

**TENURE AND ACCESS, SHIFTER INVESTMENTS, AND  
INCENTIVES/DISINCENTIVES: ECOGOVERNANCE  
INSTRUMENTS AS USED IN FOUR COASTAL  
MUNICIPALITIES IN CENTRAL VISAYAS**

**Hilconida P. Calumpong, BS, MS, PhD  
Roberto D. Montebon, AB, MBA  
Mikhail Lee L. Maxino, AB, LLB, LLM  
Manuel R. Arbon, AB, LLB, LLM**

**LEGAL ENVIRONMENT ADVOCACY PROGRAM**

College of Law  
Silliman University

*[This is a project subcontracted by the Development Alternatives, Inc. under the Philippine Environmental Governance Project (EcoGov), a technical assistance grant by the United States Agency for International Development (USAID) to the Government of the Philippines in partnership with DENR, local government units (LGUs), and civil society organizations]*

**TENURE AND ACCESS, SHIFTER INVESTMENTS, AND  
INCENTIVES/DISINCENTIVES: ECOGOVERNANCE  
INSTRUMENTS AS USED IN FOUR COASTAL MUNICIPALITIES  
IN CENTRAL VISAYAS**

**TABLE OF CONTENTS**

Table of Contents	i	
Definition of Terms	iv	
Acknowledgments	v	
Executive Summary	vi	
<b>CHAPTER 1 – INTRODUCTION</b>		
1.1	Background and Rationale of the Study	1
1.2	Objectives of the Study	2
1.3	Conceptual Framework	3
	1.3.1 The Basic Premises	3
	1.3.2 State of Ecosystem in Relation to Ecogovernance Instruments	6
	1.3.3 LGU as a Focal Point of Analysis	8
<b>CHAPTER 2 - METHODOLOGY</b>		
2.1	Review of Literature	10
2.2	Review of Policies, Legislations, and Ordinances	10
2.3	Case Studies	10
2.4	Consultations and Validation of Findings	12
<b>CHAPTER 3 - THE EXISTING TENURIAL INSTRUMENT AND INCENTIVE SYSTEM FRAMEWORK IN THE PHILIPPINES</b>		
3.1	Tenure and Access	13
3.2	Incentive System	14
<b>CHAPTER 4 – RESULTS OF THE CASE STUDIES</b>		
4.1	Dauin, Negros Oriental	18
4.2	Moalboal, Cebu	27
4.3	Panglao, Bohol	34
4.4	Sibulan, Negros Oriental	43
4.5	Synthesis and Conclusions	51

CHAPTER 5 - SOME LOCAL AND INTERNATIONAL EXPERIENCES  
ON IMPROVING ECOGOVERNANCE

5.1	BioVillages/EcoVillages: Expanding the Scope of Fisherfolk Settlement Areas	55
5.2	Performance-Driven Incentive Systems	59
5.3	Making Property Rights Marketable: Individual Transferable Quotas	60
5.4	Conservation Foundations	62
5.5	Debt-for-Nature Swap	64
5.6	Fiscal Instruments: Taxes, Charges, Fees and Bond Flotation	66
5.7	Summary and Recommendations	68

CHAPTER 6 – SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	71
---	----

CHAPTER 7 – REFERENCES	73
------------------------	----

ATTACHMENTS

Attachment A	<b><u>Prototype Ordinance</u></b> : “A Comprehensive Municipal Ordinance Providing for the Sustainable Governance, Management, Development, and Conservation of the Municipal Waters and its Coastal Resources, Harmonizing and Integrating All Ordinances Pertinent Thereto, and For Other Purposes.”
--------------	--

ANNEXES

4.1.0	Summary of Revenues and Expenditures, Municipality of Dauin, 1994-2001
4.2.0	Municipal Development Projects, Municipality of Dauin, 1994-2002
4.3.0	Shifter Investment Strategies for the Municipality of Dauin
4.4.0	Fees, Charges, Other Fiscal Resources and Incentives/Disincentives, Municipality of Dauin
4.5.0	Summary of Revenues and Expenditures, Municipality of Moalboal, 1993-1999
4.6.0	Municipal Development Projects, Municipality of Moalboal, 1996-2002
4.7.0	Shifter Investment Strategies for the Municipality of Moalboal
4.8.0	Fees, Charges, Other Fiscal Resources and Incentives/Disincentives, Municipality of Moalboal
4.9.0	Summary of Revenues and Expenditures, Municipality of Panglao, 1994-2001
4.10.0	Municipal Development Projects, Municipality of Panglao, 1993-2002
4.11.0	Shifter Investment Strategies for the Municipality of Panglao
4.12.0	Fees, Charges, Other Fiscal Resources and Incentives/Disincentives, Municipality of Panglao
4.13.0	Summary of Revenues and Expenditures, Municipality of Sibulan, 1993-2001
4.14.0	Municipal Development Projects, Municipality of Sibulan, 1993-2002
4.15.0	Shifter Investment Strategies for the Municipality of Sibulan

4.16.0 Fees, Charges, Other Fiscal Resources and Incentives/Disincentives, Municipality of Sibulan

APPENDICES

Appendix 1-1	TAP Index Calculator, Municipality of Dauin
Appendix 1-2	TAP Index Calculator, Municipality of Moalboal
Appendix 1-3	TAP Index Calculator, Municipality of Panglao
Appendix 1-4	TAP Index Calculator, Municipality of Sibulan
Appendix 2-1	List of Participants, Municipality of Dauin
Appendix 2-2	List of Participants, Municipality of Moalboal
Appendix 2-3	List of Participants, Municipality of Panglao
Appendix 2-4	List of Participants, Municipality of Sibulan
Appendix 3-1	Workshop Outputs, Municipality of Dauin
Appendix 3-2	Workshop Outputs, Municipality of Moalboal
Appendix 3-3	Workshop Outputs, Municipality of Panglao
Appendix 3-4	Workshop Outputs, Municipality of Sibulan

## **DEFINITION OF TERMS**

1. Tenure - refers to the right to permanent occupation and utilization of state-owned or public property.
2. Tenurial/Access Instruments - mechanisms instituted to regulate access to state-owned resources such as licenses and permits; taxes and rent fees; leases, bans and protected areas; and property or preferential rights.
3. Shifter Investments – refers to any or all of the following:
  - (a) *Shift in Production Activity.* Changing or moving a household's or group's primary productive activity, which may be putting pressure and/or contributing to the degradation of coastal/marine resources, towards a more environment/ecologically friendly undertaking;
  - (b) *Shift in Consumption Patterns.* The promotion of household savings and/or modification of consumption patterns in order to reduce the demand for products generated out of coastal/marine resources;
  - (c) *Improvement in Commodity Flows.* Improvement in the efficiency of materials handling and commodity flows so as to reduce wastages of coastal resource-based products.
4. Incentives/Disincentives – For purposes of this paper a broad definition will be utilized. *Incentives* are, therefore, defined as inducements, rewards, motivators, or even conditions that encourage a certain action or a pattern of behavior. A *disincentive*, on the other hand, is something that is meant to discourage or deter an action or behavior.

## **ACKNOWLEDGMENTS**

We are deeply grateful to the Mayors of Dauin, Moalboal, Panglao and Sibulan for their permission to let their municipalities be part of the ECOGOV case studies and for making sure that the necessary documents be provided to the team. In this connection, we thank the SB secretaries for supplying us the ordinances and resolutions, the Budget Officer for the Investment Plans, the Municipal Accountant and other finance officers of the LGU for the financial statements, and the MPDOs for the Land Use and CRM Plans. We are also appreciative of the time spent by the MPDOs of the abovementioned municipalities in filling up the TAP questionnaire. Finally, we thank the LGU officials, Bantay Dagat and representatives of Fishermen's Associations and other POs and NGOs for participating in the Validation Workshops.

We acknowledge the funding and direction for this project from Development Alternatives, Inc. under Contract No. PCE-1-00-99-00002-00.

## **EXECUTIVE SUMMARY**

The Development Alternatives, Inc. (DAI) contracted the Silliman University Legal Environmental Advocacy Program (SU-LEAP) to conduct a case study of local governance instruments utilized and implemented to specifically respond to tenurial and shifter investment issues in a coastal area. This study is part of the Philippine Environmental Governance Project (EcoGov) of the Department of Environment and Natural Resources (DENR) with financial assistance from the United States Agency for International Development (USAID).

Four coastal LGUs, Dauin and Sibulan in Negros Oriental, Moalboal in Cebu, and Panglao in Bohol were selected based on the following criteria: (1) the existence of projects that could provide information, (2) their performance record in environmental conservation and management, (3) presence of NIPAS protected areas, and (4) other specific considerations such as leadership in CRM. In addition, these sites were also studied in relation to ecogovernance, specifically to examine legislations passed that promote transparency, accountability and participation.

Results of the study showed that all of the municipalities are heavily dependent on their Internal Revenue Allotment (IRA) for operations from 80% to 100%. This means that the LGUs are vulnerable to cutbacks in their IRAs and may impinge on their environmental program. Except in one LGU, ecogovernance seemed to have lower priority as compared to infrastructure, health and education.

There is evidence to show that LGUs can generate significant revenues from coastal/marine-based activities. Examples from this case study are entrance fees from marine protected areas and ecotourism. Each of the LGU studied had varying mechanisms to generate such revenues. There is a need to develop a systematic program by which this can become more efficient. LGUs are still looking for appropriate shifter investment strategies that can benefit their residents. Apart from ecotourism, no other successful shifter investment strategy was seen in the four LGUs studied.

Incentives/disincentives pursued by the LGUs studied are mostly those initiated at the local level as those outlined in the national laws such as the Fisheries Code and the AFMA Law are generally considered remotely applicable to them (LGUs). The more effective incentives/disincentives schemes have been found to be those that increase sharing with resident implementers, i.e., sharing of fines collected from violators with Bantay Dagat to improve enforcement and with fisherfolk associations that manage MPAs to improve protection.

It was found that tenurial instruments commonly implemented by the LGUs that regulate and restrict the utilization and exploitation of coastal and marine resources are area and technological restriction instruments. In two LGUs it was found that these instruments have significantly increased fish catch of fisherfolks which could serve as incentive for their (MPA) protection. There have also been steps taken by at least one

LGU to implement not only species restrictions but also to restrict the number of users, especially transients.

Ecogovernance indices of the LGUs were generally high ranging from 75% to 85%. All the municipalities rated high in planning, budgeting and bidding and generally low in enforcement. Based on the lessons derived from this case study, it is recommended that (1) LGUs explore the coastal/marine ecosystem as a source of local revenues; (2) develop/improve on the system of revenue collection and increase equitable sharing with resident implementers; (3) develop more shifter investment strategies; (4) develop more incentives; (5) utilize tenurial instruments as incentives instead of disincentives by focusing on the improvement of the ecosystem and/or increased catch over the long-term; (6) implement a more effective ecogovernance by improving on their performance as indicated by their TAPS ecogovernance index; and (7) local stakeholders should be encouraged to co-manage coastal resources and ecosystems especially as organized units such as coastal cooperatives. The findings, conclusions, and recommendations are included in a comprehensive prototype ordinance on marine and coastal ecogovernance for a municipality or city.

## **CHAPTER 1 – INTRODUCTION**

### **1.1. Background and Rationale of the Study**

With coastal resources being degraded at a rapidly alarming rate, the need for an effective framework for their management has become urgent and critical. The idea of local government units (LGUs) being the entities having primary responsibility for maintaining coastal resources at acceptable levels for the enjoyment of present and future generations should be pursued along principles consistent with transparent, accountable, and participatory environmental governance.

The ability of local governments to attain its legal mandates especially with respect to the goal of a balanced ecology rests on its level of effective governance. Governance in the broadest sense answers the questions as to who is responsible, how they are held accountable, and how they wield their power. The reason for emphasis on governance is the shifting trend in co-management or sharing of responsibility between national and local government, focus on the social dimensions of natural resource use and ecosystem management, and the technical details of how to manage it.

Ecogovernance specifically focuses on how ecosystems are valued, how management goals are set, how trade-offs between conflicting uses or goals are negotiated, and how the costs and benefits of our decisions, including impacts on the poor, are equitably shared (Kooiman, J. 2003).

