment and management entail community efforts, from planning, to implementation as well as to the monitoring and evaluation stage.

Sub-Module 3D is divided into two major activities: preparation of the plan (based on the outputs and results of various activities – consciously integrating TAP principles — done in the previous modules) and plan legitimization (which actually begins during the initial site presentation and validation stage, continues through the validation of the draft plan and ends when the plan is adopted by the municipal or city council).

### **Expected Sub-module Output**

This sub-module, which may be completed in at least 2 months (covering the period needed for the write shop, refinement of the plan based on results of community consultations, drafting and redrafting of resolution/ ordinance, lobbying, etc.), will have as its output a legitimized MPA management plan (adopted by the municipal council through a resolution – at the very least – or an ordinance).

It should be emphasized, however, that even when an MPA plan has been adopted through a resolution, there is still a need to enact an ordinance (containing required organizational structures, such as the official creation of the MPA management body; logistical requirements; budget allocation; incentives; prohibited acts and penalties, etc.) to ensure effective plan implementation. It should also be stressed that even while the adoption of the plan is still being deliberated upon, activities such as IEC, may already be implemented.

### **Activity 1. Plan Preparation**

#### **Activity Coverage**

Plan is done to flesh out strategies per sub-zone (e.g. core zone/sanctuary, reserve/buffer zone, recreational, etc.) and to come up with concrete mechanisms for the establishment and management of the MPA.

The formulation of the plan takes place during a 3-day workshop that will discuss, among others, various MPA requirements that involve administration concerns, enforcement, monitoring and evaluation, IEC, capability building and financial support. All the data gathered during the site exposure visits and the site assessment will be used during this activity.

#### **Expected Activity Output**

The expected output of this activity is a draft MPA management plan that will have to be validated and legitimized. Refinement and validation of the plan may take at least a week.

#### **Activity Approach**

The formal plan formulation starts with an orientation on MPA management planning involving primarily the MPA core group. The MPA core group is introduced to the importance of an MPA management plan and its essential components: administration, enforcement, monitoring and evaluation, IEC, capability-building and financial management.

After the input sessions, the planning workshop is conducted with the following objectives:

- 1) Reach agreements on the goals and objectives of the MPA management plan;
- 2) Identify and formulate policies and strategies for each sub-zone; and
- 3) Formulate concrete strategies and mechanism for implementation with respect to the components or programs (capability building, sustainable financing, patrolling, etc.).

The workshop participants are divided into groups, corresponding to the agreed major MPA strategic components (such as IEC, capability building, etc.). The groups are tasked to discuss relevant management activities essential for each component, their objectives and expected outcomes.

Each group determines necessary materials, person-in-charge and suggested time frame/period for each activity. Also discussed are the training activities or capability-building programs, which have to be conducted to enhance the managerial and technical skills of the group. The corresponding budget requirements are estimated, including financing sources (i.e., available and prospective). Strategies on how to increase community cooperation and coordination in MPA management are given priority. Likewise, a reporting and regular feedbacking system is developed. This ensures that the communities are given the opportunity to discuss MPA management activities (e.g., handling of encroachment cases, seeking sustainable financing) and validate reported impacts and next steps.

**Need for feedbacking mechanism**

*A reporting and regular feed backing system should be developed to inform community members about MPA management activities and allow them to have their views and opinions be heard by the management team. The premise is if community members knew that good things are going on, it will not be very difficult to get their cooperation.*

Outputs of each group are reported to all participants. Deliberations are conducted in plenary to improve and integrate management recommendations. The results are used to prepare a draft plan with the assistance of the project staff or a local service provider (LSP). The draft plan undergoes technical review by the project technical personnel and the MPA core group to identify gaps and areas needing refinement. Refinement workshops and committee meetings are conducted as needed.

In selected places, the fisheries bio-economic model (See Lecture Notes, p. 67) was utilized to provide insights on possible ecological (e.g., sustainability of fish stocks) and economic consequences (e.g., income of fishers) of the size of the MPA relative to other fishery regulatory interventions.

### Communication Plan

This activity also involves the formulation of an indicative communication plan that will support the implementation of the MPA plan. Based on this, annual communication plans are prepared. Specific communication plans are also developed and integrated into action plans that support particular activities, such as community validation and lobbying efforts (**See Module 2, Sub-Module 2C, Activity 3** for related information on communication plan development).

### Participants

As mentioned earlier, the drafting of the MPA plan is led by the core group, assisted by an EcoGov specialist and an LSP. Integration and final drafting of the plan is usually done by an LSP.

## Activity 2. Plan Legitimization

### Activity Coverage

Under this activity, the draft MPA plan is presented to the community for validation to further solidify the legitimization process. Then, the plan is finalized (based on the comments gathered during the community validation) and submitted, along with a draft MPA resolution or ordinance to the municipal or city council for adoption. The core group, with the help of an EcoGov specialist or LSP, shall prepare a draft of the resolution or ordinance or both.

To reiterate, initial implementation activities such as IEC, deployment of marker buoys, etc., could be initiated even if the plan is yet to be adopted as long as consensus on the site and size of the MPA has been reached during the community validation and funds are available.

### **Expected Activity Output**

The output of this activity is a community validated and legitimized plan. Duration of this module depends on so many factors, such as availability of key players (members of TWG, core group, council), workload of the council and the time it takes to conduct public hearings before an ordinance is enacted.

### Activity Approach

The draft MPA plan is validated through community consultations. It is at this stage that the proposed strategies and mechanism, including the location and size of the MPA (which was earlier validated during an initial community consultation), are presented to a larger number of community members. These consultations provide communities a venue to air their comments and suggestions on the features and management schemes of the proposed MPA plan. The vision, goals and objectives for MPA establishment are also presented. Opportunities for the involvement of other members of the community are elicited and roles and responsibilities are clarified. Mechanisms for ensuring accountability of the duly designated persons and bodies for MPA management, including monitoring, control and surveillance are also discussed during the community consultations.



*Community members during an MPA plan validation activity.*

The core group also reviews current ordinances that are relevant to MPA establishment and management. If there are current relevant ordinances, these are consolidated and improvements suggested to ensure that policy requirements of the MPA management plan are addressed.

After the community validated MPA plan is revised and finalized, a draft municipal ordinance based on the provisions of the MPA plan is prepared. Drafting of the municipal resolutions/ordinance may be facilitated through meetings and/or workshops/write shops with the LGU officials (e.g., municipal/city council members) together with the MPA core group of the TWG. An EcoGov policy specialist or an LSP shall assist in the ordinance drafting. Another round of community consultations, referred to as the public hearings, shall be conducted before the ordinance is passed into law.

A workshop on MPA-related ordinances, similar to the CRM plan legitimization (**Module 2, Sub-Module 2C, Activity 2**), requires that good governance mechanisms be incorporated. Contents of the resolution/

ordinance should include: specific location and size of the sanctuary; organizational structure; management and enforcement plan; budget allocation; response and feedback system, penalties and processes for penalizing encroachers.

## Participants

Participants to this activity are members of the core group, some council members, an LSP and an EcoGov policy or legal specialist.

## Sub-Module 3E. MPA Monitoring and Evaluation (M&E)

### Sub-Module Coverage

The main objective of this sub-module is to contribute to the education and empowerment of local stakeholders on coral reef conservation and train them on reef assessment techniques and on the Monitoring, Evaluation, Response and Feedback System (MERFS). During this four-day training, participants shall be capacitated on how to do benchmarking and to monitor and evaluate coral reef resources (including coral cover, fish biomass, composition of species, abundance of fish, etc.) in the MPA area. The trainees are also required to draw up plans of action (usually semi-annual plans) after the training. This sub-module is recommended for areas where there are already established and functional MPAs.

During the training, the importance of conducting benchmarking activities (before or immediately after the MPA establishment) is emphasized as they provide the baseline information against which the MPA progress or improvements shall be measured.

M&E is crucial for MPA management. M&E allows for plan implementers to be aware of the changes and the progress being done—so that timely response is made—as the MPA plan is carried out. M&E entails continued observation of any chosen parameter or indicator at regular intervals over time. Ideally, it should be done inside the MPA, or the no-take zone of the MPA, as well as in adjacent areas outside the MPA. M&E should always be participatory; it should be done with representatives from the adjacent community and designated management body.

**M&E for MPA**

*M&E is crucial for MPA management. M&E allows for plan implementers to be aware of the changes and the progress being done—so that timely response is made—as the MPA plan is carried out.*

### **Expected Sub-module Outputs**

Outputs include baseline data showing reef conditions, in terms of reef fish density and biomass, composition of all reef species including target and indicator species, and percentage cover of the different benthic attributes. A system for doing periodic assessment should also be developed and a semi-annual M&E plan shall be formulated, in conjunction with a 5-year plan.

### Sub-Module Approach

The first day of the training is allotted for lectures that will cover ecology of coral reefs, coastal resource management, brief MPA orientation and reef monitoring methods; some reference materials are provided. During the lecture, standardization of local fish names and sizes is done. Fish dummies are used to practice size estimation.

Two full days are devoted for field application of the different methods learned during the classroom session. The field practice is done in the reef areas, preferably inside the MPA. Actual monitoring of reef conditions should be undertaken at every monsoon period.

The last day of the training is spent for feedback, data summarization, and discussions on plans of action to take in the next few months regarding the MPA. All benchmarking results are presented to the communities after acceptance of the report by the LGU. These include general description of the sites, status of the reef resources (including fish) and comparisons with other sites, and observed threats to the MPA, together with insights on management effectiveness concerns (e.g., degree of patrolling, level of participation).

## Participants

This activity should involve, not only experts/scientists, but also the local stakeholders directly in charge of MPA management. Recommended team size is at least six members for each MPA site.

## Field Methodologies

For this training, the participatory monitoring and evaluation follow the protocols of Uychianco, et al. (2001) manual.<sup>16</sup> There are two levels of trainees: divers and non-divers (or snorkelers). The following methods are followed:

### 1. Benthos Survey

- a. Manta Tow - Because all the trainees have already undergone the training on participatory coastal assessment, all of them are already familiar and knowledgeable on the manta tow technique. Thus, only a brief review of the methodology is required.
- b. Snorkel Survey - This method is mainly done by the non-divers to determine the percent cover of the following benthic life forms: hard coral (HC), soft coral (SC), dead coral (DC) and dead coral with algae (DCA), macro-algae (MA), turf algae (TA), coralline algae (CA), rock (RCK), rubble (R), sand (S), silt (Si), other fauna (OT) such as echinoderms, mollusks over a more specified area. Unlike the manta tow, this method will give a more detailed description of the reef, although at a smaller area only. A 50-m transect is laid at a depth of 20 ft. The observer will then estimate the percent cover of each of the benthic attribute within a 5-m x 5-m imaginary quadrat, starting from 0-m until the whole transect is sampled. The estimates from the ten sampled quadrats over the 50-meter line will then be averaged to get the benthic description for that particular site.
- c. Point Intercept Transect (PIT) method - This method also determines the percent cover of the various benthic attributes already mentioned above. This is the method used by the SCUBA divers. It is done by laying a 50-m transect line at a depth of 20 feet. At every 0.25 m starting from 0m, the

### Criteria for selecting participants are:

- 1) *Trainees must be able to read, write and swim. They must be willing to learn in identifying various kinds of reef fishes and marine invertebrates (e.g., corals, echinoderms, mollusks). Fishers or fisheries graduates are ideal participants.*
- 2) *There must be one person (NGO or LGU personnel or PO leader, preferably a member of the TWG of the MPA for the municipality) to serve as area coordinator who is willing to learn the methods and supervise trainees. This person must see to it that data forms to be used are filled-out at the end of each activity and at the end of each monitoring operation.*
- 3) *Trainees must be willing to monitor their reefs and fisheries even in the absence of the external trainers. It will help a lot if an expert is present to serve as an advisor.*
- 4) *Trainees must submit a copy of the monitoring information to the national database and give permission for the data to be used in national evaluations (though trainees retain all rights to their own data).*

<sup>16</sup> [Uychiaoco, A.J., S.J. Green, M.T. de la Cruz, P.A. Gaithe, H.O. Arceo, P.M. Aliño and A.T. White. 2001. Coral Reef Monitoring for Management. University of the Philippines Marine Science Institute, United Nations Development Programme Global Environmental Facility- Small Grants Program, Guiuan Development Foundation, Inc., Volunteer Service Overseas, University of the Philippines Center for Integrative and Development Studies. Coastal Resources Management Project and Fisheries Resources Management Project. 110p.]

benthic life form attribute directly under the 0.25-meter point will be recorded. Percent cover of each category is then computed using this formula (total count of each category/total count of all categories X 100%).

## 2. Macro- Invertebrate Survey

The macro-invertebrate survey is used to estimate the abundance of various reef substrates and macro-invertebrates particularly locally important species. It is conducted along the same transect as the fish and benthos survey either by a different person or the same person(s) who conducted the benthos survey on their way back, while reeling in the transect line. Starting at one end of the line, the observer (can be a snorkeler or a diver) swims above the transect line while observing 2.5-m on both sides of the line and moving forward until the end of the transect. Total counts of invertebrate species will be recorded. It is important that the observer look under overhangs and inside crevices for invertebrates that might be hiding under. Only indicator or commercially important species (such as lobsters, triton shells, sea urchins, etc.) are recorded.

## 3. Fish Visual Census (FVC)

This method is used to determine fish abundance and assemblage in a specified area of observation. The general procedure involves laying a 50-meter transect line at about 20 ft and at a constant depth contour. It is usually done using the same transect line for the point intercept transect method or the snorkel survey. After the line is laid, the observers wait for about 5-10 minutes before the actual census begins to allow for the disturbed fish community to return to their normal behavior. Starting at one end of the line, two observers (one on either side of the transect line) will record estimated counts and sizes of fishes in their local names, observing 5-m to his/her side of the transect and moving forward until the next 5-m mark. Both observers will swim to and briefly stop at every 5-m along the line until the transect line is completed. The faster moving fishes are counted before the slower moving fishes are counted. Each transect covers an area of 500 m<sup>2</sup> (50m x 10m width). Initially, the trainees were taught to estimate the size of each fish according to size classes. The size classes are: 0-10 cm (1-4 inches), 11-20 cm (5-8 inches), 21-30 cm (9-12 inches), and more than 30 cm. This method is usually taught to fishers and other non-technical persons. The other more scientific way to estimate sizes will require the observer to estimate the size of each fish to the nearest centimeter. This will be particularly useful when calculating for fish biomass. However, the trainees may only be able to do this after constant field practice.

Remember that standardization of local fish names and sizes is done during the lecture. Use fish dummies to practice size estimation both on land (during the lecture) and underwater.

## 4. Fish Catch Monitoring

The trainees are taught how to conduct fish catch monitoring. Fish catch data to be collected include date, fishing grounds, number of fishers, number of fishing hours, fish composition and weight. The number of fishers will be determined from the municipal profile and actual interviews. Catch composition will be done in situ or at the landing site by buying or borrowing fisherman's catch. Daily catch per fisher per gear will be identified and individual length and weight will be obtained. Catch per unit effort (CPUE) will be estimated from the total day's catch per person over total fishing hours. This will be computed per fishing gear and expressed in man-hours per day.

An FGD may also be facilitated in the cluster of barangays most appropriate for the relevant marine sanctuary. The FGD, composed of 15-20 fishers, may be convened to conduct an activity calendar, gear map and income and fisheries trend line.

## Lecture Notes

### **Fisheries Bio-Economic (Fish BE) Model**

It was conceptualized that the participatory decision making process could be enhanced if the synthesis of information from the Participatory Coastal Resource Assessment (PCRA) could be facilitated to answer the main concerns of the partner municipalities:

- 1) Illegal entry of commercial fishing vessels into municipal waters and whether they should be allowed within the 10.1-15 km municipal fishing area of jurisdiction;
- 2) What size of their municipal waters should be fully protected (e.g. as a marine sanctuary) especially since they are presently formulating their CRM plan.

From this context, the original Stella model of Licuanan et al. in 2002 (manuscript in preparation) was further conceptualized and developed to become the FISH BE model. This was incorporated as a part of the decision support tools for Local Government Units (LGUs), integrated in their Coastal Resources Management (CRM) planning

What are the social and economic implications of implementing the decisions opted for (e.g. at what costs safety nets are needed to slow the decline of fisheries productivity and sustain use and facilitate equitable benefits).

The link between the biological and economic models is the harvest (or catch) thus the need to estimate Catch per Unit Effort (i.e. per fisher or vessel):

- 1) The net value of establishing a marine reserve
- 2) Parameters used to evaluate the advantages of the marine sanctuaries;
- 3) What is the best measure of advantages of marine protected areas;
- 4) Who benefits and who pays the costs of establishing the marine reserves. The discussion revolves around various stakeholders on-site and off-site
- 5) Costs to individuals and society
- 6) Impact of market failure in fishery (e.g., property rights, externalities, high exclusion cost etc.)

### *Fisheries Biological and Ecological Assumptions and settings*

- Two types of fish, distributed evenly
  - Demersal (mun) & Pelagic (comm)
- Initial biomass: (*uniformly distributed in each zone*)
  - municipal /demersal fish: 1.3 mt /km<sup>2</sup>
  - commercial /pelagic fish: 2 mt /km<sup>2</sup>
- MPA spillover rate:
  - into both municipal and commercial stock
  - 10% of size of stock in MPA per year
  - limited by carrying capacity
- Carrying capacity:
  - municipal /demersal fish: 10 mt /km<sup>2</sup>
  - commercial /pelagic fish: 3 mt /km<sup>2</sup>

### *Economic Assumptions of the Model*

- Technology and cost remains constant over time
- Price is the same over time
- Minimum expenditure and income requirements are the same over time
- Fishers in Tabina are price takers, they do not influence the market

### *Summary of major findings:*

FISH BE elicited considerable interest that requires drastic actions that need to be taken to overcome this crisis. Outlined below is a 9-point agenda for actions.

1. MPAs are crucial to CRM imperatives and with the amendment of RA 8550, it is necessary to increase the proposed MPA area from the originally proposed 15% of municipal waters. At least 20% should be considered but preferably 30% of municipal waters are necessary even in slightly over fished areas.
2. It is a must to strictly enforce and prohibit entry into the 10-15 km area commercial fishing.
3. Transform open access conditions to co-management arrangements of MPAs akin to the mangrove stewardship arrangements.
4. An MPA trust fund as part of a national incentive system for marine sanctuaries needs to be established. Institutionalizing mechanisms to motivate fishers, resource managers and other stakeholders to be accountable in effectively implementing MPA actions within their overall CRM plan and municipal CLUP.
5. Improving budgets for CRM and MPAs to at least > P 500,000 annually from coastal LGU budgets for MPA management and the concomitant priority allocation of benefits for good management efforts given to fisher-stewards
6. At local and national levels, complementary and harmonized efforts need to be linked with the other strategies such as the proposals of the Philippine Marine Sanctuary Strategy.
7. Safety nets and incentives for conservation and synergistic efforts in enhancement and rehabilitation, needs to be instituted in all municipalities (e.g., MPAs and Monitoring, Control and Surveillance programs institutionalize within an Integrated Coastal Zone Management Program).
8. The need to find synergies and convergence can be facilitated if capability-building programs to improve management effectiveness can be related to all the concerns and imperatives mentioned earlier.
9. Furthermore, the tool when used to explain decision options to stakeholders should endeavor to foster active stakeholder participation in decision-making.

To summarize, the contributions of FISH BE in CRM decision-making have been multifaceted. In the realm of general policy, other options that help motivate the coastal populace to move away from the business as usual attitude in fisheries is urgently needed. Other value added information can help improve accountability and establishment of a CRM trust fund. All these concerns are important to enhance the sustainability features of environmental governance and better compliance mechanisms. The FISH BE model would be an important tool in gauging the needed financing scheme in a CRM incentive system.

### *Insights derived from using the Fisheries Bio-Economic Model (Fish BE)*

Utilizing the Fish BE model shows the imperative of regulating fishing effort in tandem with the need to allocate an area of protection for spawning stock biomass (e.g., investing in coastal resources bank) to sustain the replenishment of subsequent populations. In addition, social and economic consequences should be addressed in order to provide safety nets to the affected stakeholders.

Various scenarios in sample cases provide the following insights:

1. A coastal resources crisis has already occurred. Even in areas with very low fisher populations (e.g., with only around 1 fisher per km<sup>2</sup> fishing area) **improving fish prices** (e.g., in Dinalungan and Tabina), post harvest value added incentives (eco-labeling) and **marketing** together with the establishment of no-take areas can facilitate sustainability of fish stocks.
2. Most coastal areas require **regulation of fishing effort** to be urgently addressed or else delaying actions now would lead to further resource dissipation translating to more expensive social and economic costs in future.
3. **Effective actions are possible** by prioritizing the most efficient, destructive, non-selective and socially unacceptable gears (e.g., blast fishing) can go a long way to reducing fishing effort.

4. Providing alternative options (e.g., **livelihood support** to coastal management and conservation linked incentives such as sea ranching) should be pursued.
5. Developing trust funds and similar options to **promote networks of MPAs** within an ecosystem management area to reduce the costs of management and expand to complementary and synergistic effects (e.g., enforcement within and outside no-take areas) would be imperative.
6. **Cross compliance** mechanisms (e.g., livelihood support for enhancement and cost recovery measures in marine reserve areas like sea ranching in Lingayen Gulf as linked to certification and licensing] should be undertaken with an array of incentives for good coastal environmental governance.
7. **Gulf wide commercial fishing moratorium** (e.g., Moro Gulf) should be considered together with the accompanying safety nets in order for the area to stave off the decline in stocks.

### **Site Selection and Design**

*Considerations for site selection and design of an MPA (modified from Kelleher and Kenchington, 1992):*

1. Naturalness. The extent to which the area has been protected from human-induced change.
2. Biogeographical importance: contains unique/rare or representative qualities including contribution to a network of sites
3. Ecological value. Contributes to the maintenance of essential ecological processes or life support systems; for example, source of larvae for downstream areas; the degree to which the area, by itself or in association with others, encompasses a complete system; contains a variety of habitat, nursery or juvenile areas, feeding or breeding areas, or rare or endangered species
4. Economic importance. Protection of an area for recreation, subsistence, traditional use, or refuge/nursery for commercially-important species
5. Social importance. Has existing/potential value due to its heritage, historical, cultural, aesthetic or educational qualities.
6. Scientific importance. Value for research.
7. Practicality/feasibility. Degree of insulation from external destructive influences, social and political acceptability, community support, accessibility, compatibility with existing uses and management, ease of management/enforcement.

*Rules-of-Thumb when Setting MPA Objectives (Aliño and Uychiaoco, 1999):*

- Prioritize, if more than one objective is appropriate. The dilemma comes when ecological factors are weighed against socio-economic considerations. Decision-makers are faced with the conflict of satisfying immediate conservation needs by compromising the hand-to-mouth existence of fishing communities
- Participation and equity. Objectives should be deliberated with community involvement through consultations. The ultimate goal is to achieve equitable distribution of benefits to as many stakeholders as possible
- Feasibility. Objectives should be attainable and realistic given the available time and resources. Logistics required to achieve the objectives, particularly in implementation and management, should be discussed.
- Sustainability. There should be possible mechanisms (e.g. resource generation and capability building) that would sustain the initiative.

*Note on site selection:*

Based on the defined objectives on MS establishment and on the results of surveys, carefully consider prioritizing bio-physical attributes versus community acceptance. Oftentimes, the sites with best bio-physical features are the community's primary fishing grounds. If significant number of community members opposed to the proposed site, community compliance in MS implementation may be doubtful. On the otherhand,

favoring community acceptance over bio-physical features might just select sites that are already degraded and therefore could only have minimal impact. Either of the two options, it is important to clarify expectations on the potential consequences of the community's decisions.

After the presentation/validation of results, the actual position and location of the proposed MS should be determined using a GPS (or a compass). Involved as many communities as possible in site designation.

*Key Factors in the Design:*

1. Size (small vs. large). It is simpler and more effective to set up small MPAs (around 10 hectares) but it is preferable to have at least sufficient size for biomass accumulation to contribute to a significant adult spillover and reproductive output (i.e. at least around 40 hectares). It is suggested that one considers, the implications of size in relation to the regulation of fishing effort and their social consequences in marginalizing sustenance fishers (see also Fish BE model).
2. Location (from Rowley, 1994).
  - a. Within reach of fisheries and the feasibility of enforcement by the management body.
  - b. Include relevant recruitment and nursery habitat or be close enough to receive recruits from separate nursery grounds
  - c. Presence of juveniles in many size/age classes, its larval entrainment features (e.g. leeward wake and eddy position)
  - d. Be subject to long-term regional control to protect the MPA, its nursery areas and routes of migration from nursery to reserve; and
  - e. For species reluctant to disperse across "foreign" habitats, MPAs should be located within a larger patch of similar habitat.
  - f. Connectedness with other marine sanctuaries and refuge areas (e.g. as a corridor or position of island cluster in gyres and transition areas within two biogeographic regions, bays or island clusters)
3. Shape. Can influence movement of animals across reserve borders. A long, thin shape or complex border will have a larger perimeter: area ratio than a round or square reserve of equal area. More spillover can be expected from reserve with longer borders.
4. Community participation. It is essential in site selection. In fact, traditional knowledge should not be underestimated and should be continuously and seriously tapped.