Indicators of good ecogovernance (as developed by the Development Alternatives, Inc.) include the following: (1) participation; (2) accountability; and (3) transparency. The Legal Environmental Advocacy Program of Silliman University's College of Law (SU-LEAP) proposes the introduction of a fourth indicator which is sustainability.

Participatory decision-making refers to the extent that the general public, including key stakeholders and marginalized groups (women, low income workers, ethnic or religious minorities) are able to participate in and influence both the decision-making process and on-going government operations. In order to attain an effective system of public participation, relevant, current and complete information must be available and accessible to the public and there must be opportunity for participation. Furthermore, people must have the ability to seek redress or challenge a decision.

Accountability refers to the way in which public and private sector decision-makers are held responsible for their actions. Accountability requires standards, measurement, feedback loops, and sanctions. Transparency refers to the extent to which the general public has information about government operations. Transparency requires that the information is accessible, timely, relevant, accurate, and complete.

Sustainability refers to having a stable system for the perpetration of current processes and operations. Specific policies, structures, programs, and practices should be

such that they contribute to the sustainability of resource use especially in the coastal zones.

The focus of this paper is to review and study local governance instruments utilized and implemented to attain the balanced ecology mandate. Special emphasis is made on the concepts of tenure regimes and tenurial instruments, shifter investments, and incentives/disincentives with respect to the management of coastal resources within the jurisdiction of LGUs. In order to comply with the mandate of the LGC and the Constitution, LGUs must have an arsenal of institutional instruments that will allow them to effectively perform their environmental governance (ecogovernance) functions.

This project has been subcontracted by the Philippine Environmental Governance Project (EcoGov), a technical assistance grant by the United States Agency for International Development (USAID) to the Government of the Philippines in partnership with DENR, local government units (LGUs), and civil society organizations (CSOs).

## **1.2. Objectives of the Study**

1. Review and study local governance instruments utilized and implemented to attain the balanced ecology mandate especially for the coastal and marine environments. Special emphasis is made on the concepts of tenure regimes and tenurial instruments, shifter investments, and incentives/disincentives with respect to the management of coastal resources within the jurisdiction of LGUs;
2. Analyze how co-management between them and the DENR, DA-BFAR and communities in the foreshore areas can proceed and be institutionalized;
3. Analyze the factors including incentives contributing to good coastal/fishery resource governance by communities and LGUs;
4. Develop a prototype ordinance containing recommendations of the study;
5. In addition, these sites are also studied in relation to ecogovernance, specifically to examine legislations passed that promote transparency, accountability and participation;
6. Lessons learned will be inputted as recommendations to national policy towards improvement of governance of the environment and our natural resources.

## **1.3 Conceptual Framework**

### 1.3.1 The Basic Premises

The philosophical and legal foundations upon which the practice of ecogovernance in the Philippines is reviewed in this paper have for its basis the concepts of decentralization and the ownership of State resources.

Decentralization and the Mandate Towards a Balanced Ecology. Section 1, Article X of the Philippine Constitution provides that “The territorial and political subdivisions of the Republic of the Philippines are the provinces, cities, municipalities, and barangays. There shall be autonomous regions in Muslim Mindanao and the Cordilleras as hereinafter provided.” Section 2 of the same Article of the Philippine Constitution further states that “The territorial and political subdivisions shall enjoy local autonomy.” These constitutional provisions lay the basis for the governance of territorial jurisdictions and areas of the country in manageable parts. Rather than a central government that will have the primary responsibility of managing every square inch of Philippine soil, water and sea, this task and duty is delegated to local government units (LGUs) at appropriate levels.

The principle of autonomy and local governance is elaborated in Section 2(a) of the Local Government Code of 1991 (Republic Act No. 7160) or the LGC. A pertinent portion of the section provides that “It is hereby declared the policy of the State that the territorial and political subdivisions of the State shall enjoy genuine and meaningful local autonomy to **enable them to attain their fullest development as self-reliant communities and make them more effective partners in the attainment of national goals**. Toward this end, the State shall provide for a more responsive and accountable local government structure instituted through a system of decentralization whereby local government units shall be given more powers, authority, responsibilities, and resources. **The process of decentralization shall proceed from the National Government to the local government units.**” (*Emphasis supplied*).

The idea of granting local autonomy to LGUs, based on the abovesited provision, is to attain a two-fold objective: (a) giving local government units the opportunity to develop the area within their jurisdiction as self-reliant communities; and (b) allowing them to become more effective partners in the attainment of national goals. Partnering in this case refers to work that the LGUs undertake together and in conjunction with the National Government. The central or national government no longer has the sole burden of delivering basic services to the people and implementing national programs for development. This responsibility is now shared with local government units.

The process of decentralization is then the means by which the responsibilities and duties are shared. It is when some of the powers, resources, and responsibilities of the National Government are transferred to LGUs. Under a framework of local autonomy the focal reference continues to be the attainment of national goals and the building up of self-reliant communities, the latter being part of the national agenda for development.

Local autonomy and decentralization does not mean that the State is creating “mini-republics” whereby local government units are themselves sovereign states.<sup>1</sup> LGUs are but instruments in the furtherance and attainment of national goals and objectives.

As part of the feature of local autonomy, LGUs are granted powers so that they can pursue their mandates as contemplated in the LGC. Section 16 of the Code stipulates the General Welfare Clause: “Every local government unit shall exercise the powers expressly granted, those necessarily implied therefrom, as well as powers necessary, appropriate, or incidental for its efficient and effective governance, and those which are essential to the promotion of the general welfare. Within their respective territorial jurisdictions, local government units shall ensure and support, among other things, the preservation and enrichment of culture, promote health and safety, **enhance the right of the people to a balanced ecology**, encourage and support the development of appropriate and self-reliant scientific and technological capabilities, improve public morals, enhance economic prosperity and social justice, promote full employment among their residents, maintain peace and order, and preserve the comfort and convenience of their inhabitants.” (*Emphasis supplied*).

One of the expressed mandates of LGUs is to ensure that its residents enjoy a balanced ecology and that such condition should be continually enhanced. Pursuing this mandate will achieve for the LGU the major twin objectives of self-reliance and its support of national goals. It should be noted that the matter of a balanced ecology as a national goal is mandated by the Philippine Constitution. Section 16, Article II provides that “The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.”

Ownership of State Resources and the Exercise of the Rights of Ownership. Section 2 of Article XII of the Philippine Constitution provides that “All lands of the public domain, waters, minerals, coal, petroleum, and other mineral oils, all forces of potential energy, fisheries, forests or timber, wildlife, flora and fauna, and other natural resources are owned by the State. With the exception of agricultural lands, all other natural resources shall not be alienated ... In cases of water rights for irrigation, water supply, fisheries, or industrial uses other than the development of water power, beneficial use may be the measure and limit of the grant.” This constitutional provision unequivocally states that ownership of all natural resources as enumerated in the above cited provision belongs to the State. Hence, the absolute rights of ownership such as utilization, development, exploitation, enjoyment, etc. can only be exercised by the State with the exception of the right to alienate or dispose as this is expressly prohibited by the Constitution, i.e., not even the State can exercise this right. An exception to this prohibition is agricultural lands.

In fact, a reading of the constitutional provision would imply that fisheries (which is part of coastal resources) could not even be alienated or disposed. The State may only issue a grant of beneficial use to certain beneficiaries subject to certain limitations. In the

---

<sup>1</sup> Pimentel, Aquilino Jr. Q., The Local Government Code of 1991: The Key to National Development. (Cacho Publishing House, Inc., 1993), p. 14.

grant of rights for beneficial use, priority should be given to subsistence fishermen and fish workers in rivers, lakes, bays, lagoons, but only at a small-scale level (paragraph 2, Section 2, Article XII, Philippine Constitution).

While it is the State that has ownership of all resources within its territory, the question is who exercises the rights of ownership?

A standard textbook in political science<sup>2</sup> discusses the four essential elements of the State which include people, territory, government, and sovereignty. Based on these enumerated elements, only two can possibly exercise State authority and power over the natural resources within the State's territory. These are people and government. It is, however, impractical for the people to directly exercise control of natural resources in the concept of ownership, usufruct, or even as agents of the State. If people are allowed to exercise the "right of ownership" over natural resources, it is expected that anarchy and chaos will ensue. When people act as "owners", they do so not out of a sense that they are exercising ownership rights for and in behalf of the State but rather more in the concept of pursuing their own "private interests". It will be a case of "to each his own" leading to the phenomenon which is the "tragedy of the commons."<sup>3</sup>

As a democratic and republican State, governmental authority is exercised presumably based on a mandate given by the people as an expression of its sovereign power (Section 1, Article II, Philippine Constitution). Government is then the one, in practical terms, that can exercise the power and authority of the State for and in behalf of the sovereign people. The exercise of the right of ownership over State resources is one of them.

In the Philippines, there are basically two levels of governments. These are the National Government and the local government units (LGUs). LGUs, in turn, are classified as either provinces, cities, municipalities, and barangays. Each of these LGU entities have powers and functions provided for in the Local Government Code. There is another group of government instrumentalities that play an important role in national development. These are the government-owned and controlled corporations (GOCCs).

In the context of fisheries and coastal resources management, the jurisdiction over fisheries and aquatic resources are divided into two areas with a certain level of government having primary responsibility. These are those within municipal waters and those outside such waters (Rule 3.1, Republic Act No. 8550). In the case of the former, it will be the concerned LGU that will have primarily jurisdiction. Municipal waters include marine waters "between two (2) lines drawn perpendicular to the general coastline from points where boundary lines of the municipality touch the sea at low tide and a third parallel with the general coastline including offshore islands and fifteen (15) kilometers from such coastline." (Section 4 (58), Republic Act 8550).

---

<sup>2</sup> Rodee, Carlton Clymer, T.J. Anderson, and C.Q. Christol, Introduction to Political Science (Second edition), Mc-Graw Hill Book Company (1967), pp. 29-39.

<sup>3</sup> Samuelson, Paul A. and William D. Nordhaus, Economics (13<sup>th</sup> edition), Mc-Graw Hill Book Company (1989), pp. 669-670 citing Garret Hardin.

For fisheries and aquatic resources beyond municipal waters, it will be the Department of Agriculture, through the Bureau of Fisheries and Aquatic Resources (BFAR), as a National Government agency that will have primary jurisdiction (Rule 3.1, Republic Act 8550).

Assigning the jurisdiction of fisheries and aquatic resources found within municipal waters is consistent with the concept of decentralization in the Local Government Code. This implies that LGUs can exercise the rights of ownership over these resources for and behalf of the State. Such authority, however, can only spring from the National Government and that it is meant to achieve the twin goals of establishing self-reliant communities and achievement of national goals. It is reiterated that the “process of decentralization shall proceed from the National Government to the local government units (Section 2(a), Local Government Code, Republic Act 7160).

The Local Government Code likewise provides that in the matter of the responsibility in the management and maintenance of ecological balance, **the local government units shall share such responsibility with the National Government** within their territorial jurisdiction subject to the provisions of the LGC and national policies (Section 3(i), Local Government Code).

### 1.3.2 State of Ecosystem in Relation to EcoGovernance Instruments

Tenure and Access. As owner of the resources, the State may restrict or regulate access. Access may lead to exploitation and exploitation may lead to degradation (Fig. 1). Restrictions are of four categories: (1) technological, such as banning of certain fishing gears, (2) temporal, such as declaration of closed season for fishing, (3) species, such as prohibition on the hunting of whalesharks, whales, dolphins and sea turtles, and (4) area restrictions, such as putting specific areas under protected status.

Access instruments are categorized into (1) leases, (2) rents, (3) taxes, (4) licenses/permits, and (5) giving preferential rights to a specific group of people (e.g., sustenance fisherfolks).

The means by which access and the use of resources is institutionalized for a particular entity or group of people is the concept of tenure. Tenure, the right to permanent occupation and utilization of state-owned or public property, is provided for in Section 2, Article XII of the Philippine Constitution, viz: “... The exploration, development, and utilization of natural resources shall be under the full control and supervision of the State. The State may directly undertake such activities, or it may enter into co-production, joint venture, or production-sharing agreements with Filipino citizens, or corporations or associations at least sixty per centum of whose capital is owned by such citizens. Such agreements may be for a period not exceeding twenty-five years, renewable for not more than twenty-five years, and under such terms and conditions as may be provided by law. In cases of water rights for irrigation, water supply, fisheries, or

industrial uses other than the development of water power, beneficial use may be the measure and limit of the grant.”