# Module 4

## Enhancement of Municipal Fisheries Management

**T**he fishery sector is a significant livelihood source to almost 60 percent of Filipinos. With the rapidly increasing population, demand for fish has ballooned over the years, resulting in the decline of fish stock. This has been aggravated by the lack of effective fishery management interventions that take into account the TAP principles. This module on Enhancement of Fisheries Management is seen as a significant input to achieving good governance in CRM.

Module 4 outlines the formulation of a fisheries management plan, which identifies fishery management interventions for the sustainability of the multiple-fishery zone. The plan is intended to be an operational plan for selected management interventions, addressing improved fishery law enforcement and management of fishing efforts. Fisheries management will be introduced at two levels: municipal and inter-LGU levels.

The processes involved in formulating the two plans are similar. However, focus of relevant fishery management interventions differ because of a higher collaboration and negotiation efforts needed at the inter-LGU level.

The LGU-level plan may build on the management strategies and program identified for the multi-fisheries management zone of the CRM plan, if there is one. Otherwise the scope of the LGU-level operational plan will depend on the situational analysis and prioritization of fisheries issues within the available resources of the LGU. The inter-LGU plan, on the other hand, is developed in conjunction with delineation of municipal waters (**Module 2, Sub-module 2A**) and is meant to implement joint efforts of at least two LGUs (e.g., joint fishery law enforcement, including enforcement of the 15 km municipal water boundary).

### Municipal water delineation and inter-LGU plan

*Based on EcoGov experience, LGUs need not agree immediately on their municipal water boundaries before going into joint fishery law enforcement efforts. In Baler Bay, four municipalities have formulated an inter-LGU plan even when two of them have yet to agree on their boundaries.*

### Expected Module Outputs

Module 4 has two major outputs: the legitimized fisheries management plan for the municipal level and/or the inter-LGU fisheries management plan for the inter-LGU level; and draft fishery ordinances.

## Sub-Module 4A. Municipal Fisheries Management Plan Formulation and Drafting of Ordinance(s)

### Sub-Module Coverage

This sub-module aims to assist the CRM-TWG in fisheries management planning, from the drafting of the FMP to enhancing community cooperation and coordination in fisheries management. The sub-module also includes the conduct of capability-building programs, such as strengthening LGU capacity in fishery law enforcement.

Sub-Module 4A gives emphasis on identifying activities and components necessary in effectively and efficiently managing the multiple-fishery zone. Focus is on addressing fishery-related issues and concerns (such as gear regulation; fisheries law enforcement; and fisher folk registration, licensing and permit). Thus, the module is designed to provide a venue for assessing municipality's status of fisheries management implementation, identifying activities and mechanisms necessary in enhancing the implementation of the CRM Plan, and incorporating TAP principles in the plan to ensure good environmental governance.

This sub-module underscores the need for good governance as it requires having approved ordinances for fishery management, law enforcement, user fees and incentive systems. This sub-module also calls for the creation, through a Sanggunian resolution or ordinance, of a fishery enforcement body. The sub-module considers the assistance and active participation of other agencies, such as the PNP and Philippine Coastguard as well as civil society as an essential input to this participatory approach.

Based on EcoGov experience, the whole sub-module (including pre- and post-planning activities) may be completed in 4-6 months.

### **Expected Sub-module Outputs**

Three expected major outputs of the activity are: the adopted fisheries management plan, which addresses identified management gaps and lists priority activities for actions; an enhanced collaboration mechanism among various stakeholders for fisheries management; and draft ordinance(s).

### Sub-Module Approach

The process begins with an orientation of the participants, followed by the assessment of existing fishery resources and technical input sessions. Armed with needed data and various options, the participants now start the series of workshops<sup>17</sup>, focusing on the development of the plan, which shall contain, among others, relevant protocols, management schemes, user fee, incentive systems, communication plan and budgetary requirements necessary for effective fishery management. The plan is then validated through community consultations, refined based on information gathered, and submitted for approval of the Sangguniang Bayan, which passes a resolution adopting the plan and allocates budget for implementation through the enactment of the necessary ordinance. Other ordinances (e.g., on incentives, enforcement, etc.) are also drafted for enactment.

#### **Immediate actions**

*Immediate implementation activities expected from this sub-module are: establishment of fisher folk registry; formation of fishery enforcement body, paralegal training and deputation of fish wardens, regular patrolling, and community IEC.*

Immediate implementation activities expected from this sub-module are: establishment of fisher folk registry; formation of fishery enforcement body, paralegal training and deputation of fish wardens, regular patrolling, and community IEC.

<sup>17</sup> Based on EcoGov experience, it takes 2-3 workshops to refine a plan.

Provided below are details involved in each step:

### **Orientation<sup>18</sup>**

Participants are oriented on the national and local profiles of the fishery sector. The Philippine Fisheries Profile is presented to the group with emphasis on fisheries production (amount and corresponding value); composition and contribution, including employment, of fisheries sector (municipal, commercial and aquaculture); and fisheries production by administrative region or fishing grounds.

The discussion stresses the declining trend in fisheries harvest through the years. It also notes the decreasing catch from municipal fisheries sector. The perceived and realized ecological and socio-economic implications of the declining trend are the foci of the discussion. An overview of fisheries management options from production to post-harvest and marketing stage is provided. A session on types of municipal and commercial fishing gears is allotted to increase knowledge of participants on the effects of these gears, which are important to consider in the action planning workshop.

### **Fisheries Assessment**

Profiling uses secondary data gathered using participatory fisheries and socio-economic assessment methods discussed in Module 2, Sub-module 2B.

The local fisheries profile<sup>19</sup> and key assessment results and other documented information are presented at a meeting with representatives from all coastal barangays, particularly fisher folk using the most common fishing gears, city/municipal council representatives, BFARMC/MFARMC and members of the Bantay Dagat. A session is allotted for validating key results, such as trend in fisheries harvest through the years and various fishing grounds and fishing gears used in the area. A workshop on the overall status of local fishery management initiatives vis-a-vis accomplishments and major needs is then facilitated.

The discussion is facilitated by conducting SWOT analysis of the municipality's fisheries management based on the identified strategies/activities in the CRM Plan. The analysis concentrates on accomplishments and needs for local legislation/regulatory mechanisms, local capability building, budget, enforcement, institutional arrangements/partnerships, and monitoring and evaluation. To ensure TAP principles are observed, participants are encouraged to discuss strategies, which may help in improving environmental governance of local fisheries. The results of the analysis are presented to the group. Management actions are prioritized to address identified gaps and facilitate implementation of CRM plan provisions on multiple-fishery management zone.

### **Fishery Law Enforcement<sup>20</sup>**

Fishery law enforcement strategies are identified in a separate meeting or workshop where participants are oriented on the mandates of BFAR and DENR and other relevant-institutions in coastal and fishery law enforcement and how to tap the services of these agencies. The participants are then asked to identify problems and issues encountered in the enforcement of coastal and fishery laws, present possible solutions and suggest persons or groups that could be tasked to implement enforcement strategies. Areas for discussion may include monitoring and control surveillance, legislation, resource allocation, IEC and capability-building factors. This is complemented by the training and deputation of fish wardens through the assistance of BFAR.

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<sup>18</sup> See **Lecture Notes**, Enhancement of Philippine Fisheries Management, page 78.

<sup>19</sup> Profiling uses secondary and primary data gathered during the fisheries and socio-economic assessments discussed in Module 2, Sub-module 2B, Activity 1.

<sup>20</sup> See **Lecture Notes**, Coastal/Fishery Law Enforcement, page 79.

## Fisheries Management Options Analysis

Using the results of the previous activity, the participants will now identify fisheries management options. A rationale on fisheries management is first given to the participants. Various fishery management alternatives (their rationale, advantages and disadvantages, doability, etc.) are presented and discussed and incentive mechanisms are reviewed. Technical inputs on incentive systems and revenue-generating mechanisms are provided.<sup>21</sup>

The subsequent planning workshop will focus on operational strategies for the identified priority issues. Separate technical input sessions and workshops are conducted as needed to flesh out a work plan for each strategy.

A workshop is then conducted to allow participants to identify and discuss the resource management strategies (e.g., gear regulation, close/open seasons, licensing and permits, etc.) that will be included in the plan. During the workshop, participants are divided into two or three groups. Each group is tasked to enumerate priority management alternatives, addressing specific fishery issues, e.g., area/zone or gear specific. For each alternative, every group has to discuss key activities necessary, considering their ecological, legal and socio-economic implications. Economic assessment of different options follow the design of Module 2's Sub-module 2C, Activity 1 (Economic Analysis of Zone Management Activities).

After the analysis, corresponding budget, responsible persons and/or group and timeframe are also identified in the session.

## Economic Assessment of Fishery Management Options

See similar discussion on this topic (under Formulation of Inter-LGU Fisheries Management Plan) in Sub-module 4B.

## Fishery Management Plan Formulation

The proposed fishery management interventions are consolidated and validated by the group. These are presented to coastal stakeholders during consultations and public hearings. Results of consultations are synthesized as inputs to the refinement of the plan.

## Ordinance Formulation

Ordinances to support plan implementation (e.g., ordinances on implementing incentive mechanisms) are drafted by the policy team of the TWG, some members of the Sanggunian and an EcoGov policy specialist or LSP. Before drafting these ordinances, existing local fishery laws are first reviewed to identify policy gaps that have to be addressed to ensure effective implementation of the plan.

The review includes determining if existing ordinances contain the TAP principles necessary to make sure that good environmental governance is observed. Governance provisions are included in the various ordinances, which undergo public hearings and modifications before they are enacted (See **Annex 2 I, Ordinance Templates**, Proposed Outline of Fisheries Management Ordinance).

### **Ordinance review to ensure TAP**

*The review of existing ordinances includes determining if they contain the TAP principles necessary to make sure that good environmental governance is observed. Governance provisions are included in the various ordinances that have to be enacted in relation to the implementation of the plan.*

<sup>21</sup> See **Lecture Notes** and **Step-by-Step Guide**, Module 2, Sub-module 2C, Activity 1

## Communication Plan

It is also during the formulation of the plan that a communication plan is developed in support of management plan implementation as well as community validation activities and lobbying for LGU support to enact ordinances (see related information in **Module 2, Sub-module 2C, Activity 3**).

## Participants

It should be ensured that the right participants are invited to join the various activities discussed earlier. For example, for fishery law enforcement, representatives from the BFAR, the DENR, the PNP and the Coast Guard should be included. When discussing policy formulation, members of the city/municipal council should be present, and so on and so forth.

## Sub-Module 4B. Inter-LGU Fisheries Management Plan

### Sub-Module Coverage

Fisheries management entails collaborative efforts among LGUs who share coastal resources (such as those LGUs located along bays). For fisheries management efforts to be effective, adjacent LGUs must come up with an inter-LGU fisheries management plan that reflects their commitment and agreement in implementing strategic interventions to manage a common resource. Agreements may include common agenda to be implemented at the LGU level and joint activities and collaboration mechanisms.

When clusters of LGUs are involved, the sub-module requires the preparation and signing of Memoranda of Agreement that call for a unified action (e.g., licensing and permit systems, enforcement, etc.). This sub-module provides a venue for collaborating municipalities to formulate an inter-LGU operational plan. It facilitates negotiations on inter-LGU issues and concerns and assists the LGUs in identifying areas for collaboration on fishery management actions. During the conduct of this sub-module, inter-LGU enforcement mechanisms are developed, accountable persons/groups as well as financing requirements and sources are specified and required ordinances (to support and facilitate implementation of the inter-LGU Plan) are drafted.

Based on EcoGov experience, the processes involved in this whole sub-module may be completed in 8-10 months,<sup>22</sup> depending on the number of LGUs.

### Expected Sub-module Outputs

Expected outputs are an inter-LGU fisheries management plan and draft ordinances.

### Sub-Module Approach

#### Orientation on Fisheries Management

Representatives of collaborating LGUs are first oriented on the importance of fisheries management at the municipal and inter-LGU levels. Focus is given on inter-LGU fishery issues and concerns to broaden understanding on the need for an ILFMP and mandates provided in RA 850. Possible areas of collaboration are also presented to the group and incentive and enforcement mechanisms, which can be applied at the inter-LGU level, are discussed.

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<sup>22</sup> Not continuous.

## **Fisheries Assessment**

Participants are first grouped per LGU to discuss the status of fishery management in their respective municipalities. The discussion covers aspects of fishery sector's planning and budget allocation, legislation, institutional arrangements, implementation and, monitoring and evaluation. The group is asked to highlight issues and problems encountered in implementing fishery management interventions. These are then presented in plenary to share experiences with other LGUs.

An overview on the status of fisheries sector at the provincial level is presented to the group, based on data gathered from available secondary materials available at the Provincial Office, BFAR and other sources. The information is discussed along with available information on the status of the fisheries sector per municipality.

## **Fishery Law Enforcement**

Given the situational analysis per LGU, common concerns are identified. Technical inputs on provisions of RA 8550 (Fisheries Code) for integrated fisheries management and benefits of joint enforcement initiatives are discussed. Examples of inter-LGU initiatives are provided. It is during this session that the group identifies the vision, mission and objectives of the proposed inter-LGU plan. As the participants identify the desired condition of their shared resources within the 10-year period of the inter-LGU plan, they discuss required fishery enforcement strategies to help realize their vision.

This is where this sub-module differs from the one on Fisheries Management Plan. This session zooms into the possible areas of collaboration between and among LGUs in addressing fisheries issues and concerns, requiring participants to enumerate major areas of cooperation. These may include monitoring and control surveillance, legislation, resource allocation, IEC and capability building. Once agreed upon, these activities shall be implemented by all LGUs concerned.

## **Formulation of Inter-LGU Fisheries Management Plan**

Part of plan formulation is an analysis of fisheries management options. This session follows the same process as discussed in the LGU-level plan (except that the composition of the workshop groups is different).

This session is conducted to prioritize fishery management actions among the collaborating agencies. During this activity, the LGUs select the best-preferred strategies to implement identified areas of collaboration.

The first part is allotted for orienting the participants on the framework of socio-economic decision-making. Participants are then grouped (per LGU) according to the number of areas of collaboration. Each group is assigned to identify activities to be conducted by all LGUs in that specific area of collaboration. Outputs are presented during the plenary for deliberation and the participants agree on the key activities to undertake.

The big group is again divided per LGU, with each LGU asked to do a cost-benefit analysis of the management alternatives identified, which includes estimating costs and possible revenues per management option. Outputs are presented and synthesized for an overall picture of the possible inter-LGU fishery management strategies that will be included in the plan. Economic analysis on the sum of inter-LGU net revenues is done. Consensus on priority management options is reached, based on cost-benefit analysis and qualitative criteria, such as environmental, social and institutional/political factors.

A financing schedule is developed, identifying financing sources, including the revenues accruing from the activities, other budget allocations as well as assisted projects. Investment activities are spread throughout the plan period. Also discussed is the necessary implementation arrangement among stakeholders concerned. Accountable persons/groups are also identified.

Proposed inter-LGU fishery management interventions are consolidated and inputted into the plan, which is validated by the LGU representatives through consultations with various coastal stakeholders. Plan modifications are made based on the comments gathered during the consultation process.

### **Ordinance Formulation**

LGU representatives are first oriented on provisions of applicable laws in relation to the implementation and enforcement of the inter-LGU plan. This is complemented by discussion on principles of good governance in the inter-LGU agreement context.

The group lists and analyzes existing fisheries ordinances based on requirements of applicable laws and good governance elements. Required ordinances are drafted, addressing policy gaps earlier identified, by the TWG members, the city/municipal council representatives and the EcoGov specialist or LSP. The draft ordinances are validated by the different LGU representatives and then submitted to respective SBs for deliberation. Public hearings are conducted and modifications made on the draft ordinances before they are enacted into law. Ordinances are later disseminated to inform the public. (See **Module 2, Sub-Module 2C, Activity 2** for related information).

### **Communication Plan**

During this session, a communication plan that will support the implementation of the inter-LGU plan shall be formulated. (See **Module 2, Sub-Module 2C, Activity 3** for related information).

This plan shall also include the communication activities that will have to be conducted in support of community validation, getting LGU support to enact needed ordinances and conduct of public hearings. Such plan shall also spell out activities on what to do to disseminate information about the new ordinances once they are enacted. This plan may include activities such as focused group discussions with fisher folk and distribution of information materials (leaflets, brochures, etc.) to community members.

## Lecture Notes

### **Enhancement of Municipal Fisheries Management**

- I. Philippine Marine Fisheries
  - A. Economic benefits from fisheries
  - B. Present status
    1. Declining municipal fisheries production
    2. Open-access leading to fishery collapse
- II. Key Concepts in Fisheries Management
  - A. Limited ability to predict ecosystem behavior
  - B. Real thresholds and limits of ecosystems
  - C. Irreversible changes given exceeded thresholds and limits
  - D. Importance of diversity to ecosystem functioning
  - E. Multiple scales interacting within and among ecosystems
  - F. Linkages within ecosystem components
  - G. Open ecosystem boundaries
  - H. Time element of ecosystem changes
- III. Fishery Management Objectives vis-a-vis Fishery Management Arrangements
  - A. Government-based management
  - B. Community-based management
  - C. Government-centralized management
  - D. Co-Management
    1. Informing
    2. Consultation
    3. Cooperation
    4. Communication
    5. Information exchange
    6. Advisory role
    7. Joint action
    8. Partnership
  - E. Community self-governance and self-management
- IV. Elements of a Typical Fishery
  - A. Types of fisheries
  - B. Resource base for each fishery
  - C. Harvesting sector
  - D. Post-harvest and marketing sector
  - E. Support services
- V. Fishery Management Options
  - A. Regulation of fishing effort
    1. Limiting access
    2. Size limits
    3. Restrict gears
    4. Open and close season
    5. Catch quotas
  - B. Ecosystem-Based Measures
    1. Habitat protection
    2. Habitat restoration
    3. Habitat creation and enhancement
    4. Restocking/reseeding
  - C. People Focused Measures
    1. Public education
    2. Community development
    3. Incentive systems to manage excess fishing capacity

VI. Factors to Consider in Implementing Incentive Systems

- A. Economic constraints
- B. Formal constraints
- C. Social constraints
- D. Compliance

VII. Key Provisions of RA 8550

- A. On fishery rights
- B. On user fees
- C. Incentives

VIII. FARMC

- A. Rationale for creation of FARMC
- B. National FARMC
  - 1. Functions of national FARMC
- C. Municipality/City FARMC
  - 1. Functions of municipality/city FARMC
  - 2. Composition of municipality/city FARMC
  - 3. Officers of municipality/city FARMC
- D. Creation of BFARMCs/LFARMCs
  - 1. Functions of BFARMC/LFARMC
- E. Integrated FARMC
  - 1. Functions of integrated FARMC
  - 2. Composition of the integrated FARMC

***Coastal/Fishery Law Enforcement***

I. Enforcement Chain

II. Institutional Mandates

III. Model Municipal Law Enforcement Team

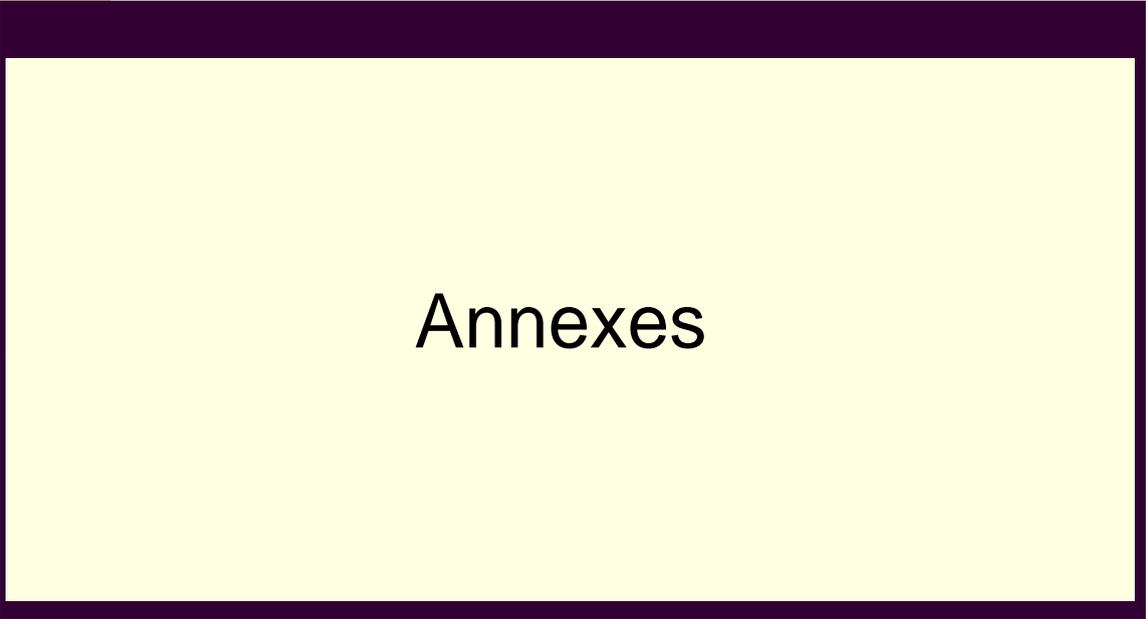
***Incentives and Revenue-Generating Mechanisms for Fishery Management***

See related information on Lecture Notes of Module 2, Sub-module 2C, Activity 1 (Economic Analysis of Zone Management Activities).





# CRM Training Guide



Annexes



# Annex 1

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- Sample Memorandum of Agreement with Municipality of Tudela



**MEMORANDUM OF AGREEMENT**

**In the implementation of the Environmental Governance Project (EcoGov) by and between DENR7, EcoGov and the Municipality of Tudela, Camotes, Cebu**

**KNOW ALL MEN BY THESE PRESENTS:**

This agreement made and entered into this 11<sup>th</sup> day of April, 2003 at Tudela, Camotes, Cebu by and among:

**THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, Region 7** with Regional Office at Greenplains Subdivision, Banilad, Mandaue City herein represented by the Regional Executive Director, **Engr. AUGUSTUS L. MOMONGAN** hereinafter referred to as **DENR-Region 7**;

The **PHILIPPINE ENVIRONMENTAL GOVERNANCE PROJECT**, a DENR project funded by the United States Agency for International Development (USAID) and with technical assistance from the Development Alternatives Inc. (DAI), with regional office at DENR 7 Compound, Banilad, Mandaue City herein represented by the Chief of Party, **ERNESTO S. GUIANG**, through the Visayas Team Leader, **MAY ELIZABETH S. YBAÑEZ**, hereinafter referred to as **ECOGOV**;

-and-

The **Municipality of Tudela**, a local government unit established and existing under the laws of the Republic of the Philippines with office at Municipal Hall, Municipality of Tudela, Camotes, Province of Cebu, duly represented herein by the Municipal Mayor, the **Hon. ROGELIO C. BAQUERFO, SR.**, hereinafter referred to as the **MUNICIPALITY**.

**WITNESSETH THAT;**

**WHEREAS**, the MUNICIPALITY has a total coastline of 15.41 kilometers;

**WHEREAS**, the MUNICIPALITY realizes the need to rationalize and manage the use of their municipal waters and coastal resources to reduce overexploitation and illegal fishing practices and ensure equitable access to such resources;

**WHEREAS** the DENR, with technical assistance from DAI, in collaboration with other government agencies and non-government organizations, and with financial assistance from the USAID is implementing the ECOGOV PROJECT in ARMM, Regions 9, 12, and the Province of Lanao del Norte in Region 10, Central Visayas and Northern Luzon;

**WHEREAS**, ECOGOV aims to strengthen the capacities of interested Local Government Units (LGUs) to address threats to coastal resources;



**WHEREAS**, DENR-Region 7, ECOGOV and the MUNICIPALITY have agreed to collaborate in the preparation, validation, approval, and legitimization of a Municipal Coastal Resources Management (CRM) Plan; establishment and management of marine sanctuaries in the MUNICIPALITY; and strengthening of Fishery law enforcement and formulation of fisheries regulation.

**WHEREAS**, the processes and procedures in preparing, validating, legitimizing, approving, and implementing the CRM Plan of the MUNICIPALITY; the establishment and management of marine sanctuaries in the MUNICIPALITY; strengthening of Fishery law enforcement and formulation of fisheries regulation; and enhance fisheries management plan, shall be the main entry point/s in demonstrating improved governance that is consistent with the principles and practices of transparency, accountability, and participatory decision-making;

**WHEREAS**, DENR-Region 7, ECOGOV, and the MUNICIPALITY are committed to jointly support, contribute to and participate in the activities to be conducted pursuant to this Memorandum of Agreement;

**NOW, THEREFORE**, for and in consideration of the foregoing premises and by way of formalizing and confirming their commitments, the Parties hereby agree as follows:

## **I. SUBJECT MATTER / OBJECTIVE**

The Parties agree that this Memorandum of Agreement shall have for its overriding objective the improvement of coastal resources management in the MUNICIPALITY through improved governance consistent with the principles and practices of transparency, accountability and participatory decision-making.

In particular, the Parties shall undertake joint and/or common activities in the following areas:

- A. Coastal Resources Management Planning;
- B. Establishment and management of marine sanctuaries;
- C. Strengthening of Fishery Law Enforcement and Formulation of Fisheries Regulation;
- D. Enhance Fisheries Management Planning.

## **II. OBLIGATIONS OF THE PARTIES**

### **A. General Obligations**

1. The Parties shall collaborate and combine their human, technical, material and financial resources to 1. prepare, validate, legitimize, approve, and implement the CRM Plan of the MUNICIPALITY; 2. establish and manage marine sanctuaries in the MUNICIPALITY; 3. strengthen Fishery law enforcement and formulate fisheries regulation; and 4. enhance fisheries management planning,
2. The Parties hereby agree to meet periodically to apprise each other of the progress of the implementation of this Memorandum of Agreement,



discuss and resolve outstanding issues and concerns, and share lessons learned.

## **B. Obligations of the MUNICIPALITY**

1. Issue an Executive Order creating a multi-sectoral group that will undertake CRM Planning; establishment and management of marine sanctuaries; strengthening of fishery law enforcement and formulation of fisheries regulation; and enhancement of fisheries management plan, in collaboration with DENR-Region 7 and DA-BFAR Region 7, and with technical assistance from ECOGOV.
2. Provide necessary extension services, personnel, and other logistical support for the activities to be conducted pursuant to this Memorandum of Agreement especially with regard to the remuneration, administrative control and incidental expenses incurred by the said personnel of the MUNICIPALITY.
3. Designate/appoint a CRM Officer whose function, among others, shall be to serve as the focal person for the coordination of activities to be conducted under this Memorandum of Agreement. The remuneration, administrative control, and incidental expenses incurred by the said officer, including the staff, if any, shall be the responsibility of the MUNICIPALITY.
4. Participate in the training modules, capacity-building, cross visits, and practicum that will be organized and conducted by ECOGOV.
5. Ensure the sustained implementation of the CRM Plan of the MUNICIPALITY with annual budgetary allocation; sustained management of established marine sanctuaries in the MUNICIPALITY with annual budgetary allocation; sustained enforcement of fisheries laws and regulations in the MUNICIPALITY; and enhancement of fisheries management plan in the MUNICIPALITY with annual budgetary allocation even after the end of ECOGOV assistance.
6. Provide DENR-Region 7 and ECOGOV, upon request, progress and status reports and any special reports of activities undertaken pursuant to this Memorandum of Agreement.
7. Allocate an initial amount of Php 50,000.00 in CY 2002 for the activities to be conducted pursuant to this Memorandum of Agreement.
8. Facilitate the review and approval of the CRM Plan and such plans and programs resulting from the activities to be conducted pursuant to this Memorandum of Agreement by the Sangguniang Bayan (SB), when appropriate.
9. Legitimize the CRM Plan and such plans and programs resulting from the activities to be conducted pursuant to this Memorandum of Agreement through the enactment of the appropriate ordinance/s.

### C. Obligations of DENR-Region 7

1. Participate in training modules, capacity-building, cross visits, and practicum that will be organized and conducted by ECOGOV.
2. Provide necessary and available data, maps and information to be utilized in the activities to be conducted under this Memorandum of Agreement.
3. Assist in the conduct of consultations, dialogues and workshops in concerned communities and areas.
4. Provide assistance in the conduct of coastal resources assessment.
5. Assist in the preparation of the draft and final coastal resource management frameworks.
6. Assist in the establishment and monitoring of mangrove rehabilitation areas and marine sanctuaries.
7. Provide the MUNICIPALITY timely information on relevant policies and development issues in connection with the activities to be conducted pursuant to this Memorandum of Agreement.
8. Link the MUNICIPALITY with other ongoing CRM efforts in the region and nearby regions.
9. Provide technical assistance in the CRM Planning processes.
10. Provide assistance in the implementation of the CRM Plan especially in the zoning of foreshore areas.
11. Assist in the identification of conflict areas, resolution of conflicts, and identification of opportunities for economic development in municipal coastal lands and waters.

### D. Obligations of ECOGOV

1. Subject to existing rules and regulations of USAID, provide a technical assistance package that includes training modules, capacity-building, cross visits, and practicum in the preparation, validation, approval legitimization and initial implementation of the CRM Plan of the MUNICIPALITY; Establishment and management of marine sanctuaries in the MUNICIPALITY; Strengthening of Fishery law enforcement and formulation of fisheries regulation in the MUNICIPALITY; and Enhance Fisheries Management Plan of the MUNICIPALITY.
2. Provide technical staff or contract with Local Service Providers (LSPs) to assist the MUNICIPALITY in the preparation, validation, approval legitimization and initial implementation of the CRM Plan of the MUNICIPALITY; Establishment and management of marine sanctuaries in the MUNICIPALITY; Strengthening of Fishery law enforcement and

*Cons Plan*  
*Cons Plan*

formulation of fisheries regulation in the MUNICIPALITY; and Enhance Fisheries Management Plan of the MUNICIPALITY.

3. Undertake related activities as DENR-Region 7 and the MUNICIPALITY may request provided that the same are within the scope of the EcoGov PROJECT and provided further that the written approval of the Chief of Party or his duly authorized representative is given.
4. Periodically monitor and evaluate the implementation of the activities under this Memorandum of Agreement.
5. Provide the necessary IEC, advocacy, and policy support in the conduct of the activities under this Memorandum of Agreement.

**III. INSTITUTIONAL MECHANISM TO PLAN, IMPLEMENT AND MONITOR THE ACTIVITIES UNDER THIS MEMORANDUM OF AGREEMENT**

1. The Parties agree that regular meetings will be conducted to determine the progress of activities under this Memorandum of Agreement, and such plans and programs as may be agreed upon by the Parties.
2. The said meetings shall be chaired by the Mayor, and Co-Chaired by the concerned CENRO officer of the DENR-Region 7. The Vice-Mayor and the SB member for environment shall always be invited to the said meetings.
3. The Mayor may also invite such other offices or persons as may be needed during regular or special meetings.

**IV. OTHER COVENANTS**

The MUNICIPALITY hereby warrants that the Municipal Council, by Resolution No. 06-2003 dated February 3, 2003 has authorized the Municipal Mayor to sign this Agreement and to perform such acts as maybe necessary to put this Agreement into full effect. The MUNICIPALITY further warrants that the Municipal Council, by the same Resolution has approved the Preparation, validation, approval legitimization and implementation of the CRM Plan of the MUNICIPALITY; Establishment and management of marine sanctuaries in the MUNICIPALITY; Strengthening of Fishery law enforcement and formulation of fisheries regulation; and Enhancement of the Fisheries Management Plan of the MUNICIPALITY, and has committed to perform all its obligations and commitments including the yearly allocation in its budget of counterpart funds. A copy of the said Resolution is hereto attached as Annex "A" and made an integral part hereof.

**V. AMENDMENT**

This Agreement may be amended, altered, modified, or supplemented by written agreement of all the Parties.



**VI. TERMINATION**

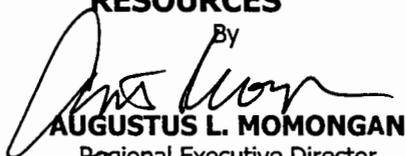
This Agreement may be terminated based on the non-performance by any of the Parties of any of their respective obligations or upon termination of USAID Contract No. PCE-I-00-99-00002-00 to DAI.

**VII. EFFECTIVITY**

This Agreement shall take effect upon the signing hereof and shall remain in full force and effect for the entire duration of ECOGOV unless sooner terminated as provided above or by written agreement of all the Parties.

IN WITNESS WHEREOF, the Parties have hereunto affixed their signatures on the date and at the place first above written.

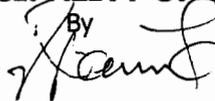
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

By  
  
**AUGUSTUS L. MOMONGAN**  
Regional Executive Director

**PHILIPPINE ENVIRONMENTAL GOVERNANCE PROJECT**

By  
  
**MAY ELIZABETH SEGURA-YBAÑEZ**  
Team Leader

**THE MUNICIPALITY OF TUDELA**

By  
  
**ROGELIO C. BAQUERFO**  
Municipal Mayor

Signed in the presence of:

  
\_\_\_\_\_

  
  
\_\_\_\_\_

**ACKNOWLEDGEMENT**

REPUBLIC OF THE PHILIPPINES)  
Province of Cebu ) S.S  
Municipality of Tudela

BEFORE ME a Notary Public for and in Cebu City this  
\_\_\_\_\_ day of ~~MAY 06 2003~~ \_\_\_\_\_, personally  
appeared:

<u>Name</u>	<u>CTC No.</u>	<u>Issued on</u>	<u>Issued at</u>
<u>Augustus L. Momongan</u>	<u>16989550</u>	<u>1/21/2003</u>	<u>Cebu City</u>
<u>May Elizabeth S. Ybañez</u>	<u>09780697</u>	<u>1/15/2003</u>	<u>Catigbian, Bohol</u>
<u>Rogelio C. Baquerfo</u>	_____	_____	_____

Known to me and to me known to be the same persons who executed the foregoing instrument and acknowledged to me that the same is their free and voluntary act and deed and of the offices they represent.

This instrument consisting of 7 pages, including this page, refers to the Memorandum of Agreement among the DENR-Region 7, ECOGOV and the Municipality of Tudela (Camotes), Cebu and has been signed by the parties and their witnesses.

IN WITNESS WHEREOF, I hereby affix my signature and notarial seal on the date and at the place above written.

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Page No. 22 :  
Book No. 38 :  
Series of 2003

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AT CEBU CITY



# Annex 2

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- 2A - Municipal Water Delineation Process
- 2B - Documentation Form
- 2C - FGD Facilitators Guide Fisheries and Socio-Economic Assessment
- 2D - Fisheries and Socio-Economic Assessment Questionnaire Household Survey
- 2E - CRM Plan Outline
- 2F - Economic Assessment of Coastal Zoning
- 2G - Sample Financing Plan
- 2H1 - CRM Ordinance Template
- 2H2 - Guide to Policy Analysis
- 2I - IEC Communications Plan Matrix



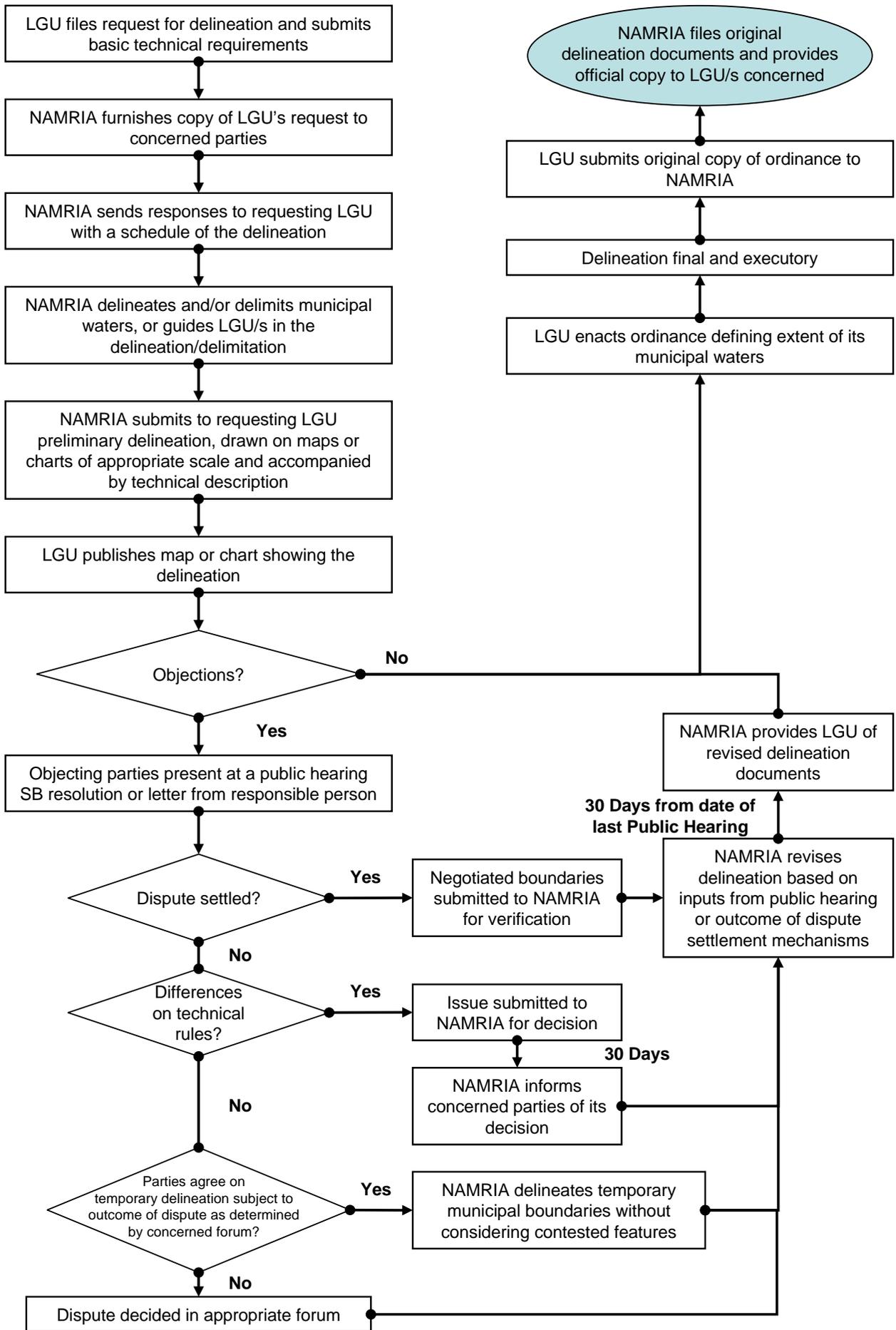
# Annex 2A

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- Municipal Water Delineation Process



## Annex 2A. The Municipal Water Delineation Process





# Annex 2B

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- Documentation Form

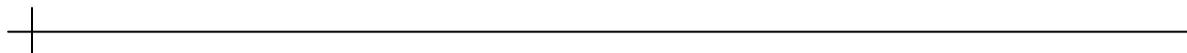


**ANNEX 2B**

<b>Field Validation of Coastal Terminal Points (CTPs)</b>					
Date		Participants	Name	Position	Signature
Localities Validated		→	1.		
Type of Equipment Used During Field Validation of Coordinates			2.		
			3.		
			4.		
			5.		

(Cluster B) Location of CTP	Source of Data 1		Field Verification			3 Jurisdictional Issues	Status of agreements/ negotiations	Signature of witness
	NAMRIA/ DENR	Mun/Province	2 MARKER	Longitude	Latitude			
→ Dinas/San Pablo								
→ San Pablo/ Dumalinao								
→ Dumalinao/ Pagadian City								
<b>Notes:</b> 1 – municipality proclamation records, DENR cadastral records, etc. 2 – describe if there is “mojon”, or natural landmark (e.g., creek, etc.) 3 – historical practice (e.g., registration of voters, seek public services, payment of taxes, etc.)						<b>Clusters:</b> A: Pitogo/Tabina/Dimataling/Dinas B: Dinas/San Pablo/Dumalinao/Pagadian C: Pagadian/Labangan/Tukuran/Sultan Naga Dimaporo		

**Sample CTP Validation Worksheet: Dinas/San Pablo/Dumalinao/Pagadian CTPs**





# Annex 2C

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- FGD Facilitators Guide  
Fisheries and Socio-Economic  
Assessment



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# **Focus Group Discussion Guide**

## **Fisheries and Socio-Economic Assessment**

### **Participatory Coastal Resource Assessment**

#### **I. Fisheries Assessment**

##### **A. Description**

The fisheries focus group discussion should be composed of selected group of community members (e.g. fishers) designed to generate information and discussion on a particular set of topics. In this particular case the focus is to generate information and perceptions of local fishers on the status of coastal fisheries and other fishery practices. During the focused group discussion, the following participatory methods will be utilized to generate consensus and synthesized information on various aspects of the local fishery.

##### **B. Tools**

###### **1. Seasonal Calendar**

This is a tool for documenting regular cyclical periods and significant events occurring during a year that has influence on the lifestyle of the community. It provides general picture of important environmental, cultural and socio-economic periods throughout the year. It identifies particular periods of high work activity and/or income vulnerability

###### **2. Gear inventory and mapping**

This a tool to provide spatial complementation to the major fishing activities/gear used identified in the seasonal calendar

##### **E Objectives**

1. To determine important and regular periods during the course of a year that influence the fishery related activities of coastal communities;
2. To determine specific fishery activities and resources during different times of the year; and
3. To determine where the major fishing gears are commonly used and their relative abundance

##### **E Sampling design**

At least three groups of fishers (10-15 persons) from different fishing villages in the municipality

**E Materials Needed:**

- craft paper
- tape or push pins
- pentel pens
- different colored pens, crayons
- base map
- notebook

**E Procedure**

1. Prepare for the activity by having participants draw an outline of the local annual calendar on craft paper.

Activity/Variable to be Considered	J	F	M	A	M	Jn	Jy	A	S	O	N	D
Weather												

2. Ask the participants to identify important environmental, cultural, or socio-economic periods in a year that influence their fishery -related activities (e.g. rainy season(s), cultural festivals, etc.).

3. Ask the group to list the different fishing activities ( including different fishing gears/practices, culture, processing, trading of fishery products) and indicate in the calendar which months of the year these activities take place. For specific fishing gears/activities, indicate the major fishery resources involved ( e.g. basnig – siganid fry; etc.)

4. On a base map indicate where the different major fishing gears are used

5. Use symbols or drawings to add interest to the activity. Let the group decide what symbols they want to use.

6. After the activity, transfer the output from craft paper to a bond paper. Leave the original with the community.

7. Ask the group to list down the main fishing gear/ practices used in the area in the first column; then on the 2nd column have them identify the number of HH engaged in using each fishing gear; on the 3rd column have them make an estimate of income/ day for each fishing gear; and on the 4th column the estimate of expenses/ day for each fishing gear.

Fishing Gears	No. of HH	Estimated Income/Day	Estimated Expenses/Day

---

## **E Expected Outputs**

Expected outputs are the following:

- seasonal calendar of fishery related events, activities and resources
- map of fishing gear

## **3. Trend Line**

This graphically illustrates the community's perception of certain events and changes. This will focus on changes in fisheries catch, income and coastal resource availability.

## **E Objectives**

The main objective of this tool is to document perception of changes in resource status and infer a particular pattern or trend over time. This can focus on specific activities derived from the seasonal calendar.

## **E Sampling Design**

Ideal participants are long-time fishers.

## **E Materials Needed**

- craft paper
- tape or push pins
- pentel pens
- different colored pens, crayons
- base map
- notebook

## **E Procedure**

Steps necessary for coming-up with a trend line are:

1. Use a sample graph to explain the concept of trends and trend lines.
2. Ask the group to plot the average daily catch rates for major fishing gears or major species in the past 20, 10, 5 years and at present. If necessary use a separate graph per major species/gear.
3. Ask them to indicate the corresponding average price (to indicate income from fishing) of their catch per kilo during those periods.
4. Probe for explanations for changes. This helps identify underlying problems. Find out what solutions have been tried or proposed, its advantages and disadvantages.
5. Formulate preliminary recommendations to address the problem or perceived opportunities.

---

**E Expected Output**

Trend in fish catch and fisher income.

**4. Commodity Flow Discussion**

**E Objective**

The main objective of the commodity flow discussion is to gather preliminary information on local market structure and marketing issues that need intervention.

**E Sampling Design**

At least three groups of fishers (10-15 persons) from different fishing villages in the municipality

**E Materials Needed**

Provide a table presented below on a manila paper

**E Procedure**

1. Describe the marketing channels of the sector.
2. What are the problems encountered in the distribution of the products?
3. What are the proposed solutions to marketing problems?

Marketing Channel	Problems Encountered	Proposed Solutions

2. What are the sources of financing for the sector?
3. What are the forms and access to credit available to the sector?

Source of Financing	Forms of Credit	Access to Credit

**E Expected Output**

Commodity flow of fish products

---

## 5. Market Survey

This identifies the economically important marine resources. It helps in generating basic information on the kind, quantity, size and value of resources caught and sold in the market and estimates the monetary value of marine resources. Output of the market survey is important for the communities to have appreciation on the economic contribution of marine resources.

### E Objectives

The objectives of the market survey are:

1. To generate basic information on the kind, quantity and value of fishery resources in the area;
2. To obtain an estimate of the fisher's income and revenue derived by the municipal government from coastal resources.

### E Procedure

#### *Landing Sites*

1. From a base map, identify and locate the key landing sites where coastal resources are landed after capture. List the types and the number of units of gears operating in the area.
2. Visit major sites where the resources are collected and sold, i.e. landing sites in the beach, local market, village outlet, trader's collection point or a retail outlet.
3. In each landing site, find out the local units of measure for sale of the catch, e.g. kilos, baskets, bins, etc.
4. Determine the prevailing price for each variety of landed resource by asking the fishers, auctioneers, traders, vendors, commission agents, etc. in the landing sites.
5. Find out the total number of units (e.g. in kilos) for each species caught in the area by conducting interviews with the fishers or through direct observations.
6. Compute for the total volume and prices of coastal resources sold from all landing sites.

Locality:			
Date:			
Species	Price per Kg (P)	Total Volume (Kg)	Total Value (P)



**Market**

1. Find out from the vendors the species, quantity and selling price of each resource being sold.
2. Compute for the total volume and prices sold in the market.
3. Using the selling prices in the market, compute for:
  - a. Average costs for fishing and food consumption of the fishers
  - b. Average income per fisher
  - c. Total income by the municipal government derived from fisheries products
  - d. Total costs for shipment to other markets

*Note:* The variance in the volume of the landed catch with that of the volume sold in the market can be assumed as transported outside the municipality. However, this estimate should be adjusted by taking into consideration the amount of catch for home consumption by the fisher since this does not reach the market.

**6. User Fees**

**E Objectives**

The objectives of the discussion on user fees are the following:

- To identify user fees being charged in the fishery sector;
- To identify responsible groups/agencies in the collection of user fees; and
- To identify other possible user fees which may be charged

**E Procedure**

Ask the following questions to the participants:

1. What are the existing policies being implemented regarding user fees?
2. What institutions/agencies are responsible in implementing these policies on user fees?
3. What fees are you obliged to pay?
  - a. Commercial
  - b. Municipal
4. How much are these fees?
5. To whom/what agency do you pay these fees?
6. How often are these fees paid?

User Fee	Amount	Agency/Institution Responsible for Collecting	Frequency of Paying



- 7. What is the role of LGUs on the collection of these fees? Kindly enumerate.
  - 8. Has the LGU explained the rationale in the collection of these fees?
  - 9. What are the advantages and disadvantages in the collection of the above enumerated fees.
- For the disadvantages, kindly give some proposed solutions.

User Fees	Advantages	Disadvantages

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## II. Socio-Economic Assessment

### A. Objectives

The objectives of the socio-economic assessment FGD are the following:

1. To identify existing other livelihood activities, number of households engaged in these other livelihood activities, income earned from and expenses incurred for these other livelihood activities, marketing channels involved as well as the threats and opportunities faced by these other livelihood activities; and
2. To identify programs which might be prioritized in consideration of threats and opportunities faced by these other livelihood activities.

### B. Procedure

1. Ask the participants the following questions and have them write their answers on a craft using the format below:

- What are the other sources of livelihood present in the area?
- How many households are engaged in these livelihood activities?
- Where are these livelihood activities located?
- How much are the estimated incomes for these livelihood activities.
- What are the expense items in undertaking these livelihood activities?
- What are the prevailing marketing systems for these existing livelihood activities?
- What are the threats and opportunities to these livelihood activities?

Livelihood	No. of Households	Specific Area	Estimated Income	Expense Items	Channel of Products	Threats	Opportunities

2. Ask the participants the following questions and have them write their answers on a craft using the format below:

- What are the financing systems being implemented in the area?
- What are the existing and proposed supporting industries to existing livelihood activities?

Livelihood	Financing	Supporting Industries	
		Existing	Proposed

---

4. Enumerate other issues which are of relative importance in the area and possible solutions to these issues.

Other Issues	Proposed Solutions

5. Are there any proposed or existing projects or programs in the area? What are the impacts of these proposed projects/programs to income, employment, trade and commerce and coastal resources? For this section, prioritization should be done as it is expected that participants will suggest as many projects that they can think of.

Proposed Projects/Programs	Impacts			
	Income	Employment	Commerce	Coastal Resources
1.				
2.				
3.				
4.				
5.				



# Annex 2D

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- Fisheries and Socio-Economic Assessment Questionnaire Household Survey

Questionnaire No. \_\_\_\_\_

# Fisheries and Socio-Economics Assessment Questionnaire

## Household Survey

Date: \_\_\_\_\_

Place of Interview: \_\_\_\_\_

Time started: \_\_\_\_\_

Barangay: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Time ended: \_\_\_\_\_

Remarks:

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## I. Fisheries

1. Is fishing your main or one of your livelihood activities? \_\_\_\_ Yes \_\_\_\_ No. If no, please go to question # 19. If yes, go to question #2.
2. Where do you fish? \_\_\_\_\_
3. What type of vessel (banca) do you use? \_\_\_\_ Motorized \_\_\_\_\_ Non - motorized \_\_\_\_\_  
No banca
4. What fishing gear/s do you use?
5. How often do you fish a day?
6. How many hours do you fish a day? (This is a compound question, must be split)
7. What are the species of fish per fishing gear do you usually catch/day?
8. How many kilos of these species of fish do you catch per day?
9. From the total number of kilos of fish caught/day, how many kilos are for family/household consumption?
10. How many kilos from your total fish catch are for selling?
11. How much do you sell fish /species?

Table#1:

Fishing Gear Used	Frequency of Fishing/No. of Hours Per Day	Species of fish/fishing gear	No. of kilos of fish caught/day	No. of kilos of fish for HH consumption	No. of kilos of fish sold	Selling price of fish/specie
1.						
2.						
3.						
4.						
5.						