Shifter Investments. Although tenure regimes may be clearly defined and delineated, mechanisms and other instruments have to be in place to ensure that beneficiaries and grantees are encouraged to act and behave within the terms and conditions of the grant or right given.

Tenurial rights and access over a certain coastal resource are deliberately granted to reduce or limit the pressure of overexploitation and to arrest the decline and degradation of the resource. This would then require that resource users, whether grant holders or not, will have to be shifted to other productive activities. Shifter investments are expected to change or divert the economic behavior of a resource user, both as a “producer/firm” and “household”. This change in behavior should be such that it will not make the resource user worse off as an economic unit compared to when he/she was utilizing or consuming the resource.

Within the context of this paper, the goal of shifter investments is to reduce or limit the exploitation of coastal resources so that it can be maintained at a level of sustainable use. Economic activities that pose a threat to coastal resources, especially under unregulated and open access regimes, may be “shifted” from one production sector to another. This is the case when fishers especially those employing illegal and destructive practices, for example, are encouraged to take up farming (fishery sector-to-agriculture) or industrial tree planting (fishery-to-forestry). From the fishery subsector, fishers may also be shifted to industrial-type of activities usually small-and-medium scale in nature (fishery-to-industry). Or fishers are trained to be guides in an ecotourism enterprise such as dolphin and whale watching (fishery-to-services). Shifter investment may also happen within the fishery subsector itself when fishers are given alternative livelihood activities such as seaweed farming, mussel and crab culture, bangus fry catching, siganid culture, etc. (fishery-to-fishery).

The reduction of unnecessary consumption of goods and services derived from coastal resources by the “household sector” is another behavioral change that may allow these resources to maintain its pristine character. Reduced consumption can also rehabilitate these resources. An example of “shifting” in this regard is the use of more environment-friendly materials instead of corals for housing and construction purposes. Responsible waste disposal and the reduction in the excessive use of non-biodegradable substances and materials, such as plastics, that find its way into the coastal zone resulting in polluted waters posing a grave threat to the ecological viability coastal resources, is another example of a “shifting” activity. Consumption-reduction strategies or savings promotion can be considered a form of shifter investment for households as it would mean a change or modification of its economic behavior.

When coastal products (e.g., fish) are extracted and sold in the market, there can be wastages along the way especially if the transport infrastructure and handling systems are inadequate and inefficient. Consider for instance that the demand for fish is ten (10)

metric tons per day. If the “commodity-flow” (sea-to-market) system registers an average wastage/spoilage rate of 40%, fish extracted should be at the level of 14 metric tons in order to meet the demand for fish. Improvements in the efficiencies of the commodity-flow system can in the long-run lead to a reduction in the extraction rate of coastal resources. Investments in infrastructure networks and handling systems can be considered “shifting” activities especially when it is a choice over improved extraction methods and technologies that lead to overexploitation of coastal resources.

Incentives/Disincentives. To enable shifter investments to take place, a system of incentives and/or disincentives are utilized and applied.

For coastal resource users to be encouraged to act and behave within the bounds of responsible and sustainable use, incentives and/or disincentives can be directed at them either as producers or consumers. Examples of incentives at the production sector as instruments for shifter investment are credit facilities, tax relief, and technical training and assistance to fisherfolks. Effective “polluter pays” fees, on the other hand, can be disincentives for households against irresponsible waste disposal. Revenues from such fees can be used to develop and maintain solid waste management staff and equipment or a treatment facility. A clean environment can encourage investments in tourism activities thereby providing opportunities for those in the fishery sector, when properly managed (e.g., fisherfolks are given first priority to training on tourism-related services), to shift to other forms of livelihood.

Incentives/disincentives may also be in the form of price ceilings or floors, taxes, and subsidies especially for certain commodities and services derived from coastal and marine resources.

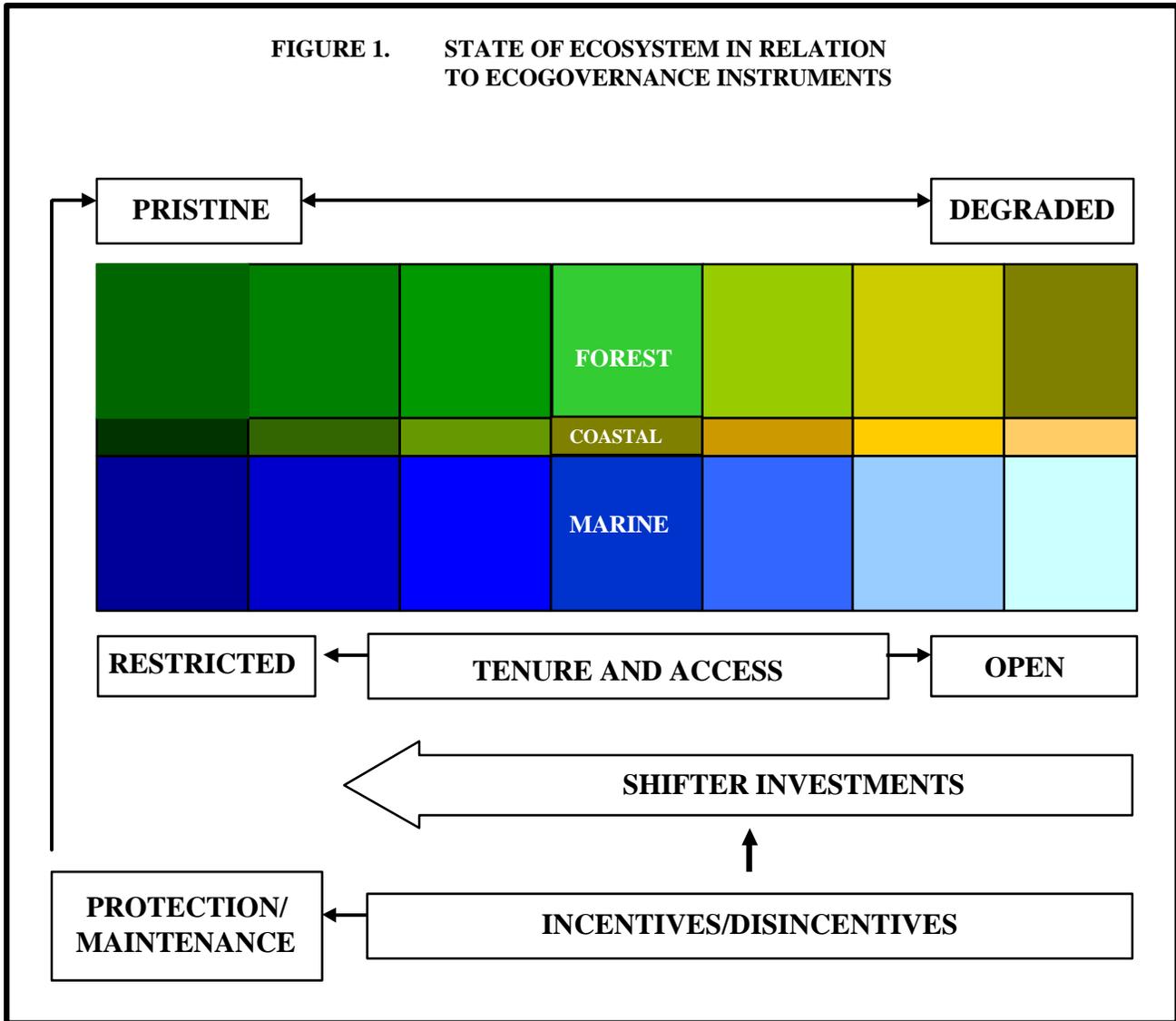
In terms of “commodity flow” efficiency mechanisms, investments in roads, storage facilities, fish ports, and communications systems are conditions upon which the wastage/spoilage rates in the transport of coastal products from sea-to-market are minimized. Build-operate-transfer (BOT) schemes, international grants, multilateral loans, municipal bond flotation are some of the ways wherein such investments can take place.

Aside from incentives/disincentives being used to support shifter investment strategies, they may also be utilized directly to maintain and protect the pristine level of the coastal and marine resources. (Refer to Fig. 1 again). In this case, LGUs and resource managers would be taking a defensive position against any threats on the coastal and marine environment.

### 1.3.3 LGU as the Focal Point of Analysis

Since Republic Act 7160 or the Local Government Code of 1991 has decentralized the responsibility of managing natural resources and attaining the ecological balance mandate from the national “State” to the local government, the focal point of analysis of ecogovernance is the LGU. By LGU is meant the local government

unit at the level of the municipality or city as these have territorial jurisdiction over coastal zones and municipal waters.



## **CHAPTER 2 – METHODOLOGY**

Several methodologies and approaches were utilized in coming up with this paper. It used a combination of literature review including an internet search on the subject matter, review of legislations, policies, ordinances and official documents pertaining to the governance and management of coastal and marine resources, case studies, and consultation/validation workshops.

### **2.1 Review of Literature**

Relevant literature listed in the **References Section** (Chapter 7) were reviewed.

### **2.2 Review of Policies, Legislations, and Ordinances**

The following legislations, policies and ordinances were reviewed:

- a) Philippine Constitution
- b) Republic Act No. 8550 otherwise known as the Fisheries Code of 1998 and its Implementing Rules and Regulations
- c) Republic Act 8435 otherwise known as the Agriculture and Fisheries Modernization Act of 1997 (AFMA)
- d) Republic Act 7160 otherwise known as the Local Government Code of 1991 and its Implementing Rules and Regulations (TLGC)
- e) “Proposed Framework for Shifter Investments: Decision Framework for Shifting Consumption and Production” (EcoGov-DAI)
- f) Municipal Ordinances (see Reference Section)

### **2.3 Case Studies**

- a.) MLGU Selection: Four municipalities in Central Visayas were studied in order to (1) determine tenure/access instruments and other incentives, as well as shifter investments to effectively develop, protect and manage coastal resources; (2) analyze how co-management between them and the DENR, DA-BFAR and communities in the foreshore areas can proceed and be institutionalized; (3) analyze the factors including incentives contributing to good coastal/fishery resource governance by communities and LGUs; and (4) develop a prototype ordinance containing recommendations of the study: Municipal LGUs were selected based on four criteria: (1) the existence of projects that could provide information, (2) their performance record in environmental conservation and management, (3) presence of NIPAS protected areas, and (4) other specific considerations such as leadership in CRM. The LGU sites selected were Sibulan and Dauin in Negros Oriental, Panglao in Bohol, and Moalboal in Cebu. In addition, these sites were studied in relation to practices specifically on the indicators of transparency, accountability and participation.

- b) Analyses of fiscal operations and performance, shifter investment strategies/plans of the subject LGUs as well as incentives/disincentives were examined. Official financial records as far back as 1992 or 1993 were reviewed to determine the LGUs resource capability to support ecogovernance. The time series review will show the experience of LGUs in regard to the priority given to ecogovernance as can be gleaned by the trends in its fiscal operations. Any activity or program of the LGU will require some form of financial resource. The allocation of the LGUs' fiscal resources will give an indication of the importance it gives to various competing needs and goals of the community.

The fiscal operations of the four (4) municipalities chosen in this paper are studied to have an idea on the extent of how these LGUs have fared in terms of the priority it gives to its balanced ecology mandate. It will also examine its capability in terms of supporting ecogovernance activities especially from self-generated sources. Financial documents of the four municipalities (Local Budget Preparation Form No. 151 and 151-A and/or Consolidated General Fund Code 101 reports, and municipal ordinances and resolutions on the allocation of the Economic Development Fund) were reviewed for this purpose.

LGU plans, especially CRM plans, were likewise examined to assess the extent of shifter investment programs that were incorporated in such plans. If none was available, the LGU's Municipal Development Plan was reviewed.

The idea of shifter investments is seen in the light of the main economic activity of the locality. One needs to know the development direction with respect to a particular productive endeavor, i.e., whether it will be continued as a main economic activity or there is a move to change and "shift" away from it. The reason for this is that economic activities that are to be developed as a means to shift fishers and resource users from the exploitation of coastal users should be tied somehow to the locality's main industry or "economic engine". Absent such link, it will be very difficult for a proposed livelihood project, for example, to prosper as investments in say market development will be quite substantial

Incentives/disincentives provided for in the Local Government Code (RA 7160), the Fisheries Code (RA 8550), and the Agricultural and Fisheries Modernization Act (RA 8435) applicable to LGUs were listed and incorporated in a comprehensive table/matrix. The list of incentives/disincentives were grouped according to the following: (a) Fishery Fees, Charges and Other Fiscal Resources; (b) Incentives and Other Support to the Sector; and (c) Disincentives to Illegal Fishing and Other Destructive Practices. Each LGU included in this study was then asked to indicate which of the incentives/disincentives listed were applicable to them.

- c) Tenure Regimes and Access Instruments in subject LGUs were determined by examining all resolution, ordinances and other legislative instruments passed by the MLGU. Fisheries and CRM-related legislations in the four LGUs under study were classified as to its type of tenurial and access instrument.
- d) TAP (Transparency, Accountability, and Participation) index tool developed by the Development Alternatives Inc. (DAI) was administered in all four LGUs.

As indicated by DAI, the over-all Transparency, Accountability and Participation (TAP) Index indicates the extent to which a municipality practices the principles of good governance in the management of our forests and upland areas, fisheries and coastal areas, and solid waste during a specific time period.

The highest possible score (HPS) that a municipality can get is 1.0 while the lowest possible score (LPS) is 0. Municipalities that score closer to the perfect score of 1.0 are considered to be more transparent, accountable and participatory in their governance practices compared to municipalities whose aggregate scores are lower.

The index allows one to measure the practices of individual municipalities using specific indicators (such as the degree of transparency practiced in resource management and utilization), compare these figures across activities (such as the degree of transparency in RMU planning versus transparency in budgeting), or compare the performance of different municipalities.

## **2.4 Consultations and Validation of Findings**

- a) Relevant documents such as the budget and financial statement, investment plan, and resolutions and ordinances were requested from each municipality.
- b) One-on-one interviews with the Municipal Planning and Development Officer were conducted in each municipality for the initial filling up of the TAP questionnaire.
- c) Workshops were conducted to validate the information gathered with respect to trends in fiscal resources available for ecogovernance, tenure and access instruments, shifter investments, and incentives/disincentives. Workshops and consultations also included the validation of the TAPS indices. Present in these workshops were LGU officials, Bantay Dagat members, members of Peoples' Organizations, etc.

### **CHAPTER 3 – THE EXISTING TENURIAL INSTRUMENT AND INCENTIVE SYSTEM FRAMEWORK IN THE PHILIPPINES**

Based on the literature review conducted, a framework for the existing mechanisms in the granting of tenurial rights and access as well as the dispensation of incentives/disincentives in the Philippine setting can be drawn.

#### **3.1 Tenure and Access**

Restrictions, Access Instruments and Granting Agencies. Figure 2 shows a comprehensive presentation of the agencies/entities of government authorized to establish restrictions and grant access rights using various instruments. This framework is based on the provisions of the Fisheries Code, the AFMA, and the Local Government Code.

Preferential Rights. The Constitution mandates the State to protect specifically “*the nation's marine wealth in its archipelagic waters, territorial sea, and exclusive economic zone, and reserve its use and enjoyment exclusively to Filipino citizens*” (Section 2, Article XII, Philippine Constitution). In this connection, “*the Congress may, by law, allow small-scale utilization of natural resources by Filipino citizens, as well as cooperative fish farming, with priority to subsistence fishermen and fishworkers in rivers, lakes, bays, and lagoons.*”

Serofia and Napilan (2003) on exclusive fishery privileges state that “There are two things concerning exclusive fishery privileges and the use of municipal waters. The first sets of exclusive privilege are those that require structures like fish corrals, fish pens and fish traps; while the second is just for catching fish fry. The former is governed by Section 53 of the Fisheries Code which provides that “no new concessions for the operation of fish pens, fish corrals and fish traps shall be granted except to municipal fisherfolk organizations”. On the other hand, LGU’s can still grant preferential right over fry gathering activities to be able to raise revenue. However, in 1995, the Department of Interior and Local Government (DILG) and the Department of Agriculture (DA) have passed a Joint Administrative Order (JAO) No. 3 stating that when there is a fisherfolk organization in the municipality interested in the exclusive fishery privilege, then that privilege should be awarded to them without bidding.

Because only agricultural lands are alienable (Section 2 of Article XII), then, only these resources can be fully developed. English (1973) states that “the absence of property rights in the conventional sense of the word poses a major obstacle to both national and international development.” Therefore, “...the most important institutional changes that must occur before the full potential of marine resources can be realized involve the legal framework defining access to them and the protection of the right to exploit them.”

The Constitution (Section 5, Article II) also provides for tenure to indigenous cultural communities, viz: *“The State, subject to the provisions of this Constitution and national development policies and programs, shall protect the rights of indigenous cultural communities to their ancestral lands to ensure their economic, social, and cultural well-being.”*

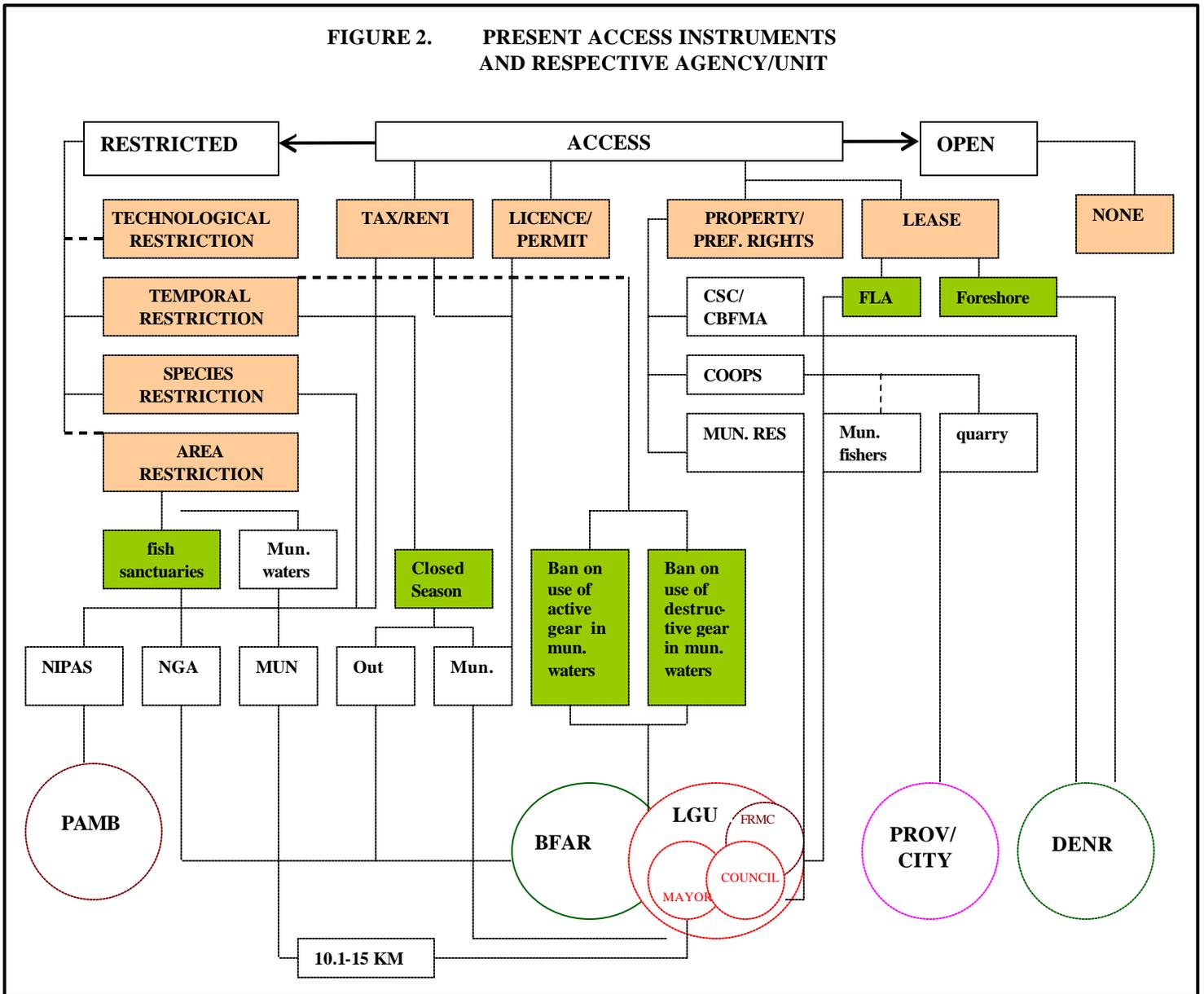
### **3.2 Incentive System**

In terms of the role and functions, powers, and tasks of the LGU in the management of fisheries and aquatic resources within its jurisdiction, these are spelled out in several provisions of the Fisheries Code. Incentive/ disincentive instruments are available to LGUs to influence the behavior of municipal fisherfolks. These instruments are spelled out in Sections 24 and 86-106.

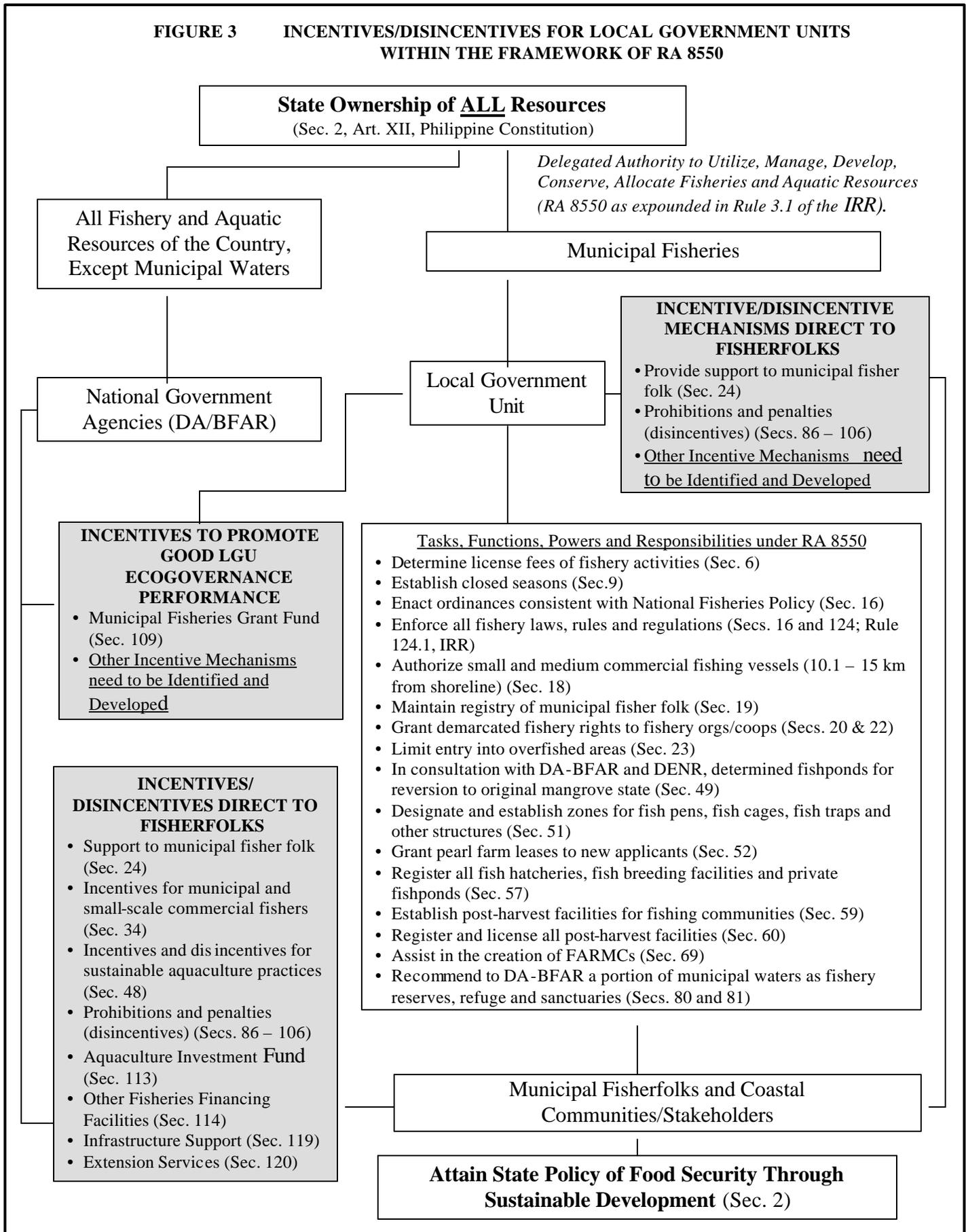
Although LGUs are supposed to have primary jurisdiction over resources within municipal waters, the Fisheries Code provides for incentives/ disincentives that the DA-BFAR can grant and extend directly to municipal fisherfolks. These mechanisms may have to be reviewed as it dilutes the authority of LGUs in the management of resources within its jurisdiction and weakens its accountability as a steward of these resources. This current concept needs to be closely looked into in the context of accountability of governmental actions and performance. When coastal resources are left to be degraded, who is responsible for it? It should be remembered that the LGU is given the task of fulfilling the ultimate national goal of food security through sustainable development (Section 2, Republic Act 8550). Following the indicators of good ecogovernance, the granting authority of incentives by DA-BFAR should instead be directed towards LGUs and not directly to municipal fisherfolks and coastal communities/stakeholders.