12. How much is your estimated gross income per day from fishing?
13. How much are your estimated fishing expenses per day?
14. How much is your estimated family expenditure/day?
15. How much is your estimated net income/day from fishing?

Table #2

Estimated Gross Income per Day	Estimated Livelihood Expenses per Day	Estimated Family Expenditure per Day	Estimated Net Income per Day

16. Have there been significant changes in the species and volume of fish catch? If yes, go to question # 15 . If no, go to question #14. .
17. If no, why do you think have there not been changes in the species and volume of fish catch?

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18. If yes, what are these changes?

- \_\_\_ Decrease in the number of species of fish caught.
- \_\_\_ Increase in the number of species of fish caught.
- \_\_\_ Decrease in the quantity of fish catch.
- \_\_\_ Increase in the quantity of fish catch.
- \_\_\_ Others, which \_\_\_\_\_

19. What are the reasons for the changes mentioned above? Choose among the statements below. More than one answer is possible.

- \_\_\_ Use of illegal fishing practices
- \_\_\_ Intrusion of commercial fishermen in municipal fishing waters
- \_\_\_ Increase in number of fishermen
- \_\_\_ Lack of fishery law enforcement
- \_\_\_ Others, which \_\_\_\_\_

20. What are your proposed solutions to the problems above?

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21. What are the major problems of fishermen in the area?

- \_\_\_ Absence of alternative livelihoods
- \_\_\_ Lack of financial support from the local government
- \_\_\_ Lack of fishing ordinances
- \_\_\_ Others, which \_\_\_\_\_

22. Have you seen rare marine species such as “dugong,” whales, “butanding,” dolphins, sea turtles and other species in the area? \_\_\_ yes \_\_\_no. If yes, go to question #21.

23. What specie have you seen?

24. Where have you seen it?

25. When was the last time you saw it?

Table #3:

Species	Place of Sighting	Period of Sighting

## II. Other Livelihood Activities, Products and Commodity Flow

26. What are your main livelihood activities besides fishing? Kindly enumerate all.

27. What are your products or outputs? Kindly enumerate all.

28. How much is your estimated gross income per day/harvest for products sold in the market?

29. How much are your estimated livelihood expenses per day/harvest for products sold in the market?
30. How much is your estimated family expenditure/day? (This is a repetition of Questions above)
31. How much is your estimated net income per day/harvest for products sold in the market?

**Note: Income is measured depending on the type of livelihood. Fishing income is usually measured per day while income from agriculture is per harvest. Output may be a good or service.**

Table #4:

Main Livelihood	Outputs	Estimated Gross Income/Day or Income/Harvest	Estimated Livelihood Expenditure/Day or Expenditure/Harvest	Estimated Family Expenditure/Day	Estimated Net Income/Day or Net Income/Harvest
1.					
2.					
3.					
4.					
5.					

32. What are your products from your main livelihood/s?
33. Enumerate target markets of your products/channel of products.

Table #5:

Outputs from Main Livelihood/s	Target Markets of Outputs/Channel of Products
1.	
2.	
3.	
4.	
5.	

34. What are the problems you encounter in your main livelihood activities and what are your proposed solutions to these?

Table #3:

Problems Encountered	Proposed Solutions

THANK YOU VERY MUCH!!!



# Annex 2E

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- CRM Plan Outline



## FOR FURTHER DISCUSSION

### Notes on EcoGov CRM Plan Outline

(revised from Tabina, ZDS template)

### Suggested minimum contents in italics

## TABLE OF CONTENTS

		Primary Sources of Inputs
<b>Cover Page</b>		
<b>Foreword</b>		
<b>Acknowledgement</b>		
<b>Executive Summary</b>	<i>Should highlight guiding principles, key features and targets aside from just describing content of each chapter</i> <i>Recommendations, key decision makers, who will use plan, how much will implementation cost and financing strategy</i>	
<b>CHAPTER I</b>	<b>INTRODUCTION</b>	
	<b>Rationale</b>	
	<ul style="list-style-type: none"><li>- <i>puts plan document into proper context in relation to Municipality's initiatives in improving local governance of coastal resources</i></li><li>- <i>should harmonize and/or amend or build on existing plan(s) where appropriate</i></li></ul>	Documentation of key CRM planning activities and overall process (including dates)
	<b>Planning Objectives</b>	
	<ul style="list-style-type: none"><li>- <i>list specific objectives</i></li></ul>	Results of consultations with TWG and municipal-wide consultation on zoning
	<b>Methodology</b>	
	<ul style="list-style-type: none"><li>- <i>briefly describes nature of conduct of key activities( i.e participatory, building consensus at barangay up to municipal - wide), participants</i></li></ul>	
	<b>Scope and Duration of the Plan</b>	
	<ul style="list-style-type: none"><li>- <i>timeframe, brief overview of implementation and M&amp;E process</i></li></ul>	

## CHAPTER II

### MUNICIPAL PROFILE

Brief History  
Geo-political Profile  
Climate  
Population  
Coastal and Fishery Resources  
Resource Users  
*-Fishing Population and other coastal resource users*

Income from Coastal Resource Use  
*Fishing and other coastal resource uses*

Municipal Coastal and Fishery Management  
*-existing policies, management interventions  
-past LGU and other institution investment in CRM*

PCRA Report

Municipal Socio-Economic Profile

Other MGU documents  
( i.e. reviewed for situational analysis)

Municipal Ordinances

Output of Policy support workshop

## CHAPTER III

### PROBLEMS, ISSUES AND OPPORTUNITIES

*Should be based on local situational analysis, self-assessment on status of governance and CRM (benchmark) and actual data gathered during consultations*  
*- describe each key issue concisely*

(e.g. Tabina, ZDS)

Critical Coastal Habitats  
Fish Yields  
Institutional Support Systems  
Fishery law Enforcement  
Socio-economic

Situational Analysis Report

Results of CRM and Governance Assessment workshop

PCRA report

Barangay and municipal wide consultation

## CHAPTER IV

### VISION, MISSION AND GOAL STATEMENTS

Vision  
Mission  
Goals

*Should state targets milestones : 3, 5, 8, 10 years*

Results of VMG exercise during municipal-wide consensus workshop on coastal zoning

Expected Outputs/  
Outcomes as indicated in

## CHAPTER V

### GENERAL STRATEGIES FOR THE MANAGEMENT AND DEVELOPMENT OF COASTAL RESOURCES

*Should provide the general policies and framework of the plan*

#### Statement of General Principles and Policies

- *sustainability of resource, equitable benefits, shared responsibilities, good governance principles (TAP)*

timetable or pertinent appendices in plan for each zone

Results of CRM Orientation and Assessment Workshop

#### Jurisdiction of Municipal Waters

- *as provided for by RA 8550, indicated local mandated office(s) for CRM as appropriate ( e.g. Municipal CRM Office, FARMC, SB)*

Results of consultations with TWG and municipal-wide consultation on zoning

#### Users of Coastal and Municipal Water Resources

- *to include granting of exclusive fishery privileges in municipal waters and registry of municipal fishers*

Output of policy support workshop and legal training and orientation

#### Zonation of the Coastal Areas and Municipal Waters

- *technical description and coordinates for each zone as appropriate*

( e.g. Tabina, ZDS)

- Marine Protected Area
- Aquaculture Zone
- Trade and Navigational Zone
- Recreational Zone
- Multiple Fishery Zone
- Commercial Fishing Zone
- Settlement and Agro-forestry Zone

Results of Municipal wide consultation on zonation ( i.e. agreed upon resource use allocation framework for the plan)

#### Overall Investment Plan

*Should indicate whether to be developed through private, public or co-management investment schemes*

Outputs of economic assessment workshop

## CHAPTER VI

### MANAGEMENT PROGRAMS AND STRATEGIES PER ZONE

*For each zone indicate specific policies and strategies as appropriate*

*More detailed and focused for MPA and fishery zones*

*Indicate interaction among zones if any (e.g. MPA and recreational /tourism)*

#### **(Sample Zones - Tabina)**

Marine Protected Area

*Policies and Strategic Management Activities*

*- ( refer to matrix of strategies and activities)*

*Regulation, Enforcement, Monitoring and Evaluation*

*Legislative Interventions*

*Institutional Arrangements*

*Investment and Financial Strategy*

*- based on results of economic assessment of zoning options workshop per zone ( refer to matrix)*

*IEC and other support activities ( e.g. capability building)*

Aquaculture Zone

*( see list in MPA zone)*

Commercial and Multiple Fishery Zone

*( see list in MPA zone)*

Trade and Navigational Zone

*( see list in MPA zone)*

Recreational Zone

*( see list in MPA zone)*

Settlement and Agro-forestry Zone

*( see list in MPA zone)*

Technical Recommendations in PCRA report

Results of Barangay consultation and zoning workshop

Results of Plan formulation Committee meetings and deliberations (including priority issues and strategies per zone)

Outputs of economic assessment, policy support, IEC, fisheries decision support workshops per zone

## CHAPTER VII

### IMPLEMENTATION ARRANGEMENTS

*Should describe overall implementation mechanisms*

*Should refer to timeline of activities and overall targets*

### **Indicative Schedule of Activities**

- *to reflect targets per zone over 10 years*
- *explicitly state key milestones/targets and timeframe per zones*  
(refer to Gantt chart)

Gantt Chart of Key activities and milestones for the zones over 10 year period

### **Municipal CRM and Coordination Office** **- institutional arrangements and mechanisms as agreed upon by local CRM plan formulation group**

- e.g. Creation of a Municipal Coastal Resource Management Office (Tabina , ZDS)
- Functions of the MCRMO
  - Composition of the MCRMO
  - Qualification of the Key Personnel
  - Functions, Duties, and Responsibilities of MCRMO Personnel
- e.g. Meetings of the CRM-Technical Advisory Group

Integrated results of Plan formulation Committee meetings and deliberations and outputs of economic assessment, policy support, IEC, fisheries decision support workshops pertaining to overall implementation of plan

### **Capability Building**

#### **IEC , M&E strategy and mechanisms**

- *clarify roles and responsibilities*
- *key performance indicators (progress in terms of plan implementation in relation to milestone targets, cost effectiveness, governance TAP mechanisms)*

#### **Overall Budgetary Requirements**

*Based on aggregate cost and revenues analysis across management zones from economic assessment of zoning options workshop and investment strategy/ revenue generation*

- **Costs**
- **Sources of Funds**
- **Cost revenue analysis**

#### **Legislative Support**

- *reiterate overall policy and legislative support strategy for plan implementation*  
e.g. SB resolution, municipal ordinance(s)

#### **Notes:**

*Chapter V and VII embodies the overall framework and implementation strategy and mechanisms which could be the basis of a municipal ordinance for formation and establishment of zones, creation of office (including budget allocation for office), first year budget, allocation of user fees for CRM activities.*



# Annex 2F

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- Economic Assessment of Coastal Zoning Options



**Coastal Resource Management Module**  
**Sub-Module 1b: Resource Assessment and**  
**Formulation of CRM Plan**

**Economic Assessment of Coastal Zoning Options**

Once proposed changes, zones or investment projects are identified, the next step in the process is evaluating various options for coastal resources management. Analysts have a number of tools to use in analyzing options for certain geographic areas. The desired level of analysis will determine which tools to use. Three most commonly used tools: (a) SWOT Analysis, (b) Decision Tree Analysis, and (c) Multi-criteria Decision Analysis are described below:

**SWOT Analysis**

The SWOT Analysis, which stands for Strengths-Weaknesses-Opportunities-Threats Analysis is an analytical and strategic planning tool adapted from market strategic planning but found to be useful for participatory decision-making. It is a planning tool and based on sound knowledge of the present situation and trends. **Strength** is defined as any internal asset of know-how, technology, motivation and entrepreneurial spirit, finance, business links, etc. which can help to exploit opportunities and to fight off threats. **Weakness** is an internal condition or any internal deficit which endangers the implementation or hampers the exploitation of opportunities. **Opportunity** is any external circumstance or characteristic which favors the implementation of project proposal or management strategy. **Threat** is a challenge of an unfavorable trend or of any external circumstance which will unfavorably influence implementation of management strategies or project proposals. Strengths and Weaknesses are indicators of internal situations while Opportunities and Threats are indicators of the external environment. SWs and OTs result in a provisional management strategy or project proposal and a priority ranking of actions to be undertaken on the short, medium and long terms to attain the development goal.

The results of assessments (PCRA/Socio-Economics) compose a tentative listing of goals or projects oriented towards meeting the demands of the target groups while taking into account the existing external potential. The SWOT analysis is undertaken by a limited number of groups concentrating on main themes, sectors or barangays. The groups are composed of local representatives of community. The main task of groups is to identify priority actions, to refine or eventually to modify the plans for their specific community and to propose a strategy to attain the goal within a given time limit.

In CRM options analysis the modified SWOT is carried out by grouping the (SWOT) elements in a matrix. In a first step and in an effort to further filter out priorities, each group selects a set of maximum three of each of the SWOTs with the aim to retain the most important elements. Subsequently for each possible and realistic combination of an internal element (SW) with any of the retained external elements (OT) an appropriate focus and action fields are defined. Finally the most appropriate SWOT combinations are selected to attain the tentative project proposal or management strategy. The selected combinations help to project proposals or management strategy per zone.

The aim of the integrated SWOT seminar is to merge through discussion and negotiation the viewpoints and results of the groups (or barangays). This is achieved in mixed discussion groups composed of members of each of the groups (or barangays). The exchange of ideas and approaches of people from different sectors, competence and interest leads to an integrated project proposal or proposed management plan. Finally the plans, strategies and management strategies retained by the discussion groups are presented, negotiated and, if possible, accepted in a plenary session, using the so-called Delphi analysis. This result is the basis for the final plan formulation, the selection of priority projects and the elaboration of an action plan.

### **Decision Tree Analysis**

Decision tree analysis is an analytical tool commonly used in situations where the future outcome of decisions is uncertain. In the context of coastal resources management planning the DTA consists of four steps: (a) structuring the problem as a tree in which the end nodes of the branches are alternatives options or payoffs associated with a particular path (scenario) along the tree, [Optional step: (b) assigning subjective probabilities to events represented on the tree], (c) assigning payoffs or costs for consequences (peso or utility value associated with a particular scenario), and (d) selecting course(s) of action based on analyses (e.g., rolling back of the tree, sensitivity analyses, and optionally, Monte Carlo simulations).

A decision tree has two types of nodes: decision nodes (marked D), meaning management has control over the course of action, and chance nodes (marked C), where the decision maker has no control. At the end of each path of the decision tree, the consequences of the several courses of action are indicated. All paths are compared with the current scenario where there are no management interventions.

### **Multi-Criteria Decision Analysis**

MCA techniques may be used to identify a single most preferred option, to rank options, to short-list a limited number of options for subsequent detailed appraisal, or simply to distinguish acceptable from unacceptable possibilities. It accounts for different objectives of stakeholders involved and put weights on this objectives through a consensus building process. The steps to apply MCA to coastal resources management planning include the following:

- Identifying objectives;
- Identifying options for achieving the objectives;
- Identifying the criteria to be used to compare the options;
- Analysis of the options;
- Making choices; and
- Feedback.

Objectives should be specific, measurable, agreed, realistic and time-dependent.

Once the objectives are defined, the next stage is to identify options that may contribute to the achievement of these objectives.

The next stage is to decide on how to compare different options' contribution to meeting the objectives. This requires the selection of criteria to reflect performance in

meeting the objectives. Each criterion must be measurable, in the sense that it must be possible to assess, at least in a qualitative sense, how well a particular option is expected to perform in relation to the criterion.

The next stage in the process is analysis. Common forms of analysis in government are financial analysis, cost effectiveness analysis and, in some areas, cost benefit analysis, all of which rely wholly or very largely on monetary valuations.

The final stage of the decision making process is the actual choice of option. This needs to be seen as a separate stage because none of the techniques available, whether they be financial analysis, cost-benefit analysis, or the different forms of multi-criteria analysis, can incorporate into the formal analysis every judgement, for example about future changes in the state of the world, or income distribution, or political impact, which the ultimate decision needs to take into account. The final decision may sometimes be taken by officials depending on its political content.

Even at this stage it may be decided that a further option or options should be considered and the analysis revisited.

Good decision making requires a continuous reassessment of choices made. Individual decision makers may learn from their own mistakes, but it is important that lessons be learned in a more formal and systematic way, and communicated to others, so that they can inform future decisions.

**Objectives:**

1. Provide participants with a framework for decision-making on coastal resources management zoning arrangements;
2. Provide participants an overview of decision-making process with multiple stakeholders and decision criteria;
3. Introduce participants to a process of making a decision to identify best management options using financial, economic and other criteria; and
4. Orient participants to the economics approach to identifying and evaluating coastal resource management options.

**Expected Output:**

1. Localized framework for decision-making for coastal resources management
2. Identified social, political, environmental, and economic criteria for decision making
3. Identified management options for various coastal resources management,
4. Identified best management option based on established multiple stakeholder criteria.

**Participants:** LSPs, LGU (i.e. MOA, SB for Env/Fish., MPDC, Budget Officer, ENRO, LCE), FARMC, PO and other stakeholders.

**Procedure for Options Analysis in Coastal Zoning**

Analysis of options comes after determination and consensus building on coastal zones. Activities in each zone become the venue for undertaking options analysis. Once stakeholders or decision-makers have identified specific activities per zone, the options

analysis will focus on how these activities will be undertaken. Specific phases of the zoning options analysis are:

#### Phase 1: Identification of Options by Zone

Participants in the workshop will be assigned groups (divided into zones) to identify activities. "Activities" refer to management implementing strategies toward establishment of the zone. The group begins with the preferred option for the zone. Alternative strategies will also be identified and characterized. This may be accomplished by developing a simple Decision Tree Model of the step by step process of implementing the strategy. The output of this phase is a list of activities and alternatives.

A simplified approach for this phase, if identification of alternatives is not feasible, is to identify only the preferred activities. These activities must be based on the issues identified during series of consultations with barangays and the whole municipality, and are listed by zones. An outline of major categories of activities help guide in the identification of activities.

#### Phase 2: Evaluating Cost and Returns/Revenues by Options

The next step of the process focuses on identifying cost, returns, and revenues for the management of the zone. Mechanisms for generating revenue are identified in this process. These mechanisms may include incentive systems, user charges, and market-based instruments. Management cost/revenue refers to LGU costs/revenue. Income due to other stakeholders may be identified. The output of this phase includes management costs, revenues, costs and revenue centers. Management cost may be disaggregated into investment, operating costs. Operating cost is further disaggregated to show labor costs, supplies and materials and other expenses. This output of this phase are implementing strategies for each zone with summary of costs, revenue, investment options, incentive systems and user charges proposals.

#### Phase 3: Estimating Total Cost and Returns/Revenue for Overall Zoning Arrangements

This phase builds from the results of Phase 2. All zone plans are aggregated to provide an overall cost and revenue picture of the overall zoning arrangement. The participants review the overall outcome and deliberate on the results. Deliberations will include developing alternative zoning arrangement and their corresponding cost, revenue implications. Sources of initial investments and are identified i.e. IRA, user charges, fees and licenses. The output of this phase includes Alternative zoning arrangement, and accompanying funding requirements and their sources.

#### Phase 4: Evaluating Alternative Zoning Arrangements based on Economic Criteria(on)

If the opportunity or need arises, society costs and benefits of zoning arrangements will be evaluated. This is an extension of the financial analysis and will require identifying who are the gainers and losers for the arrangement. This output of this phase are costs and benefits estimates of the overall zoning arrangement.

Alternatively, the LGU can identify cost and revenue centers, sources of financing for these centers, and define alternatives activities. These changes will reflect changes in cost and revenue thus, and overall gains and losses.

## Phase 5: Evaluating the Sensitivity of the Overall Zoning Arrangement to Various Risk Factors

This is an optional phase that follows from Phase 4 to identify potential gains and losses to various stakeholders in case of various controllable and uncontrollable factors. The essence of this phase is to build various scenarios to evaluate the robustness of the zoning arrangement.

Attachment A outlines the training workshop for this zoning arrangement.

**Proposed Outline of Training Workshop for the Options Analysis**

Day/Time	Activity	Coverage	Methodology	Responsible Person	Logistics and Materials	Output
<b>Day 1 , Socio-Economic Framework for Coastal Zoning</b>						
9:00 AM	Orientation on the CRM Planning Process and Plan Formulation	Formulation of the draft CRM Plan; Presentation of the process flow for CRM Planning	Presentation, and orientation	National/Regional TA	Handouts: Formulation of the Draft CRM Plan, Process flow chart, Inventory of things to do	Schedule of discussion for the writing of the CRM Plan
10:00 AM	Presentation of Decision Making and Socio-Economic Framework	Presentation of socio-economic framework for options analysis; Review of results of Socio-Economic Assessment; Review of the Zoning Options; Listing of options	Presentation, group discussion, and deliberations of various options	TWG, National/Regional TA	Large map of zoning proposals, socio-economic assessment report, charts, clean writing papers, marker pens, writing boards	(1) Listing of options by zones, (2) Listing of issues related to various options, (3) Prioritization of options, (4) Recommendations to implement the options
1:00 PM	Identification of Activities/Cost and returns/benefits assessment of options	Listing of activities per zone/Identification of costs (including LGU management costs and benefits of activities related to options; Quantification of identified costs and benefits	Group deliberations/discussion; Sub-group workshop	National TA, Assisting professionals	Writing papers, charts, writing pens, calculators, notepads; Listing of potential benefits (will be provided by the National TA)	(1) Listing of activities, (b) listing of cost and benefits items by activities, (c ) estimates of costs and benefits; (d) identification of cost and revenue centers, (e) listing of various cost components

Day/Time	Activity	Coverage	Methodology	Responsible Person	Logistics and Materials	Output
3:00 PM	Comparing Options	Calculating net economic returns/benefits of activities; Identification of gainers and losers	Sub-group workshop; Plenary discussion of management costs, returns, and benefits	National TA, Assisting professionals	Large map of zones, writing pens and papers, pen markers, clean wide papers	(1) Ranking of net economic returns/benefits of various activities in each zone, (b) overall economic returns/benefits from zoning options, (c) Costs and revenues for the LGU

## **Day 2 , Using Non-Economic Criteria to Evaluate Options**

8:00 AM	Evaluation strategy and criteria for comparing zone options	Identifying other non-economic evaluative criteria for various options	Deliberations of impacts of various legal, social, and political, and ecological issues	National TA, Assisting professionals	Listing of impacts of various legal, social, political, ecological or environmental issues	(1) Alternative ranking of various options based on non-economic criteria, (2) Priority with high potential for implementation
11:00 AM	Synthesis of the economic and non-economic evaluation of options	Ranking of options, summaries economic and non-economic evaluation, and prioritizing activities	Plenary discussion, by barangay/ sector	National TA, Assisting professionals	List of recommended options, zone map, marker pens, writing papers, boards	(1) Zone map with prioritized options
1:00 PM	Next steps	Assigning writing assignments to report results of the socio-economic options analysis per zone	Plenary discussion	CRM Regional Specialist or Assisting professionals	Outline of socio-economic assessment write up	Assignments and dates for completions of write up
2:30 PM	Closing Session	Synthesis of workshop results; Formal program	Plenary session	CRM Regional Specialist or Assisting professionals		

**Guide to the Identification of Activities for \_\_\_\_\_ Zone**

<b>Activities/Alternatives</b>	<b>Issues Considered</b>	<b>Potential Issues</b>
1 Regulation		
2 Site Development		
3 Organization and Management		
4 Income Generation and Livelihood		
5 Markets and Transport		
6 IEC		
7 Institutional Capability Building		
8 Law Enforcement		
9 Others		

Guide to Estimating Costs and Revenue, and Revenue Generating Mechanisms for \_\_\_\_\_ Zone

Activities	Cost Components			Revenue	Ways of Generating Revenue
	Investment	Operating	Others		
1 Regulation					
2 Site Development					
3 Organization and Management					
4 Income Generation and Livelihood					
5 Markets and Transport					
6 IEC					
7 Institutional Capability Building					
8 Law Enforcement					
9 Others					
<b>TOTAL COSTS/REVENUE</b>					

Sample Summary of Cost and Revenue for all zones

Activities	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
<b>Costs</b> 1 Regulation 2 Site Development 3 Organization and Management 4 Income Generation and Livelihood 5 Markets and Transport 6 IEC 7 Institutional Capability Building 8 Law Enforcement 9 Others							
<b>Revenue</b> 1 Regulation 2 Site Development 3 Organization and Management 4 Income Generation and Livelihood 5 Markets and Transport 6 IEC 7 Institutional Capability Building 8 Law Enforcement 9 Others							

Summary of Sources of Financing for All Zones

Activities	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
<b>Costs</b> 1 Regulation 2 Site Development 3 Organization and Management 4 Income Generation and Livelihood 5 Markets and Transport 6 IEC 7 Institutional Capability Building 8 Law Enforcement 9 Others							
<b>Revenue</b> 1 Regulation 2 Site Development 3 Organization and Management 4 Income Generation and Livelihood 5 Markets and Transport 6 IEC 7 Institutional Capability Building 8 Law Enforcement 9 Others							