Other incentives/disincentives are available as provided for in the AFMA Law and the LGC.

FIGURE 2. PRESENT ACCESS INSTRUMENTS AND RESPECTIVE AGENCY/UNIT



**FIGURE 3 INCENTIVES/DISINCENTIVES FOR LOCAL GOVERNMENT UNITS WITHIN THE FRAMEWORK OF RA 8550**



## CHAPTER 4 - RESULTS OF THE CASE STUDIES

All four (4) sites covered in the case studies are located in the Central Visayas region of the Philippines. Their locations are indicated in the map below.



**Figure 4. Map of the Philippines showing case study sites.**

## 4.1 Dauin, Negros Oriental

### 4.1.1 Brief Description of Site

Dauin is a fifth class municipality in the southern portion of Negros Oriental. It is composed of 23 barangays, 9 of which are coastal, including Apo Island. It has a land area of 144.32 km<sup>2</sup> and a coastline length of 10 km. The population of the municipality as of 2000 was 21,077, about half (10,884) lived in the coastal area<sup>1</sup>. Population growth rate in the municipality is 1.1%.

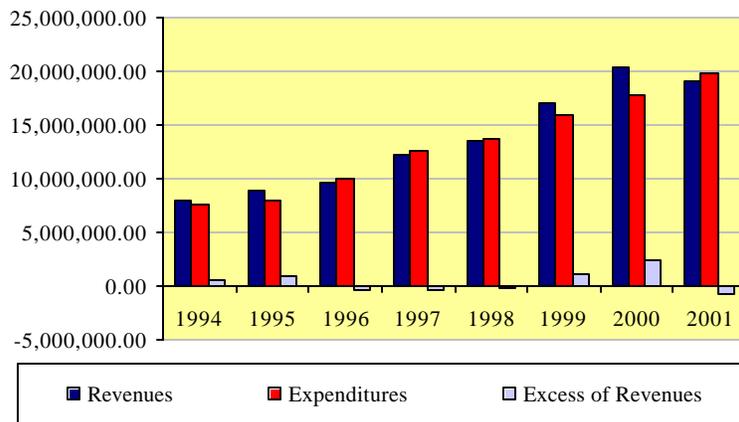
Although traditionally known as a fishing town, Dauin is fast emerging as a favorite tourist destination with its stone church and Moro tower, its hot springs, and fine beaches (it has several beach resorts). But its main attraction is the internationally famous Apo Island, which boasts of magnificent dive sites, beautiful white beach and rock formations, and a fish sanctuary that is a showcase of environmental conservation (Municipality of Dauin Official Website, <http://www.cvpc.edu.ph/dauin>).

### 4.1.2 EcoGovernance Seen Within the Context of Over-all Fiscal Operations

For the period 1994-2001, the revenues of the Municipality of Dauin showed an increasing trend except in 2001 when there was an observed decrease from the previous

year's level. The reason for this is because the Internal Revenue Allotment (IRA) for the municipality was reduced but about Php1.70 million in 2001 (please refer to Annex 4.1.0). Expenditures likewise increased during the period. In fact, expenditures were higher than revenues in some years, i.e., 1996, 1997, 1998, and 2001. (Fig. 5).

Figure 5. Trends in Revenues and Expenditures, 1994-2001  
Municipality of Dauin, Negros Oriental



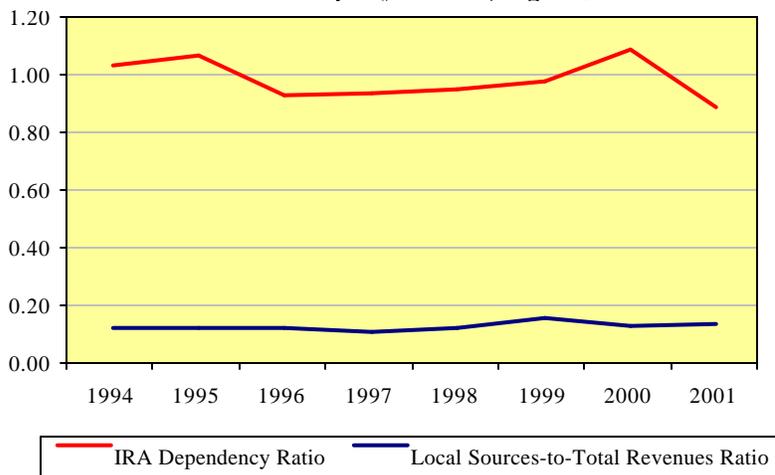
In terms of its sources of revenues, the Municipality of Dauin is seen to be heavily dependent on its IRA for its operations. Its IRA dependency ratio (IRA-to-expenditures) ranged from 0.85 in 2001 to 1.05 in 2000. This implies that for every peso of the municipality's expenditure, Php0.85 was covered by IRA in 2001 and Php1.05 in 2000. Figure 6 shows the IRA dependency ratio of Dauin from 1994-2001. This dependence is highlighted by the fact that when the IRA contribution is about Php0.90 per peso

<sup>1</sup> Data from the Municipal Coastal Database.

expenditure or lower, the municipality incurred deficits as noted for the years 1996, 1997, 1998, and 2001.

Local sources of revenues that include taxes, fees, and receipts from governmental operations were a steady ratio to total revenues ranging from 0.08 and 0.12. A review of the detailed sources of revenues of Dauin in Annex 4.1.2 will show that receipts from fees generated out of use and utilization of coastal and marine resources are very minimal. Per official records examined, this is only in the form of fishery rentals and charges (Php4,010 in 1995 and Php50 in 1996). It is reported that receipts from the users' fees (from tourists) in Apo I. are substantial. However, the municipality cannot derive benefits from these fees because it is remitted to a fund (Integrated Protected Area Fund – IPAF) that is managed by the central DENR since Apo I. has been declared as a protected seascape and is managed by a Protected Area Management Board (PAMB). Even the local community is not immediately able to utilize fees collected in the area as it is first remitted to the IPAF fund before it is disbursed to the barangay in Apo I.

**Figure 6. Trends in Internal Revenue Allotments  
vis-à-vis Expenditures, 1994-2001  
Municipality of Dauin, Negros Oriental**



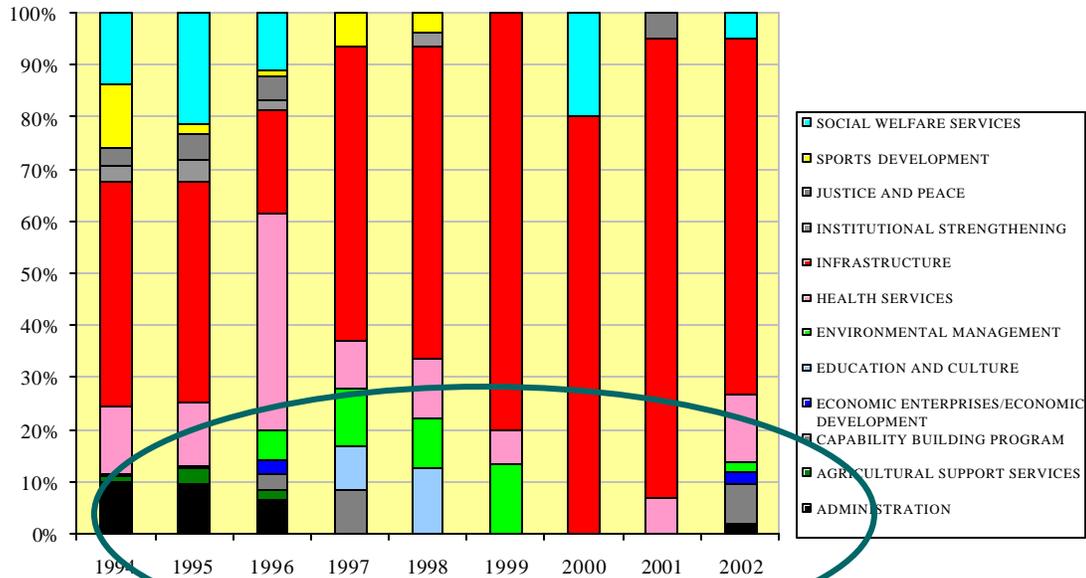
Given the present financial condition of Dauin, fresh investments in ecogovernance activities will be difficult to come by. Its heavy reliance on the IRA to fund its operations makes it vulnerable to any cutbacks in the IRA by the national government. With the many competing demands of the LGU for basic services, this may marginalize investments

and the allocation of resources for environmental concerns. The municipality of Dauin may have to look into several fiscal strategies to enable it to free up resources that can be devoted to ecogovernance. One of the strategies it can consider would include an assessment of its local sources of revenues and see if there is room for improvement in this area. Another approach is to review its expenditures to determine if these are already expended in a cost-effective manner.

In terms of the projects that it has pursued under the economic development fund (EDF) which is 20% of the IRA, a substantial portion of it went to infrastructure activities. Figure 7 shows that funds allocated for this purpose was a low of 19.5% of total EDF resources allocated in 1996 to a high of 88.0% in 2001 (please also refer to Annex 4.2.1). The next significant service funded by the EDF was the health sector. Attention to environmental management as can be gleaned from the allocation of EDF resources has not been very stable and consistent. In 1994 and 1995, it received a less

than 1% share while in 2000 and 2001 no allocation was given to the sector. From 1996 to 1999, however, amounts set aside for environmental management were in the vicinity of 6% to 14%. This was primarily because of the municipality’s investment in solid waste management. In 1996, Php50,000 was set aside to support the Bantay Dagat program (please refer to Annex 4.2.3).

**Figure 7. Trends in the Allocation of the Economic Development Fund By Program/Project Theme, 1994-2002 Municipality of Dauin, Negros Oriental**



Annex 4.2.2 shows the allocation of EDF resources using three-year averages to more or less coincide with the terms of LGU officials. It is observed that for all the periods considered, infrastructure is the number one priority. Moreover, the average allocation of EDF funds in this sector is increasing from 1995 – 1997 to 2001-2002. Health services comes in next with an average of 21.0% for the period 1995-97. In 1997-1999, environmental management received a higher average allocation compared to health services at 11.4%. This was the period when the solid waste management program of the municipality was being pursued. Recently, however, environmental management services has again been overtaken by health services with only a 0.8% average allocation given to it.

#### 4.1.3 Provision of Tenure and Access Instruments

From 1988-2000, a total of 12 CRM and Fisheries-related legislations were passed by the Dauin Sangguniang Bayan. Of these, 10 were *area restrictions ordinances*.