Sample Details of Estimates of Costs and Sources of Funds Summary

Strategies/Activities	Location/ Area of implementation	Project life/ Duration of the activity	Investment cost	Annual Operating Cost	Responsible Unit/Office/ Agency	Source of fund	Remarks (Expected benefits derived after the end of activity)
<b>REGULATION</b>  Zonation of aquaculture zones. Aqua-culture activities must be installed/ put in appropriate/ suitable areas  Permits/ Clearances/ Ordinances for ACZ users Registration of municipal aquaculturists and survey of fishponds	Municipal-wide	2003  2003, 2004 2003, 2013	-	2,500  2,500	MCRMO, Treasurer's Office, Office of the Mayor	MLGU	
<b>SITE DEVELOPMENT</b>  Establishment of permanent floating markers to indicate boundaries  Establishment of zone markers ( Bouy & plotting of GC) Establishment of buffer zones for fishponds  GPS Plotted Location for every identified ACZ's. Purchase of Portable GPS	Abong-abong (5 has.)  Poblacion (5 has.) Sto. Domingo (5 has.)		127,700 35,900 35,900 20,000	-	MCRMO, FARMC, MAO	MLGU	Reduced resource use conflict
<b>ORGANIZATION AND MANAGEMENT</b>  Organize Barangay FARMC  Creation of ACZ Committee ACZ Management Plan Strengthening / Creation of FARMC / brgy. Community Organizing	Municipal wide		17,500  7,000 10,500	-	MCRMO, FARMC, MAO, DA-BFAR DA-BAR	MLGU	Improved enforcement and compliance

Strategies/Activities	Location/ Area of implementation	Project life/ Duration of the activity	Investment cost	Annual Operating Cost	Responsible Unit/Office/ Agency	Source of fund	Remarks (Expected benefits derived after the end of activity)
<b>INCOME GENERATION &amp; LIVELIHOOD</b> Zoning Permits Fees from ACZ Operators  Clearance Fees from Municipal Fishers Fish Dryer Operation Fishing Supply Operation Fish Cage Operation Crab Fattening Operation Marine Products Marketing Agar-agar plantation	Municipal wide		630,300 379,000  37,300 85,000 104,000 25,000	-		MLGU, PFDA, private investors	Income derived from violations, penalties, charges
<b>MARKET TRANSPORT</b> Storage and Marketing  Marketing Cooperatives Post Harvest Handling - Fish Car - Fishing Boat	Municipal wide		350,000   10,000 340,000	-		Private Sector	Maximized income from resource harvest
<b>IEC</b> Training on fish production in pens and cages; seaweed culture  Forum/ Symposium on Fisheries Regulations for aquaculture  Seminar on Preservation on Marine Habitat/Pollution control Advocacy	For aquaculture operations		14,000   14,000	-	MCRMO, FARMC, DA-BFAR, DENR	MLGU	Increased social, environmental and political awareness
<b>INSTITUTIONAL CAPABILITY BUILDING</b> BFARMC and ACZ Committee Seminar on Aqua-Culture Technology and Management	Municipal wide		7,000 7,000	-	MCRMO, FARMC, DA-BFAR	MLGU	Improved production capacity

Strategies/Activities	Location/ Area of implementation	Project life/ Duration of the activity	Investment cost	Annual Operating Cost	Responsible Unit/Office/ Agency	Source of fund	Remarks (Expected benefits derived after the end of activity)
<b>LAW ENFORCEMENT</b> Activate Bantay Dagat  Surveillance/ Patrolling Acquire Fast Sea Craft Incentives/ Honorarium for Collectors and Fish Wardens Law enforcement for aquaculture to monitor compliance with DENR Adm. Orders for the environment	Municipal wide		43,600 16,800	-	MCRMO, Composite FLET, PNP, FARMC		Law enforcement is required to control illegal fishing activities in the aquaculture and multiple fishing zones and to protect the fishermen and aquaculturists from pirates and extortionists
<b>TOTAL</b>			<b>1,190,100</b>	<b>2,500</b>			

# Annex 2G

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- Sample Financing Plan



**Table 1. Estimates of total costs by zone and category of costs for the 10 Year Plan, PhP '000**

FINANCE COMPONENTS	10-Year Total, P'000	Values in PhP'000									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Investment</b>	<b>4,978</b>	<b>1,220</b>	<b>726</b>	<b>1,044</b>	<b>785</b>	<b>153</b>	<b>319</b>	<b>333</b>	<b>172</b>	<b>146</b>	<b>81</b>
Fishing and Fish Landing Zones	1,595	580	60	100	230	60	255	250	10	50	
Marine Protected Zone	1,684	261	306	494	190	73	64	68	72	76	81
Port and Navigation Zone	445	135	90		165	20		15		20	
Tourism Zone and Mariculture	1,254	244	270	450	200				90		
<b>Operating Expenses</b>	<b>14,992</b>	<b>1,549</b>	<b>1,829</b>	<b>1,454</b>	<b>1,657</b>	<b>1,608</b>	<b>1,299</b>	<b>1,317</b>	<b>1,417</b>	<b>1,377</b>	<b>1,484</b>
Fishing and Fish Landing Zones	3,945	595	595	460	550	555	240	260	260	215	215
Marine Protected Zone	8,231	631	745	682	782	836	809	857	907	962	1,019
Port and Navigation Zone	1,995	235	203	203	191	208	191	191	191	191	191
Tourism Zone and Mariculture	821	88	286	109	134	9	59	9	59	9	59
<b>Total Cost</b>	<b>19,970</b>	<b>2,769</b>	<b>2,555</b>	<b>2,499</b>	<b>2,442</b>	<b>1,761</b>	<b>1,618</b>	<b>1,649</b>	<b>1,589</b>	<b>1,523</b>	<b>1,565</b>
Fishing and Fish Landing Zones	5,540	1,175	655	560	780	615	495	510	270	265	215
Marine Protected Zone	9,915	892	1,051	1,177	972	909	873	924	979	1,038	1,100
Port and Navigation Zone	2,440	370	293	203	356	228	191	206	191	211	191
Tourism Zone and Mariculture	2,075	332	556	559	334	9	59	9	149	9	59
<b>Total Costs Components</b>	<b>19,970</b>	<b>2,769</b>	<b>2,555</b>	<b>2,499</b>	<b>2,442</b>	<b>1,761</b>	<b>1,618</b>	<b>1,649</b>	<b>1,589</b>	<b>1,523</b>	<b>1,565</b>
Investment	4,978	1,220	726	1,044	785	153	319	333	172	146	81
MOE	14,992	1,549	1,829	1,454	1,657	1,608	1,299	1,317	1,417	1,377	1,484

**Table 2. Estimates of potential revenue from various zones for the 10-Year Plan Period, PhP '000**

REVENUE COMPONENTS	10-Year Total, P'000	Values in PhP'000									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Potential Total Revenue</b>	<b>56,637</b>	<b>1,969</b>	<b>2,152</b>	<b>4,445</b>	<b>4,319</b>	<b>5,285</b>	<b>5,926</b>	<b>7,068</b>	<b>7,337</b>	<b>8,762</b>	<b>9,374</b>
Fishing and Fish Landing Zones	4,959	345	470	518	518	518	518	518	518	518	518
Marine Protected Zone	33,119	231	239	2,448	2,299	3,225	3,233	4,345	4,582	5,972	6,545
Port and Navigation Zone	17,965	1,393	1,411	1,431	1,453	1,477	2,095	2,125	2,157	2,192	2,232
Tourism Zone and Mariculture	594		31	49	49	66	80	80	80	80	80
<b>Potential Net Revenue Before Financing</b>	<b>36,667</b>	<b>-800</b>	<b>-404</b>	<b>1,946</b>	<b>1,877</b>	<b>3,524</b>	<b>4,308</b>	<b>5,418</b>	<b>5,748</b>	<b>7,240</b>	<b>7,809</b>
Fishing and Fish Landing Zones	-581	-830	-195	-42	-262	-97	23	8	248	253	303
Marine Protected Zone	23,204	-661	-812	1,271	1,328	2,315	2,360	3,421	3,603	4,934	5,445
Port and Navigation Zone	15,525	1,023	1,118	1,228	1,097	1,249	1,904	1,919	1,966	1,981	2,041
Tourism Zone and Mariculture	-1,481	-332	-525	-510	-285	57	21	71	-69	71	21
<b>Cumulative Year End Net Revenue</b>	<b>-800</b>	<b>-1,204</b>	<b>742</b>	<b>2,619</b>	<b>6,143</b>	<b>10,452</b>	<b>15,870</b>	<b>21,618</b>	<b>28,858</b>	<b>36,667</b>	

**Table 3. Financing options for the 10-Year Plan, PhP '000**

FINANCE COMPONENTS	10-Year Total, P'000	Values in PhP '000									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Financing Sources</b>		<b>1,344</b>	<b>4,747</b>	<b>2,753</b>	<b>3,469</b>	<b>3,459</b>	<b>4,107</b>	<b>4,563</b>	<b>5,323</b>	<b>6,286</b>	<b>7,222</b>
<i><b>LGU Sources</b></i>											
Allocation from IRA (Development Fund)	32%	1,344	1,402	1,462	1,525	1,591	1,660	1,731	1,806	1,884	1,965
Allocation from LGU Revenue from Previous Year	60.0%		1,181	1,291	2,667	2,591	3,171	3,556	4,241	4,402	5,257
<i><b>External Financing</b></i>											
Grants and Donations											
Loan for Infra, Vehicles, Equip, etc, % Total Cost	80%		2,163		-723	-723	-723	-723	-723		
Municipal Bonds											
Total Cost of Port and Navigation, % Zone Cost	0%										
Annual Interest Payment for PNZ Bonds											
Total Cost of Fishing and Fish Landing, % Zone	0%										
Annual Interest payments for FFLZ Bonds											
<i><b>Government Share from Private Investments</b></i>											
Hotels											
Resorts											
MPA Tourism											
Others											
<b>Total Cost for LGU Funded Components</b>	<b>15,861</b>	2,119	1,946	1,613	1,698	1,398	1,467	1,538	1,327	1,388	1,367
<b>Beginning Year Net Financial Standing</b>	<b>27,412</b>	<b>-775</b>	<b>2,800</b>	<b>1,140</b>	<b>1,771</b>	<b>2,061</b>	<b>2,641</b>	<b>3,025</b>	<b>3,996</b>	<b>4,898</b>	<b>5,855</b>
<b>Ending Year Balance</b>		<b>-775</b>	<b>2,025</b>	<b>3,165</b>	<b>4,936</b>	<b>6,997</b>	<b>9,638</b>	<b>12,663</b>	<b>16,659</b>	<b>21,557</b>	<b>27,412</b>

Notes:

Loan Payments	
Start year of loan payments	2008
Loan repayment terms, years	5
Interest on loans	20%
Interest on bonds, at maturity	10%
Interest on investments	15%

**Table 4. Summary of total budget for the 10-year plan, PhP '000**

Account Items	10-Year Total, PhP	Values in PhP '000									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Investment Expenses</b>											
Land and Land Improvement	334	134		50		50		50		50	
Buildings and Other Structures	1,774	539	354	290	308	55	118	29	25	37	19
Equipment and Software	945	255	20	320	200		150				
Furniture and Fixtures	20	20									
Vehicles	1,240	200	240	310	200			200	90		
Other Prop., Plant & Equip	665	72	112	74	76	49	51	54	56	59	62
<b>Sub-Total Investment Expenses</b>	<b>4,978</b>	<b>1,220</b>	<b>726</b>	<b>1,044</b>	<b>785</b>	<b>153</b>	<b>319</b>	<b>333</b>	<b>172</b>	<b>146</b>	<b>81</b>
<b>Operating Expenses</b>											
Personal Expenses											
Salaries and Wages											
Regular	5,228	445	460	476	493	510	528	548	568	589	611
Honoraria, Incentives, and Bonuses	69	15	6	6	6	6	6	6	6	6	6
Maintenance and Other Operating Expenses											
Traveling Expenses	717	30	57	61	65	70	75	80	87	93	100
Training and Seminar Expenses	3,384	555	533	225	459	404	241	251	261	222	233
Supplies and Materials	780	55	59	63	68	73	79	85	92	99	107
Communications	180	15	45	15	15	15	15	15	15	15	15
Repairs and maintenance of equipment	430	15	36	38	40	43	45	48	51	55	58
Repairs and maintenance of buildings and structures	1,168	49	109	117	108	117	106	130	135	145	151
Repairs and maintenance of vehicles	1,500	150	150	150	150	150	150	150	150	150	150
Miscellaneous Expenses	537	21	175	103	53	20	53	3	53	3	53
Grants and Donations	1,000	200	200	200	200	200					
<b>Sub-Total Maintenance &amp; Other Operating Expenses</b>	<b>14,992</b>	<b>1,549</b>	<b>1,829</b>	<b>1,454</b>	<b>1,657</b>	<b>1,608</b>	<b>1,299</b>	<b>1,317</b>	<b>1,417</b>	<b>1,377</b>	<b>1,484</b>
<b>Total Cost</b>	<b>19,970</b>	<b>2,769</b>	<b>2,555</b>	<b>2,499</b>	<b>2,442</b>	<b>1,761</b>	<b>1,618</b>	<b>1,649</b>	<b>1,589</b>	<b>1,523</b>	<b>1,565</b>

**Table 5. Summary of proposed budget by source of fund for the 10-year plan, PhP '000**

Account Items	10-Year Total, PhP '000	Values in PhP '000									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Investment Expenses</b>											
Local Government Unit	3,368	900	486	434	435	153	319	333	82	146	81
National Government Agencies	320	170			150						
External Sources	1,290	150	240	610	200				90		
<b>Sub-Total Investment Expenses</b>	<b>4,978</b>	<b>1,220</b>	<b>726</b>	<b>1,044</b>	<b>785</b>	<b>153</b>	<b>319</b>	<b>333</b>	<b>172</b>	<b>146</b>	<b>81</b>
<b>Operating Expenses</b>											
Local Government Unit	12,493	1,219	1,460	1,179	1,264	1,244	1,148	1,205	1,245	1,242	1,286
National Government Agencies	1,317	130	119	76	133	92	151	111	172	134	198
External Sources	1,182	200	250	200	260	272					
<b>Sub-Total Maintenance &amp; Other Operating Expenses</b>	<b>14,992</b>	<b>1,549</b>	<b>1,829</b>	<b>1,454</b>	<b>1,657</b>	<b>1,608</b>	<b>1,299</b>	<b>1,317</b>	<b>1,417</b>	<b>1,377</b>	<b>1,484</b>
Local Government Unit	15,861	2,119	1,946	1,613	1,698	1,398	1,467	1,538	1,327	1,388	1,367
National Government Agencies	1,637	300	119	76	283	92	151	111	172	134	198
External Sources	2,472	350	490	810	460	272			90		
<b>Total Cost</b>	<b>19,970</b>	<b>2,769</b>	<b>2,555</b>	<b>2,499</b>	<b>2,442</b>	<b>1,761</b>	<b>1,618</b>	<b>1,649</b>	<b>1,589</b>	<b>1,523</b>	<b>1,565</b>

**Table 6. Total Costs of CRM 10-Year Plan as proportion of the projected Internal Revenue Allocation for Poro, PhP '000**

Year	Projected IRA	20% Development Fund	Total Annual CRM Cost	CRM Total Budget as % of Dev't Fund	Annual CRM Operating Expense	CRM Operating Cost as % of Dev't Fund	Projected Income	Projected External Funding Needed	CRM Cash Requirements as % of Dev't Fund
2005	21,064	4,213	2,769	65.7%	1,549	36.8%	1,969	800	19.0%
2006	21,972	4,394	2,555	58.1%	1,829	41.6%	2,152	404	9.2%
2007	22,920	4,584	2,499	54.5%	1,454	31.7%	4,445		
2008	23,908	4,782	2,442	51.1%	1,657	34.7%	4,319		
2009	24,939	4,988	1,761	35.3%	1,608	32.2%	5,285		
2010	26,014	5,203	1,618	31.1%	1,299	25.0%	5,926		
2011	27,136	5,427	1,649	30.4%	1,317	24.3%	7,068		
2012	28,306	5,661	1,589	28.1%	1,417	25.0%	7,337		
2013	29,527	5,905	1,523	25.8%	1,377	23.3%	8,762		
2014	30,800	6,160	1,565	25.4%	1,484	24.1%	9,374		
IRA, Inc.	4.3%								

**Table 7. Estimate of the LGU funded component of the CRM 10-Year Plan to the projected IRA, PhP '000**

Year	Projected IRA	20% Dev't Fund	Total Annual CRM Cost, LGU Funded	CRM Total Budget as % of Dev't Fund	Annual CRM Operating Expense	CRM Operating Cost as % of Dev't Fund	Projected Income	Projected External Funding Needed	CRM Cash Requirements as % of Dev't Fund
2005	21,064	4,213	2,119	50.3%	1,219	28.9%	1,969	150	3.6%
2006	21,972	4,394	1,946	44.3%	1,460	33.2%	2,152		
2007	22,920	4,584	1,613	35.2%	1,179	25.7%	4,445		
2008	23,908	4,782	1,698	35.5%	1,264	26.4%	4,319		
2009	24,939	4,988	1,398	28.0%	1,244	24.9%	5,285		
2010	26,014	5,203	1,467	28.2%	1,148	22.1%	5,926		
2011	27,136	5,427	1,538	28.3%	1,205	22.2%	7,068		
2012	28,306	5,661	1,327	23.4%	1,245	22.0%	7,337		
2013	29,527	5,905	1,388	23.5%	1,242	21.0%	8,762		
2014	30,800	6,160	1,367	22.2%	1,286	20.9%	9,374		

Note: Projected IRA increase is 4.3%

# Annex 2H1

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- CRM Ordinance Template



Proposed outline of Municipal Fisheries Management Ordinance

Republika ng Pilipinas  
SANGGUNIANG BAYAN NG \_\_\_\_\_

ORDINANCE NO. \_\_\_\_  
Series of 200\_

**AN ORDINANCE PROVIDING FOR THE MANAGEMENT, DEVELOPMENT, UTILIZATION AND PROTECTION OF THE MUNICIPAL FISHERIES AND AQUATIC RESOURCES, REGULATING MUNICIPAL FISHERIES ACTIVITIES, APPROPRIATING FUNDS THEREFOR AND FOR OTHER PURPOSES.**

WHEREAS, Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998, provides for the development, management and conservation of the fisheries and aquatic resources and integrates all laws pertinent thereto;

WHEREAS, Section 16 of Republic Act No. 8550 provides that the municipal government shall have jurisdiction over municipal waters as defined therein;

WHEREAS, Section 16 of Republic Act No. 8550 likewise provides that the municipal government, in consultation with the Fisheries and Aquatic Resources management Council (FARMC), shall be responsible for the management, conservation, development, protection, utilization, and disposition of all fish and fishery/aquatic resources within their respective municipal waters;

WHEREAS, Section 16 of Republic Act No. 8550 also provides that the municipal government may, in consultation with the FARMC, enact appropriate ordinances for the said purpose and in accordance with the National Fisheries Policy;

WHEREAS, Rule 16.1 of the Implementing Rules and Regulations (IRR) of Republic Act No. 8550 provides that the municipal/city government shall enact a basic municipal fisheries ordinance delineating the boundaries of the municipal waters as defined in Republic Act No. 8550 and providing the rules and regulations on licensing and permits and other fisheries activities;

WHEREAS, Rule 16.2 of the IRR provides that the municipal/city government shall determine, in consultation with the FARMC, the license fees of fisheries activities in municipal waters: Provided that the FARMC may also recommend the appropriate license fees that will be imposed;

WHEREAS, Section 16 of Republic Act No. 8550 further provides that the LGU shall also enforce all fishery laws, rules and regulations as well as valid fishery ordinances enacted by the municipal council;

WHEREAS, in order to fully and effectively exercise the mandate given under

Republic Act No. 8550, the municipality, through the \_\_\_\_\_, has formulated its Municipal Fisheries Management (MFM) Plan including the budget for its implementation;

WHEREAS, the MFM Plan of the municipality prescribes the policies, principles and strategies for the sustainable development, conservation, protection, utilization and management of the municipal fisheries and aquatic resources;

WHEREAS, in the development and formulation of the MFM Plan, the principles of transparency, accountability and participatory decision-making were employed particularly with regard to the stakeholders and decision-makers;

WHEREAS, the MFM Plan was presented for public hearing and consensus before the various sectors and stakeholders;

WHEREAS, the MFM Plan of the municipality has been duly adopted and approved by the Municipal Development Council (MDC) through MDC Resolution No. \_\_\_\_\_, and by the Sangguniang Bayan through Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_;

NOW THEREFORE, BE IT ORDAINED, AS IT IS HEREBY ORDAINED by the Sangguniang Bayan of the Municipality of \_\_\_\_\_, in session duly assembled, that:

Article 1  
General Provisions

Section 1. Title – This Ordinance shall be known as the “Name of Municipality Municipal Fisheries Management Ordinance of 200\_”

Section 2. Declaration of Policies – It is hereby declared the policy of the Municipality to adopt and implement a comprehensive and integrated coastal resources management program which shall:

Ensure the attainment of food security for the people of the municipality in particular and the Filipino people in general;

Limit access to the fishery and aquatic resources within municipal waters for the exclusive use and enjoyment of Filipino citizens;

Protect the rights of fisherfolk, with priority to municipal fisherfolk, in the preferential use of municipal waters;

Ensure the rational and sustainable development, management, conservation, protection and utilization of the municipal waters and the fishery and aquatic resources found therein;

Recognize the usefulness of sound scientific and technical know-how while recognizing traditional and local fisheries knowledge and technologies in order to encourage their proper application to sustainable coastal and fishery resource conservation, management and development;

Ensure the observance of the good governance principles of transparency, accountability and participatory decision-making in all actions and decisions to be made by the municipality and other sectors involved;

Others. . .

\*(The declaration of policies under Section 2 of RA 8550 can be used as basis or guide)

Section 3. Coverage – The provisions of this Ordinance, which shall be enforced in conjunction with existing laws, orders, policies, rules and regulations and ordinances on fishing and/or fisheries, shall be implemented and enforced in and shall be applicable to:

The municipal waters of the Municipality of \_\_\_\_\_ as defined and delineated in Ordinance No. \_\_\_\_\_, Series of \_\_\_\_\_;

All activities, whether for business or otherwise, relating to the development, conservation, protection, utilization and management of the municipal waters and the fishery and aquatic resources found therein; and

All persons, natural or juridical, who are or will be engaged in the development, conservation, protection, utilization and management of the municipal waters and the fishery and aquatic resources found therein.

## Article 2

### Definition of Terms

Section 4. Definition of Terms – For the purposes of this Ordinance:

a) TERM + DEFINITION

\*(This section will contain the terms used in this ordinance that need to be defined based on and using the definitions provided in Section 4 of RA 8550)

## Article 3

### Zonation

Section \_\_\_. Establishment of a Municipal Fisheries Management Zone – There is hereby established a Municipal Fisheries Management Zone in the municipal waters, as follows:

Specify the following:

- a. Location
- b. Size of area
- c. Boundaries
- d. Coordinates
- e. Other relevant information

\*(The contents of this section will be based on the Municipal Fisheries Management (MFM) Plan of the municipality)

Section \_\_. General Purpose – The Municipal Fisheries Management Zone shall be utilized for

\*(State the general purpose and/or objectives for establishing the municipal fisheries management zone)

Section \_\_. Establishment of Sub-Zones –

\*(This section will deal with the establishment of sub-zones according to use within the municipal fisheries management zone as provided by the MFM Plan. The sub-zones shall be enumerated and shall state the location, size of area, boundaries, coordinates, and other relevant information)

#### Article 4

#### Management of the Zone

Section \_\_. Management –

\*(This section will deal with the management of the municipal fisheries management zone in accordance with the MFM Plan. The MFM Plan may provide that the Municipal CRM Office will be responsible for the management of this zone)

Section \_\_. Functions, Duties and Responsibilities –

\*(This section will state the functions, duties and responsibilities of the body that will manage the municipal fisheries management zone as provided in the MFM Plan.)

Section \_\_. Institutional Arrangements – The (office responsible for the management of the zone) shall coordinate with the appropriate groups or agencies in the performance of its functions and responsibilities. Specifically, . . .

\*(This section will list the groups or agencies that will provide assistance to the office responsible for the management of the zone as well as the role that the groups or agencies will have in such management)

Article 5  
Utilization

Section \_\_. Fisheries Activities – All fisheries activities such as, but not limited to, catching or taking of fish or fishery/aquatic products, gathering of bangus fry or fry of other species, and operating fish corrals, fish pens, mussel/oyster culture beds, and other structures for the culture or capture of fish and other fishery products, shall be confined to the Municipal Fisheries Management Zone and within the specific sub-zones established therein. No such fisheries activities shall be undertaken outside of the Municipal Fisheries Management Zone.

Section \_\_. Uses – Subject to compliance with the licensing and/or permitting requirements, the payment of fees and compliance with other requirements as provided in this ordinance, the Municipal Fisheries Management Zone may be utilized for the following activities:

Sub-zone	Permitted Activities
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\*(This section will enumerate the activities allowed to be undertaken within the municipal fisheries management zone in accordance with the MFM Plan. The enumeration of the activities shall be made on a per sub-zone basis)

Article 6  
Guidelines

\*(The sections under this article will prescribe the guidelines for the conduct of fisheries activities in the zone based on the MFM Plan. The enumeration of the guidelines will be per fishery activity. Thus, each section will enumerate the guidelines for a specific fisheries activity. Example:

Section \_\_. Guidelines for the Construction and Operation of Fishpens –

Section \_\_. Guidelines for the Gathering of Bangus Fry –

Section \_\_. Guidelines for Seaweed Farming –

Article 7  
Users of the Municipal Fisheries Management Zone

Section \_\_. Qualifications of Users – Subject to compliance with the requirements prescribed in this Ordinance, the Municipal Fisheries Management Zone may be utilized

and all fishery-related activities allowed within the said zone may be undertaken by Filipino citizens who are residents of name of municipality including partnerships, cooperatives, associations or corporations duly registered or incorporated under Philippine laws and authorized to transact business in the Philippines: Provided, that one hundred percent (100%) of the membership are Filipino citizens or, in case of corporations, one hundred percent (100%) of the capital stock belong to Filipino Citizens; Provided further, that the municipality is the principal place of business of such partnerships, cooperatives, associations or corporations.