Dauin, through Apo I., has provided much of the current information and evidence as to the effectiveness of area restrictions in improving habitat condition and

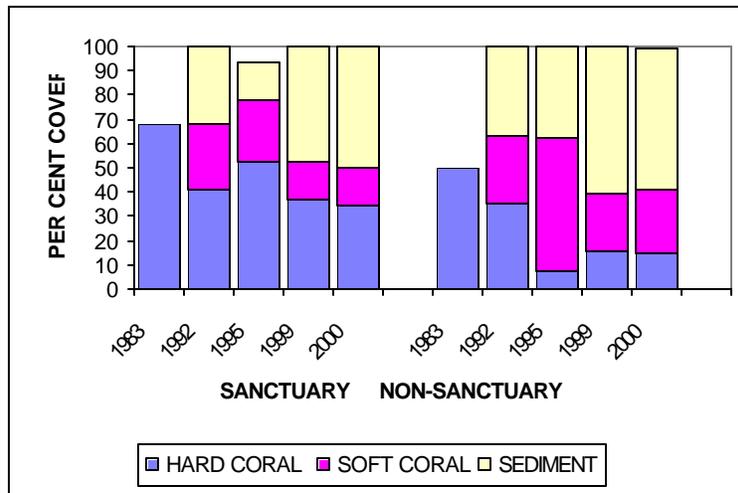


Figure 8. Live coral cover in the restricted (sanctuary) and unrestricted (non-sanctuary) areas in Apo over time. Data sources: 1983: MCDP, 1986; 1992: White and Calumpong, 1992; 1995: Reboton and Divinagracia, in Calumpong et al., eds, 1997.

productivity. A portion of the island, covering about 11 hectares was declared a fish sanctuary in 1988 through Ordinance No. 8-88. Since then, the condition of the corals in the protected area has remained stable (Fig. 8) which is categorized as GOOD (50-74.9% live coral cover) compared to the non-sanctuary which dropped from GOOD to POOR (0-24.9%); fish standing stock (the biomass of fish in the water) has increased by as much as 400-600% and the number of species has almost doubled (Fig. 9), and most importantly, the catch of fishers and consequently, their income has increased (Fig. 10). Catch per unit effort (CPUE) using hook & line alone showed an increasing trend from 0.13-0.15 in 1981, to  $1.89 \pm 0.87$  in 1986 to  $2.1 \pm 0.5$  in 1998 (Fig. 11). This is very significant considering that more than half of the fishers have non-motorized boats and therefore cannot go very far out to sea. In addition, the fishery in Apo is very diverse with 77 fish species in 24 families (Calumpong et al., eds., 1997) which is an indication of a healthy habitat. The notable thing is that family *Acanthuridae* (surgeon fishes) which are strictly reef dwellers and family *Carangidae* (jacks), members of which are pelagic but reef-associated, dominated the volume of catch landed (50% and 30.6%, respectively). These are high value fish and are caught mostly by hook and line fishers. White and Cruz-Trinidad

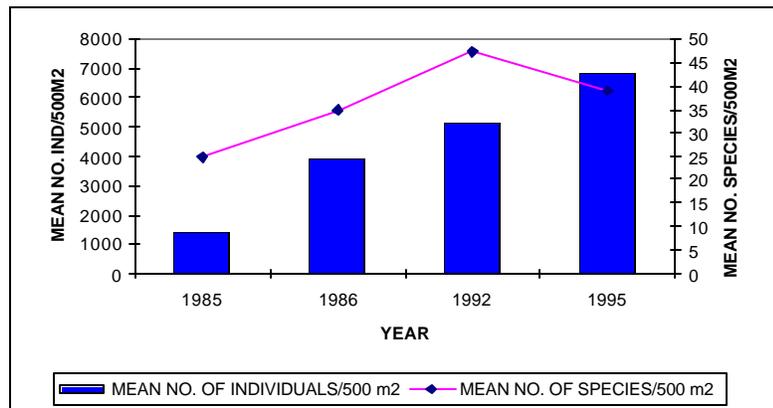


Figure 9. Fish standing stock in the restricted (sanctuary) area in Apo over time. Data sources: 1985-1986: MCDP, 1986; 1992: White; 1989; 1995: Luchavez and Luchavez in Calumpong et al., eds, 1997.

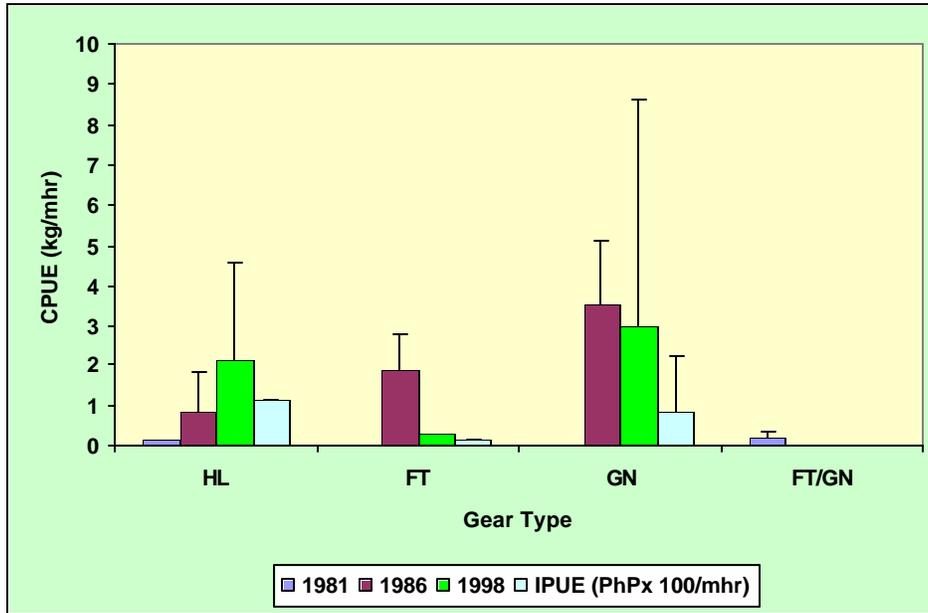


Figure 10. Catch and income per unit effort over time of specific gear types used in Apo. HL = Hook and Line; FT = Fish Trap or bubo; GN = Gill Net; CPUE = Catch per Unit Effort; IPUE = Income per Unit Effort. Data sources: 1981: Alcala and Luchavez, 1981; 1986: MCDP, 1986; 1998: Calumpong, et al., eds., 1997.

(1998) calculated the potential annual revenue of a healthy reef per km<sup>2</sup> from fisheries for local consumption with production range of 10-30 tons to be in the order of 12–36

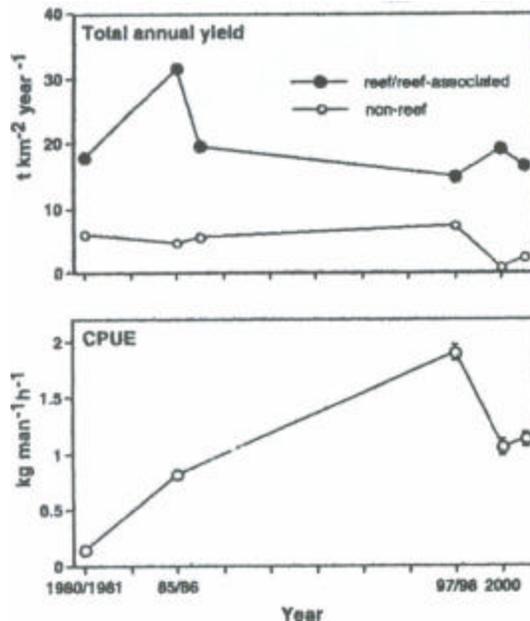


Figure 11. Total annual yield in tons per sq. km of reef in Apo. and catch per unit effort over time using Hook and Line. From Maypa, et al., 2002.

thousand US dollars, assuming an average market price of US1.5 kg of reef fish less production cost of 20%.

In other words, the productivity of the coastal and marine habitats of Apo has increased (Fig. 11).

The results also show that ecogovernance in Apo has improved.

The good results obtained in Apo has encouraged the municipality to establish area restrictions in three other barangays by passing ordinances establishing marine reserves in these areas (Ord. 2, s. 2000 -east of barangay Maayong Tubig, Ord, 01-01 -fronting District I, Ord. 02-01-east of Masaplod Norte).

Ecogovernance in Dauin is far advanced as can be gleaned from provisions in their ordinances. For example, Ord. 01-01 already provides for a management structure of the marine reserve area – giving it to two fisherfolk organizations. This has ensured participation and accountability by the fisherfolks and sustainability in the management of the marine reserve. Another example is Ord. 02-01 of the SB of Dauin whereby Fees and Allocation of Shares from the income derived from the Masaplod Norte Marine Reserve are already stipulated.

Pertinent ordinances of the municipality of Dauin passed to establish restrictions on the utilization of its coastal and marine resources and to regulate its use are listed below:

#### Area Restrictions

1. Ordinance No. 01-01 of the SB of Dauin. A comprehensive ordinance providing for the sustainable management, development and conservation of the municipal waters and its fisheries resources, harmonizing and integrating all ordinances pertinent thereto and for other purposes.
2. Ordinance No. 2, series of 2000 of the SB of Dauin. An ordinance declaring a portion of municipal waters east of barangay Maayong Tubig, Dauin, Negros Oriental consisting of an area of 70,129 sq. m as marine reserve area and regulating activities in the said marine reserve and for other purposes.
3. Ordinance No. 01-01 of the SB of Dauin. An ordinance declaring a portion of the municipal waters fronting District I municipality of Dauin Province of Negros Oriental as a marine reserve area to be managed by two fisherfolks organization.
4. Ordinance No. 02-01 of the SB of Dauin. An ordinance supplementing Sec. 3 (Definition of Terms) and Sec. 4 (Prohibition) of Ordinance No. 97-02 declaring a portion of the municipal waters located east of Masaplod Norte, Dauin, Negros Oriental as marine reserve for the protection, conservation, regeneration and rehabilitation of the fishery & aquatic resources of this municipality and amending Sec. 5 (Fees) & Sec. 6 (Allocation of Shares) PAR. “a”, “b” & “c”.
5. Ordinance No. 97-02 of the SB of Dauin. An ordinance declaring a portion of the municipal waters located east of Masaplod Norte, Dauin, Negros Oriental as marine reserve area .
6. Ordinance No. 96-01 of the SB of Dauin. An ordinance declaring a portion of the public domain situated in the barangays of Bulak and Lipayo, municipality of Dauin,

as an integrated coastal zone/municipal public beach resort and withdrawing it from alienation and disposition under Chapter IX of Public Land Law.

7. Ordinance No. 95-019 of the SB of Dauin. An ordinance granting exclusive fishery privileges to fishermen's association that established artificial reefs in the municipality.
8. Ordinance No. 96-01 of the SB Dauin. An ordinance declaring a portion of the public domain situated in the barangays of Bulak and Lipayo, municipality of Dauin, as an integrated coastal zone/municipal public beach resort<sup>2</sup> and withdrawing it from alienation and disposition under Chapter IX of Public Land Law.
  - Sec. 1, a) foreshore land with an area of 14,652 sq.m located at Barangay Bulak.
  - Sec. 1, b) foreshore land with an area of 45,597 sq.m located at Barangay Lipayo.
  - Sec. 4 An Integrated Coastal Zone Management Plan shall be formulated to ensure implementation of all ordinances relevant to coastal zone management, obtain widespread community support for responsible resources management and active custodians of the resources and a viable base for deriving sustained livelihood from the resources assigned to the communities.
9. Ordinance No. 95-019 of the SB Dauin. An ordinance granting exclusive fishery privileges to fishermen's association<sup>3</sup> that established artificial reefs in the municipality.
10. Ordinance No. 96-046 of the SB Dauin. Declaring valid Res. No. 96-046 adopting ordinance No. 96-03 which prohibit the operation of fishing vessels of more than three tons gross within the municipal waters.
11. Ordinance No. 8-88 of the SB Dauin. Ordinance declaring the coral reef of Apo I. as marine reserve.

#### *Technological and Other Restrictions*

1. Ordinance No. 2-99 of the SB of Dauin. An ordinance the use of compressors and SCUBA tanks in fishing within the municipal waters of the municipality of Dauin and imposing penalties for violations thereof.
2. Ordinance No. II s. 1997 of the SB of Dauin. An ordinance controlling and regulating the activities of visitors, scuba divers. Tourists, snorkelers, pumpboats and other visitors.

#### 4.1.4 Implementation of Shifter Investments

Agriculture is considered to be the main industry or economic activity of Dauin. Two major crops are produced in the municipality. These are corn and coconut. Fishing is said to be a marginal activity and as such may not be considered an "economic engine",

---

<sup>2</sup>As integrated coastal zone/municipal public beach resort, the following activities are permitted (Sec. 3): recreation, bathing, boating and the establishment, maintenance and operation by the municipal government of structures to accelerate productivity related to marine, seashore and offshore activities.

<sup>3</sup>Sec. 2, c). Fishermen's association – is a group of small-scale or marginal fishermen duly registered and recognized as such by the municipal government.

i.e., one that provides the main resource inflows to the locality to spur growth and development.

The Municipality of Dauin already has a Coastal Resource Management Plan for the period 2001 – 2005. As a means to reduce pressure on the fisheries and coastal resources within its territorial jurisdiction, several opportunities and strategies are contemplated in the plan (see Annex 4.3 for summary of shifter investment strategy for the municipality of Dauin).

Principally, Dauin employs a shifter investment strategy of embarking on conservation-friendly activities such as the establishment and maintenance of marine protected areas, mangrove reforestation, protection of seagrass beds, etc. This approach is coupled with industry/sub-industry transfer activities. Under the LGU's CRM plan, several sub-sectoral transfer activities are being proposed. Some of these include fish processing and seaweed farming (fishery-to-fishery transfer). Fishery-to-agro processing transfers are also being planned to include abaca weaving, bamboo crafts, salt-making, etc. Likewise, social forestry and the planting of fruit trees are shifter investment approaches that are proposed to be pursued as a means to transfer current fishers and coastal resource users to the forestry sector. Finally, the plan also contemplates of developing coastal tourism as a means a shifter investment mechanism.

There is an observed major shift that the municipality is looking which is to move away from too much dependence on the traditional "economic engine" of agricultural production and more towards tourism. The official website of Dauin stipulates that "although traditionally known as a fishing town, Dauin is fast emerging as a favorite tourist destination."<sup>4</sup> Given this trend, all the proposed shifter investment strategies need to link to the framework of development of the municipality that is anchored on tourism.

During the validation workshop conducted on July 23, 2004 in Dauin, the participants reported that those fishers affected by the establishment of the marine sanctuaries were given appointments as Bantay Dagat. Also, they were given the priority to work in established resorts in the municipality. Furthermore, a technical and assistance for livelihood projects like poultry raising were granted.

#### 4.1.5 Incentives/Disincentives Utilized

Annex 4.4 shows the completed matrix by the Municipality of Dauin. It indicates that it availed of Section 149 of the Local Government Code in regard to the imposition of fishery rentals, fees, and charges (*Item No. 1*). Such fees and charges are associated with the marine reserves that the municipality established. These are the two found in Masaplod Norte and Poblacion District I. From 2001 – 2003, it was reported that Php36,529 and Php14,436 as fishery rentals, fees, and charges were collected from Masaplod Norte and District I, respectively. While receipts from this type of fees were minimal as reported in its financial reports, it had opened new sources with the

---

<sup>4</sup> <http://www.cvpc.edu.ph/dauin>.

establishment of the marine reserves. Under the first group of incentives/ disincentives, fishing privileges were also granted in municipal waters to fishing associations by the Dauin LGU pursuant to Section 17 of the Fisheries Code (*Item No. 7*).

For incentives and other support to the sector, it was reported that assistance was extended to fishermen’s associations and fisherfolks (*Item No. 24*) pursuant to Section 24 of the Fisheries Code (*Item No. 8*). The municipality of Dauin also exercised its power to grant privileges for the operations of fish pens, cages, corrals/traps and similar structures also to fishermen’s associations and fisherfolks. The exercise of such power is provided for in Section 53 of the Fisheries Code (*Item No. 11*). Other incentives utilized under this group involved infrastructure support from the Department of Agriculture as lead agency (*Item No. 20*). A reported Php1.0 million was spent for the benefit of farmers (under Section 119 of the Fisheries Code). Finally, it was reported that Php10,000 was extended by the Department of Agriculture to fisherfolks in 2002 under the initial appropriation from the AFMA fund pursuant to Section 111 of the Agricultural and Fisheries Modernization Act (*Item No. 23*).

In terms of disincentives to illegal fishing and other destructive practices, the Dauin LGU reported the following for 2003, all violations under the Fisheries Code:

1. Section 86 on Unauthorized Fishing or Engaging in Other Unauthorized Activities (*Item No. 24*): 2 apprehensions.
2. Section 88 on Fishing Through Explosives, Noxious or Poisonous Substance and/or Electricity (*Item No. 25*): 5 apprehensions.
3. Section 92 on Ban on Muro-Ami, Other Methods and Gear Destructive to Coral Reefs and Other Marine Habitat (*Item No. 29*): 1 apprehension.
4. Section 96 on Fishing in Fishery Reserves, Refuge and Sanctuaries (*Item No. 33*): 9 apprehensions.
5. Section 103 on Other Violations (*Item No. 40*): 13 apprehensions

Other Practices. In addition to those incentives/disincentives provided for by law, it was also reported (during the validation workshop) that the LGU contemplates of giving rewards to those who report or arrest violators. Already there is a practice of the Bantay Dagat getting a share of the fees collected especially from violators.

4.1.6 TAP Issues (to highlight on the quality of TAP of the process undertaken in the following:)

Table 1. Overall T.A.P. Index by LGU Ecogovernance Activities –  
DAUIN

OVERALL T.A.P. INDEX		
I. Participation in RMU Planning	(A)	21
II. Transparency in RMU Planning	(C)	8
III. Accountability in RMU Planning	(E)	21

IV. Transparency in FFSW Budgeting	(G)	7
V. Accountability in FFSW Budgeting	(I)	7
VI. Participation in FFSW Budgeting	(K)	10
VII. Transparency in Contracting, Bidding and Procurement	(M)	3
VIII. Accountability in Contracting, Bidding and Procurement	(O)	1
IX. Participation in Contracting, Bidding and Procurement	(Q)	3
X. Accountability in the Issuance of Permits, Licenses	(S)	4
XI. Transparency & Participation in Issuance of Permits, Licenses	(U)	5
XII. Accountability in Enforcement	(W)	4
XIII. Transparency in Enforcement	(Y)	4
XIV. Participation in Enforcement	(AA)	4
TOTAL		102
Overall T.A.P. Score of Municipality (TOTAL SCORE divided by 134*)		102/134
<b>ECOGOVERNANCE INDEX OF MUNICIPALITY</b>		<b>76%</b>

\*IP's not present, hence not included in calculation

## **4.2 Moalboal, Cebu**

### 4.2.1 Brief Description of Site

The municipality of Moalboal is located on the southern part of Cebu province and approximately 89 km southwest of Cebu City. It is a fifth class municipality composed of 14 barangays, half (7) of which are coastal. It has a land area of 7.29 km<sup>2</sup> and coastline length of km. The population of the municipality as of 2000 was 23,402, about (xxx) of who lived in the coastal area<sup>5</sup>. It is an international diving destination.

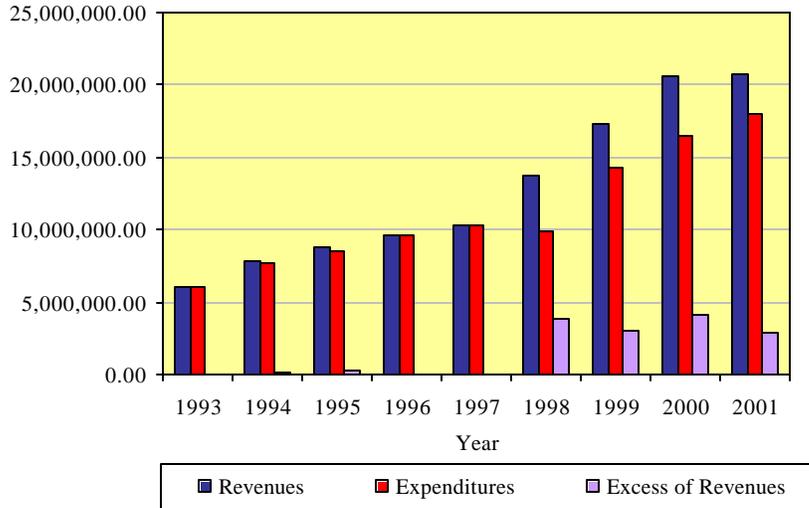
### 4.2.2 EcoGovernance Seen Within the Context of Over-all Fiscal Operations

Revenues generated by the Municipality of Moalboal were increasing from 1993 to 2001. It never incurred an operating deficit during this period (Fig. 12). It is noted, though that the municipality is about 90% dependent on the IRA for its operations. Its IRA dependency ratio ranged from 0.90 in 1993 and 1996 to a high of 1.28 in 1998. In fact, the IRA dependency ratio of Moalboal since 1998 never went below 1.00. This implies that all of the governmental operations of Moalboal since that time has funded in full by its IRA. Local sources of revenues amounted to less than 10% of total revenues.(Fig. 13). Annex 4.5.2 indicates that there is no record of receipts generated out of coastal and marine resources inspite of the fact that Moalboal is considered an international diving destination. Even for fisheries rentals and charges, the financial reports did not show any amounts received in this category.

<sup>5</sup> Data from the Municipal Coastal Database.

With the year-on-year fiscal surpluses of Moalboal, it can have the flexibility to fund priority projects such as ecogovernance activities. However, such flexibility is

**Figure 12. Trends in the Revenues and Expenditures Municipality of Moalboal, Province of Cebu 1993 - 2001**

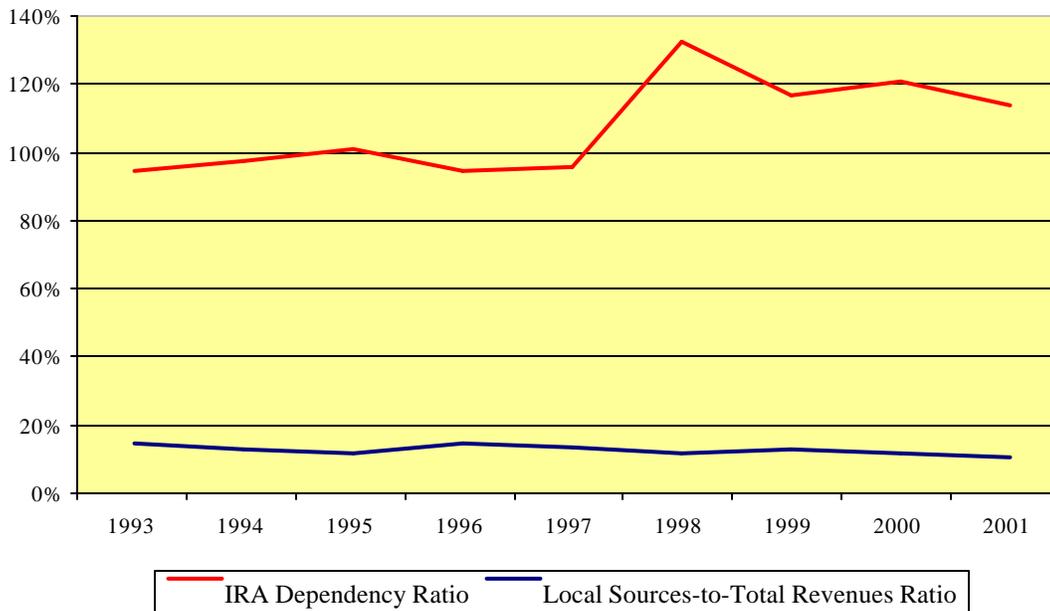


dependent on the availability of IRA funding. The need to develop locally-generated sources is, therefore, necessary especially from fees and charges for the use and utilization of coastal and marine resources.