Section \_\_. Priority in the Use of the Municipal Fisheries Management Zone – Resident municipal fisherfolk of the municipality who are duly registered in the registry of municipal fisherfolk as provided hereunder and their organizations/cooperatives shall have priority to exploit or utilize the Municipal Fisheries Management Zone.

Section \_\_. Fisherfolk Organizations and/or Cooperatives – Fisherfolk organizations/cooperatives whose members are listed in the registry of municipal fisherfolk, may be granted use of the Municipal Fisheries Management Zone to engage in fish capture, mariculture and/or fish farming: Provided, however, that an organization/cooperative member whose household is already in possession of a fishery right other than for fish capture cannot enjoy the fishing rights granted to the organization or cooperative.

Section \_\_. Municipal Fishers from Adjoining Municipalities –

\*(This section will state the provision on municipal fishers from adjoining municipalities if such is provided in the MFM Plan)

## Article 8 Registry

Section \_\_. Registry of Municipal Fisherfolk – The municipality, through the Municipal Coastal Resources Management Office shall maintain a registry of municipal fisherfolk who are fishing or may desire to fish in municipal waters for the purpose of determining priorities among them, of limiting entry into the municipal waters, and of monitoring fishing activities and/or other related purposes: Provided, that the Fisheries and Aquatic Resources Management Council (FARMC) shall submit to the Municipal Coastal Resources Management Office the list of priorities for its consideration.

Such list or registry shall be updated annually or as may be necessary, and shall be posted in barangay halls or other strategic locations where it shall be open to public inspection, for the purpose of validating the correctness and completeness of the list. The Municipal

Coastal Resources Management Office, in consultation with the FARMC shall formulate the necessary mechanisms for inclusion or exclusion procedures that shall be most beneficial to the resident municipal fisherfolk. The FARMC may likewise recommend such mechanisms.

Section \_\_. Criteria for Registration – Only municipal fisherfolk who are residents of the municipality for a period of at least six (6) months prior to the date of registration shall be registered in the registry of municipal fisherfolk.

Section \_\_. Use of the Registry – The registry of municipal fisherfolk shall serve as basis for the identification of priority municipal fisherfolk who shall be allowed to undertake fisheries activities within the Municipal Fisheries Management Zone: Provided, that registration is not equivalent to a permit.

Section \_\_. Registry of Municipal Fishing Vessels – The municipality, through the Municipal Coastal Resources Management Office, shall likewise maintain a registry of municipal fishing vessels by type of gear and other boat particulars with the assistance of the FARMC.

Section \_\_. Coding of Municipal Fishing Vessels –

#### Article 9

#### Exclusive Fishery Privileges

Section \_\_. Grant of Exclusive Fishery Privileges – Subject to compliance with permitting and/or licensing requirements and the payment of fees as provided in this Ordinance, the following exclusive fishery privileges may be granted by the Sangguniang Bayan:

Type of Exclusive Fishery Privilege	Sub-zone
(Examples: Fishpen Operation, Seaweed Farming)	(Identify the sub-zone)

Section \_\_. Preferential Rights in the Grant of Exclusive Fishery Privileges – The duly registered and accredited organizations and cooperatives of municipal fishers or people’s organizations (POs) which have municipal fishers comprising the majority of its members shall have preferential right in the grant of exclusive fishery privileges; Provided further, that in the event no duly registered and accredited organizations and cooperatives of municipal fishers or people’s organizations (POs) which have municipal fishers comprising the majority of its members apply for exclusive fishery privileges, the same may be granted to other parties who comply with the qualifications stated in Section \_\_ hereof.

Section \_\_. Procedure for Granting Exclusive Fishery Privileges to Organizations,

Cooperatives or People's Organizations of Municipal Fishers –

\*(This section will set the procedure to be followed by the SB in granting the said privilege)

Section \_\_. Procedure for Granting Exclusive Fishery Privileges to Other Qualified Parties –

\*(This section will set the procedure to be followed by the SB in granting the said privilege)

Section \_\_. Applications – Applications for exclusive fishery privileges, whether made by organizations, cooperatives or people's organizations of municipal fishers or by other qualified parties shall be made . . .

\*(This section will set the procedure as well as the requirements for applications)

NOTE: If public bidding will be conducted in the award of exclusive fishery privileges, add Sections on: 1) who will conduct the public bidding (local PBAC?); 2) time and place of auction; 3) procedure to be followed in the bidding; and 4) publication of notice.

Article 10

Permits and Licenses

Section \_\_. Permits and Licenses – No person, partnership, cooperative, association, organization or corporation shall be allowed to undertake any kind of fisheries activity in the Municipal Fisheries Management Zone without first obtaining the appropriate permits and/or licenses for such activity and paying the fees provided in this ordinance.

The permit or license issued shall be valid for a period of \_\_\_\_\_ and shall specify the name of the permittee or licensee, the fishery activity for which the permit or license is issued, the area where the activity will be undertaken, the effectivity and expiration dates of the permit or license, the restrictions (if any), reportorial requirements (if any), and other relevant information.

Section \_\_. Exceptions –

\*(This section will state the fisheries activities that are exempt from the permitting and licensing requirement, if the same is provided in the MFM Plan)

Section \_\_. Permitting or Licensing Authority – The \_\_\_\_\_ shall have the sole authority to issue permits or licenses for fisheries activities in the Municipal Fisheries Management Zone.

Section \_\_. Gears Allowed – The use of the following gears shall be allowed

within the Municipal Fisheries Management Zone: Provided, that a permit or license for the same is first obtained and the corresponding fees are paid:

Sub-zone	Type of Gear Allowed
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All gears not included in the enumeration above are prohibited.

\*(This section will enumerate the types of gear allowed per sub-zone)

Section \_\_. Procedure for Issuance of Permits and/or Licenses –

\*(This section will set the procedure as well as the requirements for applications. This will include: 1) Where to apply; 2) application form; 3) attachments, if any; 4) evaluation of the application; 5) the process for approval or denial; and 6) other relevant information)

Section \_\_. Grounds for Denial of Applications –

\*(This section will list the grounds for denying applications for permits or licenses)

Section \_\_. Reports –

\*(This section will prescribe the reportorial requirements for those who have been issued licenses and permits, if the same are required in the MFM Plan)

Section \_\_. Registry of Permits and Licenses – The Municipal Coastal Resource Management Office (or other appropriate office) shall maintain a registry of permits and licenses issued for fishery activities. Such registry shall list the names of the persons or groups, the fisheries activity for which the permit or license is issued, the area where such activity will be undertaken, the effectivity date of the permit or license, the expiration date thereof, and other relevant information. The registry shall be updated as may be necessary.

Section \_\_. Grounds for Cancellation or Revocation of Permits and/or Licenses – Permits and/or licenses issued shall be cancelled or revoked based on the following grounds:

\*(This section will enumerate the grounds for cancellation or revocation of permits and/or licenses)

Section \_\_. Procedure for Cancellation or Revocation of Permits and/or Licenses –

\*(This section will set the procedure for the cancellation or revocation of permits and/or licenses)

Section \_\_. Renewal of Permits or Licenses –

\*(This section will prescribe the procedure for renewal of permits or licenses)

Article 11  
Fees

Section \_\_. User Fees – The following fees shall be paid by users of the Municipal Fisheries Management Zone:

Type of Activity	Amount of Fees (per annum?)
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\*(This section will set the amount of fees to be collected for each activity per sub-zone.)

Section \_\_. Gear Fees – The following fees shall be paid for the use of gears that are allowed in the Municipal Fisheries Management Zone:

Type of Gear	Amount of Fees (per annum?)
--------------	-----------------------------

\*(This section will set the amount of fees to be collected for each type of gear allowed within the municipal fisheries management zone.)

Section \_\_. Collected Fees – The fees collected pursuant to this Ordinance shall be placed in and form part of the Municipal Fisheries Management Fund.

Article 12  
Auxiliary Invoice

Section \_\_. Issuance – All fish and fisheries products, except those caught in violation of the provisions of this ordinance or are declared as health hazards by concerned institutions, must have an auxiliary invoice to be issued by the Municipal CRM Office prior to their transport from the point of origin to their point of destination in the Philippines and/or export purposes upon payment of the prescribed fee to defray administrative costs therefor.

Article 13  
Posting

Section \_\_. Posting in Public Places – The general public shall be notified of the availability of areas within the Municipal Fisheries Management Zone for utilization. For this purpose, notices of such availability shall be posted in a bulletin board at the entrance of the Municipal Hall, at the Municipal Coastal Resource Management Office and in all barangay halls.

All requirements for the issuance of permits and licenses, the schedule of fees, the process for issuance of the same, the grounds for cancellation or revocation of the permits and licenses issued as well as the process for cancellation or revocation shall likewise be posted in a bulletin board at the entrance of the Municipal Hall, at the Municipal Coastal Resource Management Office and in all barangay halls.

The registry of permits and licenses issued shall also be posted in a bulletin board at the entrance of the Municipal Hall, at the Municipal Coastal Resource Management Office and in barangay halls.

The Municipal Coastal Resources Management Office shall be responsible for the posting of the above information.

Article 14  
Monitoring and Evaluation

Section \_\_\_\_.

\*(The section/s under this article will prescribe the parameters for monitoring and evaluation based on the MFM Plan)

Article 15  
Enforcement Mechanisms

Section \_\_\_\_.

\*(The section/s under this article will provide the enforcement mechanisms based on the provisions of the MFM Plan on enforcement, such as, the group/s responsible for enforcement, their responsibilities, and their relationship with other groups. An example will be the Bantay Dagat will be responsible for patrolling, apprehending, etc. The Bantay Dagat will submit reports to the body or group tasked to manage the Municipal Fisheries Management Zone)

Article 16  
Municipal Fisheries Management Fund

Section \_\_\_\_ Establishment of the Fund – There is hereby created, as a special account of the municipality, a Municipal Fisheries Management Fund to be administered by the \_\_\_\_\_. Such fund shall be sourced from the following:

- 1.
- 2.
- etc.

\*(This section will create the municipal fisheries management fund to support the activities to be undertaken for the area as specified in the MFM Plan. It will also list the sources of the fund)

Section \_\_. Use of the Fund – The Municipal Fisheries Management Fund shall be used to finance the following:

\*(Enumerate the uses of the fund)

Section \_\_. Reporting and Auditing –

\*(This section will provide the guidelines for reporting and auditing of the fund)

#### Article 17

##### Prohibited Acts and Penalties

Section \_\_. Prohibited Acts –

\*(This section will enumerate the activities that are prohibited within the Municipal Fisheries Management Zone as provided in the MFM Plan, as well as those prohibited inside municipal waters)

Section \_\_. Fines and Penalties –

\*(This section will prescribe the fines and penalties to be imposed for violation of the prohibited acts listed above and the other provisions of this ordinance. It should also prescribe where the fines collected will go)

#### Article 18

##### Appropriations

Section \_\_. Appropriations – There is hereby appropriated the amount of \_\_\_\_\_ from the \_\_\_\_\_ for the Municipal Fisheries Management Fund on the year this Ordinance is approved. Thereafter, the \_\_\_\_\_ shall submit its proposed annual budget to the \_\_\_\_\_ for inclusion in the Annual Investment Plan of the Municipality. The amount appropriated yearly shall form part of the Municipal Fisheries Management Fund.

#### Article 19

##### Other Provisions

Section \_\_. Separability Clause – If any provision of this Ordinance or the application of

such provision to any person or circumstances is declared invalid, the remainder of the Ordinance or the application of such provision to other persons or circumstances shall not be affected by such declaration.

Section \_\_. Repealing Clause – All ordinances, executive orders, rules and regulations or parts thereof which are inconsistent with this Ordinance are hereby repealed or modified accordingly.

Section \_\_. Effectivity – This Ordinance shall take effect \_\_ days after a copy hereof is posted in a bulletin board at the entrance of the Municipal Hall and in at least two (2) other conspicuous places in the municipality and the Ordinance has been published (once, twice, etc) in a local newspaper of general circulation in the province of \_\_\_\_\_.

APPROVED by the SANGGUNIANG BAYAN of \_\_\_\_\_, this day of \_\_\_\_\_, 200\_.



Proposed template of ordinance creating the Municipal Coastal Resources Management Office (or other name of office)

Republika ng Pilipinas  
SANGGUNIANG BAYAN NG \_\_\_\_\_

ORDINANCE NO. \_\_\_\_  
Series of 200\_

AN ORDINANCE CREATING THE MUNICIPAL COASTAL RESOURCES MANAGEMENT OFFICE (or other name of office), PRESCRIBING ITS POWERS AND FUNCTIONS, APPROPRIATING FUNDS THEREFOR, AND FOR OTHER PURPOSES.

WHEREAS, Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998, provides for the development, management and conservation of the fisheries and aquatic resources and integrates all laws pertinent thereto;

WHEREAS, Section 16 of Republic Act No. 8550 provides that the municipal government shall have jurisdiction over municipal waters as defined therein;

WHEREAS, Section 16 of Republic Act No. 8550 likewise provides that the municipal government, in consultation with the Fisheries and Aquatic Resources management Council (FARMC), shall be responsible for the management, conservation, development, protection, utilization, and disposition of all fish and fishery/aquatic resources within their respective municipal waters;

WHEREAS, Section 16 of Republic Act No. 8550 also provides that the municipal government may, in consultation with the FARMC, enact appropriate ordinances for the said purpose and in accordance with the National Fisheries Policy;

WHEREAS, in order to fully and effectively exercise the mandate given under Republic Act No. 8550, the municipality, through the \_\_\_\_\_, has formulated the \_\_-year Coastal Resources Management Plan of the Municipality including the budget for its implementation;

WHEREAS, the CRM Plan of the municipality prescribes the policies, principles and strategies for the sustainable development, conservation, protection, utilization and management of the municipal waters as well as the fisheries and aquatic resources found therein;

WHEREAS, in the development and formulation of the CRM Plan, the principles of transparency, accountability and participatory decision-making were employed particularly with regard to the stakeholders and decision-makers;

WHEREAS, the CRM Plan was presented for public hearing and consensus before the various sectors and stakeholders;

WHEREAS, the CRM Plan of the municipality has been duly adopted and approved by the Municipal Development Council (MDC) through MDC Resolution No. \_\_\_\_\_, and by the Sangguniang Bayan through Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_;

WHEREAS, pursuant to the CRM Plan of the municipality and in order to fully and effectively implement the same, there is a need to establish a Municipal Coastal Resources Management Office (or other name of office);

NOW THEREFORE, BE IT ORDAINED, AS IT IS HEREBY ORDAINED by the Sangguniang Bayan of the Municipality of \_\_\_\_\_, in session duly assembled, that:

Section 1. Municipal Coastal Resources Management Office (or other name of office) – There is hereby established a Municipal Coastal Resources Management Office (or other name of Office) that will serve as the lead office in the implementation of the Coastal Resources Management Plan of the Municipality. The Municipal Coastal Resources Management Office (or other name of office) shall be under the \_\_\_\_\_.

Section 2. Composition – The Municipal Coastal Resources Office (or other name of office) shall be composed of the following:

- 1) Head of Office: Municipal Coastal Resources Management Officer (or other name)
- 2) Staff

Section 3. Qualification and Compensation of Municipal Coastal Resources Management Officer (or other name) – No person shall be appointed Municipal Coastal Resources Management Officer (or other name) unless he is a \_\_\_\_\_ (personal and professional qualifications). The Municipal Coastal Resources Management Officer (or other name) shall receive a salary equivalent to salary grade \_\_\_\_\_.

Section 4. Qualification and Compensation of Municipal Coastal Resources Management Office Staff (or other name) – No person/s shall be appointed Municipal Coastal Resources Management Office Staff (or other name) unless he/she/they meet the following minimum qualifications:

- 1)
- 2)

etc.

The Municipal Coastal Resources Management Office Staff (or other name) shall receive a salary equivalent to salary grade \_\_\_\_\_.

Section 5. Appointment of Municipal Coastal Resources Management Officer and Staff (or other name) – The Municipal Coastal Resources Management Officer and Staff (or other name) shall be appointed by the \_\_\_\_\_. In appointing such officer and staff, the principles of transparency, accountability and participatory decision-making shall be duly observed.

Section 6. Powers and Functions of the Municipal Coastal Resources Management Office (or other name) – The Municipal Coastal Resources Management Office (or other name) shall serve as the lead office in the implementation of the Coastal Resources Management Plan of the Municipality. It shall have the following powers and functions:

1)

2)

etc.

\*(The specific powers and functions of the Municipal Coastal Resources Management Office will depend on the approved Coastal Resources Management Plan of the Municipality)

Section 7. Functions, Duties and Responsibilities of the Municipal Coastal Resources Management Officer (or other name) – The Municipal Coastal Resources Management Officer (or other name) shall have the following functions, duties and responsibilities:

1)

2)

etc.

\*(The specific powers and functions of the Municipal Coastal Resources Management Officer will depend on the approved Coastal Resources Management Plan of the Municipality)

Section 8. Functions, Duties and Responsibilities of the Municipal Coastal Resources Management Staff (or other name) – The Municipal Coastal Resources Management Staff (or other name) shall have the following functions, duties and responsibilities:

1)

2)

etc.

\*(The specific powers and functions of the Municipal Coastal Resources Management staff will depend on the approved Coastal Resources Management Plan of the Municipality)

Section \_\_. Other provisions as may be necessary

Section \_\_. Appropriations – For the initial operating expenses of the Municipal Coastal Resources Management Office (or other name) to carry out the mandate of this Ordinance, the amount of \_\_\_\_\_ is hereby appropriated from the \_\_\_\_\_ on the year this Ordinance is approved. Thereafter, the Municipal Coastal Resources Management Office (or other name) shall submit its proposed annual budget to the \_\_\_\_\_ for inclusion in the Annual Investment Plan of the Municipality.

Section \_\_. Separability Clause – If any provision of this Ordinance or the application of such provision to any person or circumstances is declared invalid, the remainder of the Ordinance or the application of such provision to other persons or circumstances shall not be affected by such declaration.

Section \_\_. Repealing Clause – All ordinances, executive orders, rules and regulations or parts thereof which are inconsistent with this Ordinance are hereby repealed or modified accordingly.

Section \_\_. Effectivity – This Ordinance shall take effect \_\_ days after a copy hereof is posted in a bulletin board at the entrance of the Municipal Hall and in at least two (2) other conspicuous places in the municipality and the Ordinance has been published (once, twice, etc) in a local newspaper of general circulation in the province of \_\_\_\_\_.

APPROVED by the SANGGUNIANG BAYAN of \_\_\_\_\_, this \_\_ day of \_\_\_\_\_, 200\_.

Proposed template of ordinance delineating the municipal waters boundaries.

Republika ng Pilipinas  
SANGGUNIANG BAYAN NG \_\_\_\_\_

ORDINANCE NO. \_\_\_\_  
Series of 200\_

AN ORDINANCE ESTABLISHING THE BOUNDARIES OF THE MUNICIPAL WATERS OF THE MUNICIPALITY OF \_\_\_\_\_ AND FOR OTHER PURPOSES.

WHEREAS, Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998, provides for the development, management and conservation of the fisheries and aquatic resources and integrates all laws pertinent thereto;

WHEREAS, Section 16 of Republic Act No. 8550 provides that the municipal government shall have jurisdiction over municipal waters as defined therein;

WHEREAS, Section 16 of Republic Act No. 8550 likewise provides that the municipal government, in consultation with the Fisheries and Aquatic Resources Management Council (FARMC), shall be responsible for the management, conservation, development, protection, utilization, and disposition of all fish and fishery/aquatic resources within their respective municipal waters;

WHEREAS, Rule 16.1 of the Implementing Rules and Regulations (IRR) of Republic Act No. 8550 provides that the municipal government shall enact a basic municipal fisheries ordinance delineating the boundaries of the municipal waters as defined in Republic Act No. 8550 and providing the rules and regulations on licensing and permits and other fisheries activities;

WHEREAS, in compliance with and in order to fully implement the provisions of Republic Act 8550 and its IRR, the municipality, together with the adjoining municipalities of \_\_\_\_\_ and \_\_\_\_\_ have agreed on the coordinates of their respective municipal waters derived through joint coastal terminal points field verification and consensus and have executed the corresponding Memorandum of Agreement, a copy of which is hereto attached as Annex "A";

[\*IF BOUNDARIES ALREADY APPROVED BY NAMRIA, ADD:

WHEREAS, the coordinates covering the municipal waters have been submitted to and approved by the National Mapping and Resource Information Authority (NAMRIA);]

NOW THEREFORE, BE IT ORDAINED, AS IT IS HEREBY ORDAINED by the Sangguniang Bayan of the Municipality of \_\_\_\_\_, in session duly assembled, that:

Section 1. Municipal Waters – The municipal waters of the Municipality of \_\_\_\_\_ consist of the streams, lakes, inland bodies of water and tidal waters within the municipality that are not included within the protected areas as defined under Republic Act No. 7586 (also known as the NIPAS Act), public forest, timber lands, forest reserves or fishery reserves. The municipal waters likewise consist of the marine waters included between two (2) lines drawn perpendicularly to the general coastline from points where the boundary lines of this municipality touch the sea at low tide, and a third line parallel with the general coastline including offshore islands and fifteen (15) kilometers from such coastline, containing an area of \_\_\_\_\_ (\_\_\_\_\_) hectares, more or less, situated in and covered by the following coordinates:

From latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 to latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 to latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 to latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 and latitude \_\_\_\_\_, longitude \_\_\_\_\_,  
 to latitude \_\_\_\_\_, longitude \_\_\_\_\_.

Section 2. NAMRIA Approval – The foregoing coordinates covering the municipal waters shall be submitted to the National Mapping and Resource Information Authority (NAMRIA) for approval. Upon approval, the coordinates shall constitute the final boundaries of the municipal waters.

[\*NOTE: If the coordinates have already been approved by NAMRIA, delete this section]

Section 3. Jurisdiction – Pursuant to Republic Act No. 8550, the Municipal Government shall have jurisdiction over its municipal waters as defined and delineated in Section 1 hereof.

Section 4. Separability Clause – If any provision of this Ordinance or the application of such provision to any person or circumstances is declared invalid, the remainder of the Ordinance or the application of such provision to other persons or circumstances shall not be affected by such declaration.

Section 5. Repealing Clause – All ordinances, executive orders, rules and regulations or parts thereof which are inconsistent with this Ordinance are hereby repealed or modified accordingly.

Section 6. Effectivity – This Ordinance shall take effect \_\_ days after a copy

hereof is posted in a bulletin board at the entrance of the Municipal Hall and in at least two (2) other conspicuous places in the municipality and the Ordinance has been published (once, twice, etc) in a local newspaper of general circulation in the province of \_\_\_\_\_.

APPROVED by the SANGGUNIANG BAYAN of \_\_\_\_\_, this \_\_\_ day of \_\_\_\_\_, 200\_.



Proposed outline of ordinance establishing a commercial fishing zone

**NOTE:** This ordinance shall be enacted in accordance with the guidelines prescribed in RA 8550 and its IRR, specifically:

I. A public hearing, in consultation with the FARMC, shall be conducted to present the following:

1. A map showing the area of the municipal waters where small and medium commercial fishing vessels may be allowed to operate;
2. The type of fishing vessel and gear that may be allowed in such waters;
3. The draft municipal fisheries ordinance permitting or allowing such commercial fishing operations

II. No commercial fishing shall be allowed in municipal waters with depth less than seven (7) fathoms as certified by the appropriate agency. (This means that even in the 10.1 to 15 km area, commercial fishers cannot be allowed to operate if the depth is less than 7 fathoms).

**Republika ng Pilipinas**  
**SANGGUNIANG BAYAN NG \_\_\_\_\_**

ORDINANCE NO. \_\_\_\_\_  
Series of 200\_

AN ORDINANCE ESTABLISHING A COMMERCIAL FISHING ZONE WITHIN THE MUNICIPAL WATERS, PROVIDING FOR THE MANAGEMENT, CONSERVATION, DEVELOPMENT AND PROTECTION THEREOF, APPROPRIATING FUNDS THEREFOR AND FOR OTHER PURPOSES.

WHEREAS, Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998, provides for the development, management and conservation of the fisheries and aquatic resources and integrates all laws pertinent thereto;

WHEREAS, Section 16 of Republic Act No. 8550 provides that the municipal government shall have jurisdiction over municipal waters as defined therein;

WHEREAS, Section 16 of Republic Act No. 8550 likewise provides that the municipal government, in consultation with the Fisheries and Aquatic Resources management Council (FARMC), shall be responsible for the

management, conservation, development, protection, utilization, and disposition of all fish and fishery/aquatic resources within their respective municipal waters;

WHEREAS, Section 16 of Republic Act No. 8550 also provides that the municipal government may, in consultation with the FARMC, enact appropriate ordinances for the said purpose and in accordance with the National Fisheries Policy;

WHEREAS, Rule 16.1 of the Implementing Rules and Regulations (IRR) of Republic Act No. 8550 provides that the municipal/city government shall enact a basic municipal fisheries ordinance delineating the boundaries of the municipal waters as defined in Republic Act No. 8550 and providing the rules and regulations on licensing and permits and other fisheries activities;

WHEREAS, Rule 16.2 of the IRR provides that the municipal/city government shall determine, in consultation with the FARMC, the license fees of fisheries activities in municipal waters: Provided that the FARMC may also recommend the appropriate license fees that will be imposed;

WHEREAS, Section 16 of Republic Act No. 8550 further provides that the LGU shall also enforce all fishery laws, rules and regulations as well as valid fishery ordinances enacted by the municipal council;

WHEREAS, in order to fully and effectively exercise the mandate given under Republic Act No. 8550, the municipality, through the \_\_\_\_\_, has formulated its \_\_\_-year Coastal Resources Management (CRM) Plan including the budget for its implementation;

WHEREAS, the CRM Plan of the municipality prescribes the policies, principles and strategies for the sustainable development, conservation, protection, utilization and management of the municipal waters and all fisheries and aquatic resources found therein;

WHEREAS, in the development and formulation of the CRM Plan, the principles of transparency, accountability and participatory decision-making were employed particularly with regard to the stakeholders and decision-makers;

WHEREAS, the CRM Plan was presented for public hearing and consensus before the various sectors and stakeholders;

WHEREAS, the CRM Plan of the municipality has been duly adopted and approved by the Municipal Development Council (MDC) through MDC Resolution No. \_\_\_\_\_, and by the Sangguniang Bayan through Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_;

WHEREAS, the CRM Plan provides for the establishment of zones within the municipal waters to ensure a more effective and efficient management of the same;

NOW THEREFORE, BE IT ORDAINED, AS IT IS HEREBY ORDAINED by the Sangguniang Bayan of the Municipality of \_\_\_\_\_, in session duly assembled, that:

Article 1  
Zonation

Section \_\_. *Establishment of a Commercial Fishing Zone* – There is hereby established a Commercial Fishing Zone within the 10.1 to 15 kilometer area from the shoreline in the municipal waters, as follows:

Specify the following:

- a. Location
- b. Size of area
- c. Boundaries
- d. Coordinates
- e. Other relevant information

\*(The contents of this section will be based on the CRM Plan of the municipality and the result of the public hearing. The area comprising the zone should comply with the requirements of RA 8550, among which is, it should not be less than 7 fathoms in depth as certified by the appropriate agency)

Section \_\_. *General Purpose* – The Commercial Fishing Zone shall be utilized for

\*(State the general purpose and/or objectives for establishing the Commercial Fishing Zone)

Section \_\_. *Establishment of Sub-Zones* –

\*(This section will deal with the establishment of sub-zones within the Commercial Fishing Zone if the same is provided in the CRM Plan. The sub-zones shall be enumerated and shall state the location, size of area, boundaries, coordinates, and other relevant information. If there are no sub-zones, this section will be deleted)

Article 2  
Management of the Zone

Section \_\_. *Management* –

\*(This section will deal with the management of the Commercial Fishing Zone in accordance with the CRM Plan. The CRM Plan may provide that the Municipal CRM Office will be responsible for the management of this zone)

Section \_\_. *Functions, Duties and Responsibilities* –

\*(This section will state the functions, duties and responsibilities of the body that will manage the Commercial Fishing Zone as provided in the CRM Plan.)

Section \_\_. *Institutional Arrangements* – The (office responsible for the management of the zone) shall coordinate with the appropriate groups or agencies in the performance of its functions and responsibilities. Specifically, . . .

\*(This section will list the groups or agencies that will provide assistance to the office responsible for the management of the zone as well as the role that the groups or agencies will have in such management)

Article 3  
Utilization

Section \_\_. *Commercial Fishing Activities* – All commercial fishing activities as enumerated hereunder shall be confined to the Commercial Fishing Zone established in this Ordinance. No commercial fishing activities shall be undertaken outside of the Commercial Fishing Zone.

Section \_\_. *Commercial Fishing Activities Allowed* – Subject to compliance with the licensing and/or permitting requirements, the payment of fees and compliance with other requirements as provided in this ordinance, only the following commercial fishing activities shall be allowed in the Commercial Fishing Zone:

- 1.
- 2.

\*(This section will enumerate the activities allowed to be undertaken within the Commercial Fishing Zone in accordance with the CRM Plan and the result of the public hearing.)

Article 4  
Guidelines on the Conduct of Commercial Fishing Activities

\*(The sections under this article will prescribe the guidelines for each kind of commercial fishing activity allowed by the ordinance. The guidelines will include the fishing methods allowed. Each section will provide the guidelines for a specific commercial fishing activity)

Section \_\_. *Guidelines for* \_\_\_\_\_ –

Section \_\_. *Guidelines for* \_\_\_\_\_ –

Etc.

Article 5  
Users of the Commercial Fishing Zone

Section \_\_. *Qualifications of Users* – Subject to compliance with the requirements prescribed in this Ordinance, the Commercial Fishing Zone may be utilized by

\*(This section will list the qualifications of users of the commercial fishing zone. An example would be: Filipino citizens who are residents of name of municipality including partnerships, cooperatives, associations or corporations duly registered or incorporated under Philippine laws and authorized to transact business in the Philippines: Provided, that one hundred percent (100%) of the membership are Filipino citizens or, in case of corporations, one hundred percent (100%) of the capital stock belong to Filipino Citizens.)

Article 6  
Permits and Licenses

Section \_\_. *Permits and Licenses* – No person, partnership, cooperative, association, organization or corporation shall be allowed to undertake any kind of commercial fishing activity in the Commercial Fishing Zone without first obtaining the appropriate permits and/or licenses for such activity and paying the fees provided in this ordinance.

The permit or license issued shall be valid for a period of \_\_\_\_\_ and shall specify the name of the permittee or licensee, the activity for which the permit or license is issued, the area where the activity will be undertaken, the effectivity and expiration dates of the permit or license, the restrictions (if any), reportorial requirements (if any), and other relevant information.

Section \_\_. *Permitting or Licensing Authority* – The municipal mayor shall have the sole authority to issue permits or licenses for commercial fishing activities in the Commercial Fishing Zone.

Section \_\_. *Gears Allowed* – Only the following gears shall be allowed within the Commercial Fishing Zone: Provided, that a permit or license for the same is first obtained and the corresponding fees are paid:

1.

2.

Etc.

All gears not included in the enumeration above are prohibited.

\*(This section will enumerate the types of gear allowed in the Commercial Fishing Zone)

Section \_\_. *Procedure for Issuance of Permits and/or Licenses* –

\*(This section will set the procedure as well as the requirements for applications. This will include: 1) Where to apply; 2) application form; 3) attachments, if any; 4) evaluation of the application; 5) the process for approval or denial; and 6) other relevant information)

Section \_\_. *Grounds for Denial of Applications* –

\*(This section will list the grounds for denying applications for permits or licenses)

Section \_\_. *Reports* –

\*(This section will prescribe the reportorial requirements for those who have been issued licenses and permits)

Section \_\_. *Registry of Permits and Licenses* – The Municipal Coastal Resource Management Office (or other appropriate office) shall maintain a registry of permits and licenses issued for commercial fishing activities. Such registry shall list the names of the persons or groups, the activity for which the permit or license is issued, the area where such activity will be undertaken, the effectivity date of the permit or license, the expiration date thereof, and other relevant information. The registry shall be updated as may be necessary.

Section \_\_. *Grounds for Cancellation or Revocation of Permits and/or Licenses* – Permits and/or licenses issued shall be cancelled or revoked based on the following grounds:

\*(This section will enumerate the grounds for cancellation or revocation of permits and/or licenses)

Section \_\_. *Procedure for Cancellation or Revocation of Permits and/or Licenses* –

\*(This section will set the procedure for the cancellation or revocation of permits and/or licenses)

Section \_\_. *Renewal of Permits or Licenses* –

\*(This section will prescribe the procedure for renewal of permits or licenses)

## Article 7 Fees

Section \_\_. *User Fees* – The following fees shall be paid by users of the Commercial Fishing Zone:

<u>Type of Activity</u>	<u>Amount of Fees</u> (per annum?)
-------------------------	------------------------------------

\*(This section will set the amount of fees to be collected for each activity in the Commercial Fishing Zone)

Section \_\_. *Gear Fees* – The following fees shall be paid for the use of gears that are allowed in the Commercial Fishing Zone:

<u>Type of Gear</u>	<u>Amount of Fees</u> (per annum?)
---------------------	------------------------------------

\*(This section will set the amount of fees to be collected for each type of gear allowed within the Commercial Fishing Zone)

Section \_\_. *Collected Fees* – The fees collected pursuant to this Ordinance shall be placed in and form part of the \_\_\_\_\_ Fund.

## Article 8 Other Requirements

Section \_\_. *Fishing Vessels* – Only small and medium commercial fishing vessels shall be allowed to operate within the Commercial Fishing Zone. Commercial fishing vessels of 3.1 gross tons up to 20 gross tons are classified

as small while commercial fishing vessels of 20.1 gross tons up to 150 gross tons are classified as medium.

Section \_\_. *Applicants* – The applicant vessel as well as the ship owner, employer, captain and crew have been certified by the appropriate agency as not having violated Republic Act No. 8550, environmental laws and related laws.

#### Article 9 Posting

Section \_\_. *Posting in Public Places* – The general public shall be notified of the availability of the Commercial Fishing Zone for commercial fishing activities. For this purpose, notices of such availability shall be posted in a bulletin board at the entrance of the Municipal Hall, at the Municipal Coastal Resource Management Office and in all barangay halls.

All requirements for the issuance of permits and licenses, the schedule of fees, the process for issuance of the same, the grounds for cancellation or revocation of the permits and licenses issued as well as the process for cancellation or revocation shall likewise be posted in a bulletin board at the entrance of the Municipal Hall, at the Municipal Coastal Resource Management Office and in all barangay halls.

The registry of permits and licenses issued shall also be posted in a bulletin board at the entrance of the Municipal Hall, at the Municipal Coastal Resource Management Office and in barangay halls.

The Municipal Coastal Resources Management Office shall be responsible for the posting of the above information.

#### Article 10 Monitoring and Evaluation

Section \_\_.

\*(The section/s under this article will prescribe the parameters for monitoring and evaluation based on the CRM Plan)

Article 11  
Enforcement Mechanisms

Section \_\_\_\_.

\*(The section/s under this article will provide the enforcement mechanisms based on the provisions of the CRM Plan on enforcement, such as, the group/s responsible for enforcement, their responsibilities, and their relationship with other groups. An example will be the Bantay Dagat will be responsible for patrolling, apprehending, etc. The Bantay Dagat will submit reports to the body or group tasked to manage the Commercial Fishing Zone)

Article 12  
Prohibited Acts and Penalties

Section \_\_\_\_ *Prohibited Acts* –

\*(This section will enumerate the prohibited acts. Examples are: 1) Conducting commercial fishing outside the Commercial Fishing Zone; 2) Use of large commercial fishing vessels; 3) Use of prohibited methods; 4) Use of prohibited gears; 5) Violation of the provisions of this ordinance; etc.)

Section \_\_\_\_ *Fines and Penalties* –

\*(This section will prescribe the fines and penalties to be imposed for violation of the prohibited acts listed above and the other provisions of this ordinance. It should also prescribe where the fines collected will go)

Article 13  
Other Provisions

Section \_\_\_\_ *Separability Clause* – If any provision of this Ordinance or the application of such provision to any person or circumstances is declared invalid, the remainder of the Ordinance or the application of such provision to other persons or circumstances shall not be affected by such declaration.

Section \_\_\_\_ *Repealing Clause* – All ordinances, executive orders, rules and regulations or parts thereof which are inconsistent with this Ordinance are hereby repealed or modified accordingly.

Section \_\_\_\_ *Effectivity* – This Ordinance shall take effect \_\_\_\_ days after a copy hereof is posted in a bulletin board at the entrance of the Municipal Hall and in at least two (2) other conspicuous places in the municipality and the Ordinance

has been published (once, twice, etc) in a local newspaper of general circulation in the province of \_\_\_\_\_.

APPROVED by the SANGGUNIANG BAYAN of \_\_\_\_\_,  
this \_\_ day of \_\_\_\_\_, 200\_\_.

Proposed outline of ordinance establishing a Marine Protected Area within municipal waters

**Republika ng Pilipinas**  
**SANGGUNIANG BAYAN NG \_\_\_\_\_**

ORDINANCE NO. \_\_\_\_\_  
Series of 200\_

AN ORDINANCE ESTABLISHING A MARINE PROTECTED AREA WITHIN THE MUNICIPAL WATERS, PROVIDING FOR THE MANAGEMENT, CONSERVATION, DEVELOPMENT AND PROTECTION THEREOF, APPROPRIATING FUNDS THEREFOR AND FOR OTHER PURPOSES.

WHEREAS, Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998, provides for the development, management and conservation of the fisheries and aquatic resources and integrates all laws pertinent thereto;

WHEREAS, Section 16 of Republic Act No. 8550 provides that the municipal government shall have jurisdiction over municipal waters as defined therein;

WHEREAS, Section 16 of Republic Act No. 8550 likewise provides that the municipal government, in consultation with the Fisheries and Aquatic Resources management Council (FARMC), shall be responsible for the management, conservation, development, protection, utilization, and disposition of all fish and fishery/aquatic resources within their respective municipal waters;

WHEREAS, Section 16 of Republic Act No. 8550 also provides that the municipal government may, in consultation with the FARMC, enact appropriate ordinances for the said purpose and in accordance with the National Fisheries Policy;

WHEREAS, Section 16 of Republic Act No. 8550 further provides that the LGU shall also enforce all fishery laws, rules and regulations as well as valid fishery ordinances enacted by the municipal council;

WHEREAS, Rule 16.3 of the IRR provides that the municipal government shall enact, in consultation with the Bureau of Fisheries and Aquatic Resources (BFAR), special fisheries ordinances, such as but not limited to declaring special demarcated fisheries areas, closed season and environmentally critical areas and sanctuaries;

WHEREAS, in order to fully and effectively exercise the mandate given under Republic Act No. 8550, the municipality, through the

\_\_\_\_\_, has formulated the Marine Protected Area (MPA) Plan of the Municipality including the budget for its implementation;

WHEREAS, the MPA Plan of the municipality prescribes the policies, principles and strategies for the sustainable development, conservation, protection, and management of the Marine Protected Area of the municipality;

WHEREAS, in the development and formulation of the MPA Plan, the principles of transparency, accountability and participatory decision-making were employed particularly with regard to the stakeholders and decision-makers;

WHEREAS, the MPA Plan was presented for public hearing and consensus before the various sectors and stakeholders;

WHEREAS, the MPA Plan of the municipality has been duly adopted and approved by the Municipal Development Council (MDC) through MDC Resolution No. \_\_\_\_\_, and by the Sangguniang Bayan through Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_;

NOW THEREFORE, BE IT ORDAINED, AS IT IS HEREBY ORDAINED by the Sangguniang Bayan of the Municipality of \_\_\_\_\_, in session duly assembled, that:

Section 1. *Establishment of a Marine Protected Area* – There is hereby established a Marine Protected Area in the municipal waters, as follows:

Specify the following:

- a. Type of protected area, eg., mangrove, marine sanctuary, etc.
- b. Location
- c. Size of area
- d. Boundaries
- e. Coordinates
- f. Other relevant information

\*(The contents of this section will be based on the MPA Plan of the municipality)

Section \_\_. *Purpose* – The Marine Protected Area shall be reserved for protection, rehabilitation and/or replenishment of fish and fishery/aquatic resources, etc. . .

\*(State the purpose and/or objectives for establishing the marine protected area)

Section \_\_. *Management* –

\*(This section will deal with the management of the marine protected area in accordance with the MPA Plan. If the MPA Plan provides for the establishment of a local body in the area to manage the same, such establishment, including the composition of the local body will be included in this section. The role of the Municipal CRM Office should also be stated)

Section \_\_. *Functions, Duties and Responsibilities* –

\*(This section will state the functions, duties and responsibilities of the body that will manage the marine protected area as provided in the MPA Plan. The functions and powers should include enforcement of this ordinance with regard to the prohibited and permitted activities)

Section \_\_. *Management Plan* –

\*(Assuming that the management plan for the MPA has not yet been formulated, this section will provide for the formulation of the management plan for the MPA, including the process for its approval. It is recommended, however, that a management plan be formulated before the enactment of this ordinance as the said plan will be the basis of the provisions of this ordinance.)

\*\*\*(If a management plan has already been formulated, this section will provide the activities that will be implemented in accordance with the Management Plan)

Section \_\_. *Establishment of Sub-Zones* –

\*(This section will deal with the establishment of sub-zones within the marine protected area if the MPA Plan so provides. Examples of sub-zones are buffer zones, limited use zones, strict protection zones, etc. The location, area, and coordinates of the sub-zones as well as other relevant information should be stated)

Section \_\_. *Prohibited Activities* –

\*(This section will enumerate the activities that are prohibited within the marine protected area as provided in the MPA Plan. The enumeration can be made per sub-zone)

Section \_\_. *Permitted Activities* – Subject to compliance with the requirements provided in the succeeding sections, the following activities may be undertaken in the marine protected area established herein:

\*(This section will enumerate the activities allowed to be undertaken inside the marine protected area in accordance with the MPA Plan. It is recommended that the enumeration be made on a per sub-zone basis)

Section \_\_. *Requirements* – No permitted activity within the Marine Protected Area shall be undertaken unless the following requirements are complied with:

\*(This section will enumerate the requirements needed as well as the process involved for complying with the requirements, before any permitted activity in the marine protected area is allowed to be undertaken. Examples of requirements are submission of application forms, signing in registration books or logbooks, payment of fees, presence of authorized guide, etc)

Section \_\_. *Schedule of Fees* –

\*(This section will set the schedule of fees to be collected for each activity permitted to be undertaken inside the marine protected area. It should also state where the collected fees will go)

Section \_\_. *Collected Fees* – The fees collected pursuant to this Ordinance shall be placed in and form part of the Marine Protected Area Fund.

Section \_\_. *Marine Protected Area Fund* – There is hereby created, as a special account of the municipality, a Marine Protected Area Fund to be administered by the \_\_\_\_\_. Such fund shall be sourced from the following:

- 1.
- 2.
- etc.

\*(This section will create the marine protected area fund to support the activities to be undertaken for the area as specified in the MPA Plan. It will also list the sources of the fund)

Section \_\_. *Use of the Marine Protected Area Fund* – The Marine Protected Area Fund shall be used to finance the following:

\*(Enumerate the uses of the fund)

Section \_\_. *Reporting and Auditing* –

\*(This section will provide the guidelines for reporting and auditing of the fund)

Section \_\_. *Monitoring and Evaluation* –

\*(This section will state the responsible group and the parameters for monitoring and evaluation of activities within the MPA as prescribed in the MPA Plan).

Section \_\_. *Enforcement Mechanisms* –

\*(This section will state the group/s responsible for enforcement, their responsibilities, and their relationship with other groups in accordance with the provisions of the MPA Plan on enforcement. An example will be the Bantay Dagat will be responsible for patrolling, apprehending, etc. The Bantay Dagat will submit reports to the body or group tasked to manage the MPA)

Section \_\_. *Fines and Penalties* –

\*(This section will prescribe the fines and penalties to be imposed for violation of the prohibited acts listed above and the other provisions of this ordinance. It should also prescribe where the fines collected will go)

Section \_\_. *Appropriations* – There is hereby appropriated the amount of \_\_\_\_\_ from the \_\_\_\_\_ for the Marine Protected Area Fund on the year this Ordinance is approved. Thereafter, the \_\_\_\_\_ shall submit its proposed annual budget to the \_\_\_\_\_ for inclusion in the Annual Investment Plan of the Municipality. The amount appropriated yearly shall form part of the Marine Protected Area Fund.

Section \_\_. *Separability Clause* – If any provision of this Ordinance or the application of such provision to any person or circumstances is declared invalid, the remainder of the Ordinance or the application of such provision to other persons or circumstances shall not be affected by such declaration.

Section \_\_. *Repealing Clause* – All ordinances, executive orders, rules and regulations or parts thereof which are inconsistent with this Ordinance are hereby repealed or modified accordingly.

Section \_\_. *Effectivity* – This Ordinance shall take effect \_\_ days after a copy hereof is posted in a bulletin board at the entrance of the Municipal Hall and in at least two (2) other conspicuous places in the municipality and the Ordinance has been published (once, twice, etc) in a local newspaper of general circulation in the province of \_\_\_\_\_.

APPROVED by the SANGGUNIANG BAYAN of \_\_\_\_\_,  
this \_\_ day of \_\_\_\_\_, 200\_\_.



# Annex 2H2

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- Guide to Policy Analysis



## **GUIDELINES FOR THE ANALYSIS OF MFM ORDINANCES**

Prior to the formulation of the policy support component of the Municipal Fisheries Management (MFM) Plan, it is important that LGUs do an analysis of their existing ordinances. The compilation, summary and analysis of these policies will be made part of the situational analysis of the MFM Plan.

The analysis will have two objectives. These are: 1) identifying gaps in terms of the requirements of Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998 and its Implementing Rules and Regulations (IRR); and 2) identify aspects in the ordinances where good governance practices can be integrated.

The LGU technical working group (TWG) should form a sub-group for this specific activity. This sub-group shall be tasked to undertake the compilation and summary of existing ordinances, and their analysis. The gaps identified in the analysis will indicate the types of ordinances that the TWG should include in the Policy Support Component of the MFM plan. The output of this activity will thus be used as inputs to the preparation of the policy support component of the MFM Plan and to the actual policy formulation.

The sub-group should include the Chair of the SB/SP Environment Committee and the ABC President. It is critical that sub-group members undertake a thorough review of RA 8550 and its IRR before starting the analysis of ordinances.

In performing the analysis, it is recommended that the following guidelines be observed:

### **I. Analysis to identify gaps in terms of the requirements of Republic Act No. 8550 and its IRR:**

Section 16 of Republic Act No. 8550 provides that the municipal/city government, in consultation with the Fisheries and Aquatic Resources Management Council (FARMC), shall be responsible for the management, conservation, development, protection, utilization and disposition of all fish and fishery/aquatic resources within their respective municipal waters. For this purpose and in accordance with the National Fisheries Policy, the municipal/city government may, in consultation with the FARMC, enact appropriate ordinances. Republic Act No. 8550 and its IRR identify a number of appropriate ordinances that LGUs may enact.

It is against this backdrop that this analysis will be conducted. It will basically address these questions:

1. Does the LGU have existing ordinances on municipal fisheries management including those on the issuance of permits and licenses?
2. Does the LGU have special municipal fisheries ordinances, such as but not limited to, declaring special demarcated fisheries areas, closed season, declaring municipal waters or parts thereof as over fished and prohibiting or limiting fisheries activities?
3. Does the LGU have an ordinance authorizing or permitting commercial fishing within municipal waters?
4. Do the ordinances conform to the provisions of RA 8550 and its IRR?

Use the attached guide (Annex A) for the detailed analysis of ordinances.

## **II. Analysis to identify gaps in terms of good governance in the ordinances enacted.**

The second aspect of the analysis will focus on the identification of gaps in terms of good governance, particularly with regard to the principles of transparency, accountability, and participatory decision-making. Refer to Annex B for the Guide to the Analysis of Governance Features, which defines these three principles and provides examples on how they can be put into place.

This analysis will be conducted on existing ordinances enacted by the LGU on MFM. In the absence of such ordinances, this part of the analysis will not be undertaken. Instead, this portion may serve as a guide in the preparation of ordinances specifically with regard to the provisions on transparency, accountability and participatory decision-making.

For this part of the analysis, the relevant questions are:

1. Does the ordinance contain provisions that prescribe transparency?
2. Does the ordinance clearly identify the centers of responsibility?
3. Does the ordinance provide who shall be held accountable for actions and decisions?
4. Were the stakeholders involved in the preparation of the ordinance?
5. Does the ordinance provide mechanisms by which the stakeholders can participate in the decision-making process?

Annex C provides the detailed guide for the conduct of this particular analysis.

**Annex A. Matrix for analysis of ordinances (MFM) re: compliance with RA 8550 and IRR**

ISSUE	NO	YES	DETAILS
<b>1. Municipal fisheries management</b>			
<ul style="list-style-type: none"> <li>Does the LGU have existing ordinances on municipal fisheries management?</li> </ul> *(If response to this question is yes, also answer the succeeding questions)			(If yes, state ordinance number, year and title)
<ul style="list-style-type: none"> <li>Does the ordinance specify the area covered by the ordinance?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Are the boundaries of the area covered by the ordinance identified and/or delineated?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance establish zones inside municipal waters?</li> </ul> If yes: <ul style="list-style-type: none"> <li>Are the boundaries of the zones delineated?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance specify who shall exercise jurisdiction over the area covered?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Is the scope of the ordinance stated? (i.e. management? development? utilization? conservation? etc)</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide for the creation of a body to manage the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide institutional arrangements for the management of the area?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the ordinance specify what activities are allowed within the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance prescribe guidelines for the conduct of activities that are allowed within the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance prescribe the qualifications of the users of the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state who shall have priority in the use of the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide for a registry of fisherfolk?</li> </ul> <p>If yes:</p> <ul style="list-style-type: none"> <li>Does it provide the criteria for registration?</li> <li>Does it state the purpose for which the registry shall be used?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide for a registry of municipal fishing vessels?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide for the grant of exclusive fishery privileges?</li> </ul> <p>If yes:</p> <ul style="list-style-type: none"> <li>Does it state who shall have preferential rights in the grant of exclusive fishery privileges?</li> <li>Does it prescribe the procedure for granting exclusive fishery privileges?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the ordinance require permits and/or licenses for the conduct of specified activities?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide the procedure for issuance of permits and licenses?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state the grounds for denial of applications for permits and/or licenses?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state the grounds for cancellation or revocation of licenses and/or permits issued?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide the procedure for cancellation or revocation of licenses or permits issued?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance specify the gears allowed in the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance impose fees for the use of gears allowed in the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance impose fees for the conduct of specified activities?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state where the fees collected will go?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide for the issuance of auxiliary invoices?</li> </ul>			
<ul style="list-style-type: none"> <li>Does the ordinance prohibit certain acts and impose fines and/or penalties for violation?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the ordinance provide mechanisms for monitoring and evaluation?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide enforcement mechanisms?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide for the establishment of a fund?</li> </ul> If yes: <ul style="list-style-type: none"> <li>Does it state who will manage the fund?</li> <li>Does it state how the fund will be used?</li> <li>Does it provide for reporting on and auditing of the fund?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Is the ordinance being implemented?</li> </ul>			(If no, state the causes or reasons)
<ul style="list-style-type: none"> <li>Does the LGU include the funds needed to implement the ordinance in its annual budget?</li> </ul>			(If yes, state if included regularly. If no, state the reason)
<ul style="list-style-type: none"> <li>Have there been any recorded incidents of violation?</li> </ul>			(If no, state the reasons)
<ul style="list-style-type: none"> <li>Have there been any recorded apprehensions, prosecutions, or impositions of fines and/or penalties for violations?</li> </ul>			(If no, state the causes or reasons)
<ul style="list-style-type: none"> <li>Was the ordinance enacted in consultation with the FARMC?</li> </ul>			(If yes, state the details. If no, state the reason)
<b>2. Special municipal fisheries ordinances</b>			
<ul style="list-style-type: none"> <li>Does the LGU have an ordinance declaring special demarcated fisheries areas?</li> </ul>			(If yes, state ordinance number, year and title)
<ul style="list-style-type: none"> <li>Does the LGU have an ordinance declaring closed season on specified fisheries activities?</li> </ul>			(If yes, state ordinance number, year and title)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the LGU have an ordinance declaring municipal waters or parts thereof as over fished and prohibiting or limiting fisheries activities?</li> </ul>			(If yes, state ordinance number, year and title)
<b>3. Commercial fishing within municipal waters</b>			
<ul style="list-style-type: none"> <li>Does the LGU have an ordinance authorizing or permitting commercial fishing within municipal waters?</li> </ul> *(If response to this question is yes, also answer the succeeding questions)			(If yes, state ordinance number, year and title)
<ul style="list-style-type: none"> <li>Does the ordinance specify the areas covered by the ordinance?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Are the boundaries of the areas identified and/or delineated?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Is the commercial fishing area in the municipal waters within 10.1 to 15 kilometers from the shoreline?</li> </ul>			
<ul style="list-style-type: none"> <li>Does the commercial fishing area have a depth of 7 fathoms or more?</li> </ul>			
<ul style="list-style-type: none"> <li>Was the depth of 7 fathoms or more certified by the appropriate agency?</li> </ul>			(If yes, state the government agency and date of certification)
<ul style="list-style-type: none"> <li>Does the ordinance state who shall manage the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance specify what activities are allowed within the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance prescribe guidelines for the conduct of activities that are allowed within the area?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the ordinance prescribe the qualifications of the users of the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance require permits and/or licenses for the conduct of specified activities?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide the procedure for issuance of permits and licenses?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state the grounds for denial of applications for permits and/or licenses?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state the grounds for cancellation or revocation of licenses and/or permits issued?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide the procedure for cancellation or revocation of licenses or permits issued?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance specify the gears allowed in the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance impose fees for the use of gears allowed in the area?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance impose fees for the conduct of specified activities?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state where the fees collected will go?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance prescribe the type of fishing vessel allowed to operate in the commercial fishing area?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the ordinance prescribe the requirements for applicant vessels as well as the ship owner, employer, captain and crew?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance prohibit certain acts and impose fines and/or penalties for violation?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide mechanisms for monitoring and evaluation?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide enforcement mechanisms?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Is the ordinance being implemented?</li> </ul>			(If no, state the causes or reasons)
<ul style="list-style-type: none"> <li>Have there been any recorded incidents of violation?</li> </ul>			(If no, state the reasons)
<ul style="list-style-type: none"> <li>Have there been any recorded apprehensions, prosecutions, or impositions of fines and/or penalties for violations?</li> </ul>			(If no, state the causes or reasons)
<ul style="list-style-type: none"> <li>Was a public hearing, in consultation with the FARMC, conducted before the ordinance was passed?</li> </ul> <p>If yes:</p> <ul style="list-style-type: none"> <li>Was a map showing the area where commercial fishing will be allowed presented in the public hearing?</li> <li>Were the types of fishing vessel and gear that will be allowed presented in the public hearing?</li> <li>Was the draft municipal fisheries ordinance permitting or allowing commercial fishing presented in the public hearing?</li> </ul>			(If no, state the causes or reasons)

**Annex B. Guide to the Analysis of the Governance Features (Transparency, Accountability and Participatory Decision-Making) of Resource Management Interventions**

	<b>TRANSPARENCY</b>	<b>ACCOUNTABILITY</b>	<b>PARTICIPATORY DECISION-MAKING</b>
Definitions	<p><u>Transparency</u> is the extent to which the general public has credible and reliable information about the state and conduct of affairs of a government unit or public agency.</p> <p>Transparency is <i>indicated</i> by the predictability that the residents of a government unit, or the publics of an agency, are able to avail of timely, relevant, accurate and complete information on the decisions and actions they make and do.</p>	<p><u>Accountability</u> is the degree to which the officials and staff of a government unit or of an agency can be predictably held responsible for their decisions and actions and for the performance of their staff and offices.</p> <p>Accountability is <i>indicated</i> by the extent (1) the lines and centers of (a) command and control (vertical accountability) and (b) checks and balances (horizontal accountability) are clear to all concerned, (2) the standards of conduct and procedures of due diligence are being observed by officials and staff, and (3) the sanctions being imposed for violations of standards and procedures are clear</p>	<p><u>Participation</u> is the degree that the general public, especially key stakeholders and marginalized groups (low income groups, indigenous peoples, women, farmers and fishers, and religious minorities) are predictably able to have access and opportunities to influence the decision or action of a government unit or public agency.</p> <p>Participation is <i>indicated</i> by the extent that stakeholders and publics outside their roster of officials and staff shape the decisions of a unit or agency. It is indicated by how less the officials and staff exercise discretion over decisions and actions.</p>

	<b>TRANSPARENCY</b>	<b>ACCOUNTABILITY</b>	<b>PARTICIPATORY DECISION-MAKING</b>
Guide Questions for the Analysis/ Design of TAP Interventions	<p>How is information on LGU actions and decisions, generated, analyzed and disseminated to the general public? Does the public have easy access to these means?</p> <p>When is the information disseminated? (before the decision/action; after the decision/action; only when demanded)</p> <p>Is the information provided current, complete and accurate?</p>	<p>Who will be responsible for particular actions and decisions? Are these roles and responsibilities clearly defined in plan documents, ordinances, and orders?</p> <p>How will performance be monitored and evaluated?</p> <p>How will good performance/ observance of procedures be recognized? Are there clear sanctions for violations of standards and procedures?</p>	<p>How are the stakeholders of a particular activity identified? Are they sufficiently represented?</p> <p>How do the stakeholder groups participate in decision-making at various stages of project planning and implementation?</p> <p>How are incentives for participation of each stakeholder provided?</p>
Some Examples of Governance Mechanisms	<p>Posting of proposals/plans/zoning maps, ordinances, and proceedings in public bulletin boards</p> <p>Periodic publication of performance audit reports, financial statements, reports on license/permit issuances, results of transactions/bidding</p> <p>Publication/announcement of meetings and public consultations/ hearings well ahead of schedule</p> <p>Publication of systems and procedures, selection criteria</p> <p>IEC on local legislations enacted</p>	<p>Clear definition of roles and responsibilities</p> <p>Clear sanctions and incentives</p> <p>Clear schedule of activities and performance standards/key result areas</p> <p>M and E of plan implementation</p> <p>Periodic performance audit</p>	<p>Public consultations/hearings prior to decision-making/legitimization</p> <p>Multi-sectoral representation in committees, working groups, management councils, enforcement groups</p> <p>Consensus building (e.g., visioning, resource uses, selection of sectoral /civil society reps); establishment of conflict resolution mechanisms</p> <p>Community validation of resource assessments results, issues, plan priorities Participatory M and E; community feedback system</p>

**Annex C. Matrix for analysis of ordinances re: Good Governance elements**

ISSUE	NO	YES	DETAILS
<b>1. Transparency</b>			
<ul style="list-style-type: none"> <li>Does the public know of the existence of the ordinance?</li> </ul>			
<ul style="list-style-type: none"> <li>Does the ordinance contain mechanisms by which its provisions will be made known to the public?</li> </ul> <p>Of specific concern are the provisions that deal with:</p> <ul style="list-style-type: none"> <li>Licenses and permits, including the requirements for the same</li> <li>Procedure involved in obtaining licenses and permits</li> <li>Grounds for denial of applications</li> <li>Grounds for cancellation of licenses or permits issued</li> <li>Office, agency or body that will serve as the responsibility center for the implementation and/or enforcement of the ordinance/s</li> <li>Activities allowed</li> <li>Fees</li> <li>Prohibited acts and penalties</li> </ul>			(If yes, state the mechanisms)
<ul style="list-style-type: none"> <li>Does the ordinance provide for dissemination to the general public of subsequent acts undertaken pursuant to the ordinances?</li> </ul> <p>Some examples of this are:</p> <ul style="list-style-type: none"> <li>Publication of the list of areas available for utilization by the residents</li> <li>Publication of the list of licenses and/or permits issued including the updated lists</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state the means or how the information, such as those listed above, will be disseminated to the general public?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the public have easy access to these means?</li> </ul>			
<ul style="list-style-type: none"> <li>Does the ordinance provide when the information will be disseminated to the public?</li> </ul>			(If yes, state the provision)
<b>2. Accountability</b>			
<ul style="list-style-type: none"> <li>Does the ordinance identify who will be responsible for particular actions and decisions?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Are the roles and responsibilities of those responsible for the particular actions and decisions clearly defined in the ordinance?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide the mechanisms on how the performance of those responsible for actions and decisions will be monitored and evaluated?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance provide how good performance or observance of procedures by those responsible for actions and decisions will be recognized?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance have clear sanctions or punishments for violations of standards and procedures by those responsible for actions and decisions?</li> </ul>			(If yes, state the provision)
<b>3. Participatory Decision-Making</b>			
<ul style="list-style-type: none"> <li>Were the stakeholders involved in the formulation of the ordinances?</li> </ul>			(Provide details)
<ul style="list-style-type: none"> <li>Do stakeholders have access and opportunities to participate in or influence the decisions or actions of those responsible for such decisions or actions in the implementation and enforcement of the ordinances?</li> </ul>			(Provide details)

ISSUE	NO	YES	DETAILS
• Does the ordinance provide how the stakeholders are identified?			(If yes, state the provision)
• Are the stakeholders sufficiently represented?			(If yes, provide details. If no, state the reasons)
• Do stakeholder groups participate in decision-making?			(If yes, provide details. If no, state the reasons)
• Are there incentives for participation of stakeholders?			(If yes, state how these incentives are provided)

## **GUIDELINES FOR THE ANALYSIS OF MPA ORDINANCES**

Prior to the formulation of the policy support component of the Marine Protected Area (MPA) Management Plan, it is important that LGUs do an analysis of their existing ordinances. The compilation, summary and analysis of these policies will be made part of the situational analysis of the MPA Plan.

The analysis will have two objectives. These are: 1) identifying gaps in terms of the requirements of Republic Act No. 8550, also known as The Philippine Fisheries Code of 1998 and its Implementing Rules and Regulations (IRR); and 2) identify aspects in the ordinances where good governance practices can be integrated.

The LGU technical working group (TWG) should form a sub-group for this specific activity. This sub-group shall be tasked to undertake the compilation and summary of existing ordinances, and their analysis. The gaps identified in the analysis will indicate the types of ordinances that the TWG should include in the Policy Support Component of the MPA plan. The output of this activity will thus be used as inputs to the preparation of the policy support component of the MPA Plan and to the actual policy formulation.

The sub-group should include the Chair of the SB/SP Environment Committee and the ABC President. It is critical that sub-group members undertake a thorough review of RA 8550 and its IRR before starting the analysis of ordinances.

In performing the analysis, it is recommended that the following guidelines be observed:

### **I. Analysis to identify gaps in terms of the requirements of Republic Act No. 8550 and its IRR:**

Section 16 of Republic Act No. 8550 provides that the municipal/city government, in consultation with the Fisheries and Aquatic Resources Management Council (FARMC), shall be responsible for the management, conservation, development, protection, utilization and disposition of all fish and fishery/aquatic resources within their respective municipal waters. For this purpose and in accordance with the National Fisheries Policy, the municipal/city government may, in consultation with the FARMC, enact appropriate ordinances. Republic Act No. 8550 and its IRR identify a number of appropriate ordinances that LGUs may enact.

It is against this backdrop that this analysis will be conducted. It will basically address the following question:

1. Does the LGU have existing ordinances on the establishment, management, development, and protection of marine protected area/s within its municipal waters?

Use the attached guide (Annex A) for the detailed analysis of ordinances.

## **II. Analysis to identify gaps in terms of good governance in the ordinances enacted.**

The second aspect of the analysis will focus on the identification of gaps in terms of good governance, particularly with regard to the principles of transparency, accountability, and participatory decision-making. Refer to Annex B for the Guide to the Analysis of Governance Features, which defines these three principles and provides examples on how they can be put into place.

This analysis will be conducted on existing ordinances enacted by the LGU on MPA Management. In the absence of such ordinances, this part of the analysis will not be undertaken. Instead, this portion may serve as a guide in the preparation of ordinances specifically with regard to the provisions on transparency, accountability and participatory decision-making.

For this part of the analysis, the relevant questions are:

1. Does the ordinance contain provisions that prescribe transparency?
2. Does the ordinance clearly identify the centers of responsibility?
3. Does the ordinance provide who shall be held accountable for actions and decisions?
4. Were the stakeholders involved in the preparation of the ordinance?
5. Does the ordinance provide mechanisms by which the stakeholders can participate in the decision-making process?

Annex C provides the detailed guide for the conduct of this particular analysis.

**Annex A. Matrix for analysis of ordinances (MPA) re: compliance with RA 8550 and IRR**

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the LGU have existing ordinances on the establishment, management, development and protection of marine protected area/s within its municipal waters?</li> </ul> <p>*(If response to this question is yes, also answer the succeeding questions)</p>			(If yes, state ordinance number, year and title)
<ul style="list-style-type: none"> <li>Does the ordinance specify the area covered by the ordinance?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Are the boundaries of the area covered by the ordinance identified and/or delineated?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance specify the type of protected area being established?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance state the purpose/s for which the marine protected area is being established?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance establish sub-zones within the marine protected area?</li> </ul> <p>If yes:</p> <ul style="list-style-type: none"> <li>Are the boundaries of the sub-zones delineated?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance provide for the creation of a body to manage the marine protected area?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance specify what activities are allowed within the area?</li> </ul>			(If yes, state the provisions)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>Does the ordinance prescribe the requirements needed to be complied with before allowed activities may be undertaken?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance impose fees for the conduct of activities that are allowed within the area?</li> </ul>			(If yes, state the provisions)
<ul style="list-style-type: none"> <li>Does the ordinance state where the collected fees will go?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance prohibit certain acts and impose fines and/or penalties for violation?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance establish a marine protected area fund or similar fund?</li> </ul> <p>If yes:</p> <ul style="list-style-type: none"> <li>Does the ordinance state who shall administer the fund?</li> <li>Does the ordinance state the source/s of the fund?</li> <li>Does the ordinance state the purpose/s for which the fund may be used?</li> <li>Does the ordinance provide for reporting on and auditing of the fund?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance provide for the monitoring and evaluation of activities in the marine protected area?</li> </ul>			(If yes, state the provision of the ordinance)
<ul style="list-style-type: none"> <li>Does the ordinance provide mechanisms for its enforcement?</li> </ul>			(If yes, state the provision of the ordinance)

ISSUE	NO	YES	DETAILS
• Is the ordinance being implemented?			(If no, state the causes or reasons)
• Does the LGU include the funds needed to implement the ordinance in its annual budget?			(If yes, state if included regularly. If no, state the reason)
• Have there been any recorded incidents of violation?			(If no, state the reasons)
• Have there been any recorded apprehensions, prosecutions, or impositions of fines and/or penalties for violations?			(If no, state the causes or reasons)
• Was the ordinance enacted in consultation with the FARMC?			(If yes, state the details. If no, state the reason)

## Annex B. Guide to the Analysis of the Governance Features (Transparency, Accountability and Participatory Decision-Making) of Resource Management Interventions

	<b>TRANSPARENCY</b>	<b>ACCOUNTABILITY</b>	<b>PARTICIPATORY DECISION- MAKING</b>
Definitions	<p><u>Transparency</u> is the extent to which the general public has credible and reliable information about the state and conduct of affairs of a government unit or public agency.</p> <p>Transparency is <i>indicated</i> by the predictability that the residents of a government unit, or the publics of an agency, are able to avail of timely, relevant, accurate and complete information on the decisions and actions they make and do.</p>	<p><u>Accountability</u> is the degree to which the officials and staff of a government unit or of an agency can be predictably held responsible for their decisions and actions and for the performance of their staff and offices.</p> <p>Accountability is <i>indicated</i> by the extent (1) the lines and centers of (a) command and control (vertical accountability) and (b) checks and balances (horizontal accountability) are clear to all concerned, (2) the standards of conduct and procedures of due diligence are being observed by officials and staff, and (3) the sanctions being imposed for violations of standards and procedures are clear</p>	<p><u>Participation</u> is the degree that the general public, especially key stakeholders and marginalized groups (low income groups, indigenous peoples, women, farmers and fishers, and religious minorities) are predictably able to have access and opportunities to influence the decision or action of a government unit or public agency.</p> <p>Participation is <i>indicated</i> by the extent that stakeholders and publics outside their roster of officials and staff shape the decisions of a unit or agency. It is indicated by how less the officials and staff exercise discretion over decisions and actions.</p>
Guide Questions for the Analysis/ Design of TAP Interventions	<p>How is information on LGU actions and decisions, generated, analyzed and disseminated to the general public? Does the public have easy access to these means?</p> <p>When is the information disseminated? (before the decision/action; after the decision/action; only when demanded)</p> <p>Is the information provided current, complete and accurate?</p>	<p>Who will be responsible for particular actions and decisions? Are these roles and responsibilities clearly defined in plan documents, ordinances, and orders?</p> <p>How will performance be monitored and evaluated?</p> <p>How will good performance/ observance of procedures be recognized? Are there clear sanctions for violations of standards and procedures?</p>	<p>How are the stakeholders of a particular activity identified? Are they sufficiently represented?</p> <p>How do the stakeholder groups participate in decision-making at various stages of project planning and implementation?</p> <p>How are incentives for participation of each stakeholder provided?</p>

	<b>TRANSPARENCY</b>	<b>ACCOUNTABILITY</b>	<b>PARTICIPATORY DECISION-MAKING</b>
<p>Some Examples of Governance Mechanisms</p>	<p>Posting of proposals/plans/zoning maps, ordinances, and proceedings in public bulletin boards</p> <p>Periodic publication of performance audit reports, financial statements, reports on license/permit issuances, results of transactions/bidding</p> <p>Publication/announcement of meetings and public consultations/hearings well ahead of schedule</p> <p>Publication of systems and procedures, selection criteria</p> <p>IEC on local legislations enacted</p>	<p>Clear definition of roles and responsibilities</p> <p>Clear sanctions and incentives</p> <p>Clear schedule of activities and performance standards/key result areas</p> <p>M and E of plan implementation</p> <p>Periodic performance audit</p>	<p>Public consultations/hearings prior to decision-making/legitimization</p> <p>Multi-sectoral representation in committees, working groups, management councils, enforcement groups</p> <p>Consensus building (e.g., visioning, resource uses, selection of sectoral /civil society reps); establishment of conflict resolution mechanisms</p> <p>Community validation of resource assessments results, issues, plan priorities</p> <p>Participatory M and E; community feedback system</p>

**Annex C. Matrix for analysis of ordinances re: Good Governance elements**

ISSUE	NO	YES	DETAILS
<b>1. Transparency</b>			
<ul style="list-style-type: none"> <li>Does the public know of the existence of the ordinance?</li> </ul>			
<ul style="list-style-type: none"> <li>Does the ordinance contain mechanisms by which its provisions will be made known to the public?</li> </ul> <p>Of specific concern are the provisions that deal with:</p> <ul style="list-style-type: none"> <li>Location, size and boundaries of the area</li> <li>Office, agency or body that will serve as the responsibility center for the implementation and/or enforcement of the ordinance/s</li> <li>Activities allowed</li> <li>Requirements needed to be complied with before allowed activities may be conducted</li> <li>Fees</li> <li>Prohibited acts and penalties</li> </ul>			(If yes, state the mechanisms)
<ul style="list-style-type: none"> <li>Does the ordinance provide for dissemination to the general public of subsequent acts undertaken pursuant to the ordinances?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the ordinance state the means or how the information, such as those listed above, will be disseminated to the general public?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>Does the public have easy access to these means?</li> </ul>			
<ul style="list-style-type: none"> <li>Does the ordinance provide when the information will be disseminated to the public?</li> </ul>			(If yes, state the provision)
<b>2. Accountability</b>			
<ul style="list-style-type: none"> <li>Does the ordinance identify who will be responsible for particular actions and decisions?</li> </ul>			(If yes, state the provision)

ISSUE	NO	YES	DETAILS
<ul style="list-style-type: none"> <li>• Are the roles and responsibilities of those responsible for the particular actions and decisions clearly defined in the ordinance?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>• Does the ordinance provide the mechanisms on how the performance of those responsible for actions and decisions will be monitored and evaluated?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>• Does the ordinance provide how good performance or observance of procedures by those responsible for actions and decisions will be recognized?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>• Does the ordinance have clear sanctions or punishments for violations of standards and procedures by those responsible for actions and decisions?</li> </ul>			(If yes, state the provision)
<b>3. Participatory Decision-Making</b>			
<ul style="list-style-type: none"> <li>• Were the stakeholders involved in the formulation of the ordinances?</li> </ul>			(Provide details)
<ul style="list-style-type: none"> <li>• Do stakeholders have access and opportunities to participate in or influence the decisions or actions of those responsible for such decisions or actions in the implementation and enforcement of the ordinances?</li> </ul>			(Provide details)
<ul style="list-style-type: none"> <li>• Does the ordinance provide how the stakeholders are identified?</li> </ul>			(If yes, state the provision)
<ul style="list-style-type: none"> <li>• Are the stakeholders sufficiently represented?</li> </ul>			(If yes, provide details. If no, state the reasons)
<ul style="list-style-type: none"> <li>• Do stakeholder groups participate in decision-making?</li> </ul>			(If yes, provide details. If no, state the reasons)
<ul style="list-style-type: none"> <li>• Are there incentives for participation of stakeholders?</li> </ul>			(If yes, state how these incentives are provided)



# Annex 2I

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- IEC Communications Plan Matrix



Sample Communications Plan Matrix

Key Issues (needs, current practices)	Objectives by target audience	Key Activities	Channels	Key Message Concept	Timetable	Responsible person	Resources Needed	Expected Outputs
1. There are no barangay ordinances/resolutions re: mangrove protection	Encourage barangay council to pass resolutions/ordinances re: mangrove protection	Meet with barangay captain to stress urgency of problem and get his/her support	Meeting	Mangroves are important to coastal barangays, You can help protect them by passing resolutions/ordinances	March			Resolution/Ordinances, barangay wide info drive, etc.
1.1 Barangay leaders don't care about mangroves		Orient barangay council about the importance of mangrove areas to barangay in general and the livelihood of fishermen in particular	Orientation, presentation material, print materials (flyers)		April			
1.2 Barangay leaders do not know about the negative impacts of illegal cutting of mangroves		Provide council with infor (sample ordinance, etc.) on how to draft ordinance	Print sample ordinance		May			
2. Residents do not report illegal cutting of mangroves	Persuade fishermen's wives to report illegal cutting of mangroves to barangay office	Orient wive's groups - with help of barangay captain-about ill effects of illegal cutting on livelihood	Assemblies	Wives of fishermen should get involved in fighting illegal cutting of mangroves - that destroys fish and fish habitats- by reporting the perpetrators to the barangay	April			Number of reports made, No. of visits to barangay to ask questions, etc.
2.1 Residents do not know where to report illegal activities		Distribute flyers on illegal cutting and where to report	Print flyers		April			
2.2 Residents do not know how important mangroves are to their livelihood		Produce/air radio plugs on ill effects of illegal cutting and where to report	Radion		April to May			