Environmental management is given the highest priority in the Municipality of Moalboal. From a situation of no

allocation of EDF funds in 1996 and 1997, it registered a share of 46.8% in 2002 surpassing even the infrastructure sector (Annex 4.6.1). Graphically, this trend can be seen in Figure 14.

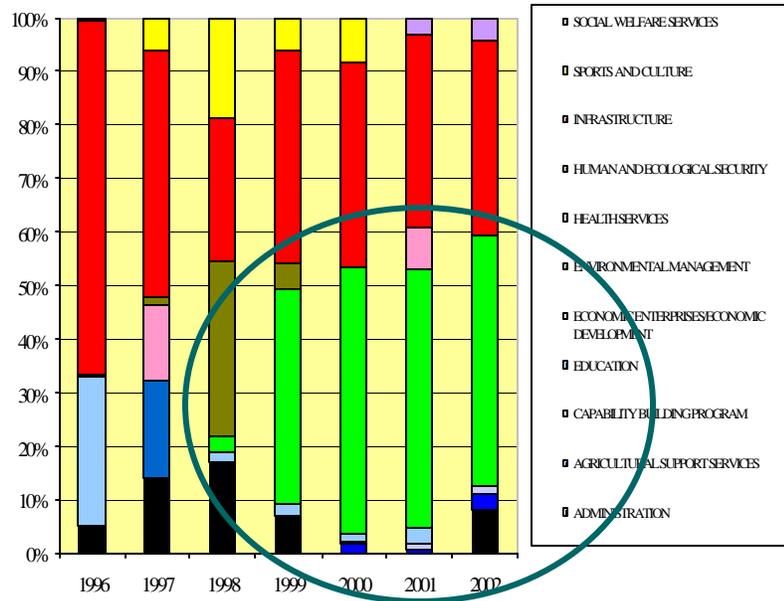
**Figure 13. Trends in Internal Revenue Allotments vis-à-vis Expenditures Municipality of Moalboal, Province of Cebu 1993 - 2001**



The focus on environmental management shifted during the term of office of LGU officials starting around 1997 (Annex 4.6.2). Prior to that, environmental management was given a zero allocation. From an average allocation of 14.3% from 1997-1999, it jumped to a level of 45.9% for the period 1999-2001 and 47.5% for the period 2001-02. The substantial allocation of this sector was the municipality’s investment in its solidwaste management program. In 2002 alone, the allocation for this program was Php1.0 million (Annex 4.6.3).

In the area of coastal resources and fisheries management, Moalboal set aside from the EDF an amount of Php24,804 in 1998 for a fish sanctuary guard house and facilities. Starting on that year, it also allocated Php15,480 for fishery development. In 2002, the amount allocated for fishery development from the EDF had increased to Php165,207. Moalboal also allocated an accumulated total of Php1.1 million in 2001 and 2002 for its Clean and Green Program. These added together make for the largest amount of funds dedicated to environmental management. (Annex 4.6.3).

**Figure 14. Trends in the Allocation of the Economic Development Fund By Program/Project Theme, 1996-2002 Municipality of Moalboal, Province of Cebu**



#### 4.2.3 Provision of Tenure and Access Instruments

Moalboal is probably one of the earliest municipalities among the four in this case study exposed to participatory management as a pilot site of the Central Visayas Regional Project –1, a pilot project on community-based natural resource management. Interventions such as mangrove reforestation, sanctuary establishment, mariculture, artificial reefs and fish aggregating devices were done in selected barangays. One of the tenurial instruments used was Certificate of Stewardship Contract (CSC) issued to household heads for mangrove reforestation. Fish sanctuaries were managed by fishermen’s associations and the barangay council in conjunction with the Marine Management Committee. The Saavedra Fishermen’s Association was organized to undertake seaweed culture<sup>6</sup>.

<sup>6</sup> Calumpong, et al., 1977(a).

Mangrove reforestation success was only 12.% (only one out of 8 sites was maintained). Average survival of mangroves planted was on 5.63% (Table 2 below).

Of the two sanctuaries established, only one (Saavedra) is maintained<sup>7</sup>. The major reason for the low success rate was organization, i.e., leadership issues, mismanagement, disunity and financial problems. It was perceived that a contributing factor to the low level of enforcement of the fish sanctuary ordinance was the low penalty, hence this was increased in 2001 (Ord. 10).

Table 2. Performance of CVRP-1 Interventions<sup>8</sup>

<b>Barangay</b>	<b># of HH 1991</b>	<b># of HH 1995</b>	<b>Hectares Planted 1991</b>	<b>Hectares Existing 1995</b>	<b>Survival 1995</b>
Balabagon	26			1.2	30%
Basdiot	25				1%
PoblacionE	15				0
PoblacionW	25	(4)			0
Saavedra	122				0
Tomonoy	31	5	(11)	1	5%
Tuble	22				8%
Tunga	3	(2)			1%
<b>TOTAL</b>	<b>269</b>	<b>11</b>	<b>(11)</b>		<b>Ave = 5.63%</b>

### Species Restrictions

Among the municipalities studied, Moalboal is the only one with a species restriction ordinance (Ord. No. 11, s. 2002, “Ban on the taking or catching, selling, possessing and transporting turtles and reef sharks”).

### Area Restrictions

A total of nine area restriction ordinances were noted giving protection to three marine sanctuaries (Basdiot, Saavedra, Pescador), declaring the whole municipality as a bird sanctuary, declaring Busay as a watershed, comprehensive zoning of the whole municipality, restricting sand collection, demolishing structures in violation of 20-m set back and requiring a locational clearance for any building or structure. These specific ordinances are listed below.

1. Municipal Ordinance No. 10, s. 2001 of the SB of Moalboal, Cebu. “An ordinance imposing regulatory measures for the protection of the fish sanctuary at Barangays Basdiot and Saavedra, Moalboal, Cebu, and to provide penalties for its violations.” Amendment to Ordinance No. 9-A s. 1988.

<sup>7</sup> Ibid.

<sup>8</sup> Data from Calumpong et al., 1997.

2. Municipal Ordinance No. 115, Series of 1999 of the SB of Moalboal, Cebu. “An ordinance adopting the comprehensive zoning ordinance for the Municipality of Moalboal and providing for the administration, enforcement, and amendment thereof, and for the repeal of all ordinances in conflict therewith”.
3. Municipal Ordinance No. 110 of the SB of Moalboal, Cebu. “An ordinance declaring Busay water source and its surroundings as watershed area”.
4. Municipal Ordinance No. 112 of the SB of Moalboal, Cebu. “An ordinance amending ordinance No. 4 s. 1981: Prohibiting anybody to take or get sands from all beaches, seashore and seabed located within the municipality of Moalboal, Cebu”.
5. Municipal Ordinance No. 69 of the SB of Moalboal, Cebu. “An ordinance demolishing the illegally constructed dikes along the shore of Panagsama Beach, Basdiot, Moalboal, Cebu ”.
6. Municipal Ordinance No. 74 of the SB of Moalboal, Cebu. “Locational clearance”. Sec. 1. All persons, company and corporations who will construct buildings and similar structures within a distance of 100 meters from the shoreline will be required to get Locational Clearance in the local government of Moalboal, Cebu.
7. Municipal Ordinance No. 79 of the SB of Moalboal, Cebu. “Locational clearance”. Sec. 1. All persons, company and corporations who will construct buildings and similar structures within a distance of 100 meters from the shoreline will be required to get Locational Clearance in the local government of Moalboal, Cebu. Resolution No. 1077 “A resolution enacting an ordinance in order to declare and establish Pescador Island as municipal marine park with a marine sanctuary”.
8. Municipal Ordinance No. 76 of the SB of Moalboal, Cebu. “An ordinance imposing regulatory measures in the area declared as municipal marine park with a marine sanctuary at Pescador Island, Moalboal, Cebu”.
9. Municipal Ordinance No. 78 of the SB of Moalboal, Cebu. “An ordinance requiring any foreigner who wish to construct buildings residential or commercial and/or cottages and /or set up any business establishments to pay a regulatory fee of ten thousand pesos (P10,000) and to pay penalties for violation thereof”.
10. Municipal Ordinance No. 81 of the SB of Moalboal, Cebu. “Requiring all business establishments in Piangsam and Basdako to register at Moalboal Tourism Council”.
11. Municipal Ordinance No. 83 of the SB of Moalboal, Cebu. “Declaring the entire jurisdiction of the municipality of Moalboal as bird sanctuary”.

#### *Technological and Other Restrictions*

Among the technological restrictions are the banning of “kobkob” (purse seiners) within municipal waters, carrying or transporting of speargun used for scuba spearfishing in Pescador Island and other fish sanctuaries such as Tongo, Basdiot and Bangag, Saavedra, Moalboal, prohibiting fishpond operators/caretakers to drain water containing poisonous substance before the duration of seven (7) days and also prohibiting the gathering or selling of poisoned fish, and prohibiting the throwing of all garbage within fifty (50) m along the side of a barangay, municipal and provincial road as well as requiring households to have garbage receptacles. The specific ordinances referring to these restrictions are listed below.

1. Municipal Ordinance No. 01, s. 2000 of the SB of Moalboal, Cebu. “Banning the operation of kobkob (Ring net operation), trawl fishing, spearfishing and all other methods/forms of fishing using compressor, catching tropical fish for aquarium purposes, netfishing and capturing immature species in the municipal waters of Moalboal, Cebu, and to impose penalties for violation hereof”.
2. Municipal Ordinance No. 104 of the SB of Moalboal, Cebu. “An ordinance prohibiting the opening of new dive shops in Panagsama, Basdiot, Moalboal, Cebu, for the next five years effective this year, 1997”.
3. Municipal Ordinance No. 118 of the SB of Moalboal, Cebu. “An ordinance repealing ordinance No. 104 s. 1997 and the amending ordinance No. 114 s. 1999”.
4. Municipal Ordinance No. 99 of the SB of Moalboal, Cebu. “Prohibiting operators of pumpboat for hire, diveshop operators and any other similar sea transport to allow any person to carry or transport speargun used for scuba spearfishing in Pescador Island and other areas declared as fish sanctuary such as Tongo, Basdiot and Bangag, Saavedra, Moalboal”.
5. Municipal Ordinance No. 111 of the SB of Moalboal, Cebu. “An ordinance prohibiting/banning persons from other towns to put-up/install fish pens like “dumpil or bunsod” within the municipal waters of Moalboal, Cebu, and to impose penalties for violation thereof ”.
6. Municipal Ordinance No. 113 of the SB of Moalboal, Cebu. “Banning the operation of kobkob (Ring net operation), trawl fishing, spearfishing and all other methods/forms of fishing using compressor, catching tropical fish for aquarium purposes, netfishing and capturing immature species in the municipal waters of Moalboal, Cebu, and to impose penalties for violation hereof”.
7. Municipal Ordinance No. 64, s. 1994 of the SB of Moalboal, Cebu. “An ordinance prohibiting fishpond operators/caretakers to drain water containing poisonous substance before the duration of seven (7) days and also prohibiting the gathering or selling of poisoned fish by any person and to provide penalty thereof”.
8. Municipal Ordinance No. 73 of the SB of Moalboal, Cebu. “Requiring all households and establishments to have garbage receptacle in their respective places or area”.
9. Municipal Ordinance No. 87 of the SB of Moalboal, Cebu. “An ordinance imposing annual municipal license for professional dive center, dive instructor and dive master within the jurisdiction of Moalboal, Cebu”.
10. Municipal Ordinance No. 89 of the SB of Moalboal, Cebu. “An ordinance prohibiting the throwing of all garbage within a distance of fifty (50) meters along the side of a barangay, municipal and provincial road in the municipality of Moalboal, Cebu, and to provide penalties for violation”.

### *Preferential Rights*

Moalboal also limits the number of users by requiring non-resident fishers (“transients”) a permit (Municipal Ordinance No. 98, s. 2002 of the SB of Moalboal, Cebu, “Mayor’s Permit of five hundred pesos (P500.00) per fishing for transient fishermen fishing in the municipal waters within the jurisdiction of Moalboal, Cebu”).

#### 4.2.4 Implementation of Shifter Investments

The main industry that is driving the local economy of Moalboal is tourism. It is considered as a diving site that is patronized by both international and local tourists. Although it is admitted that the multiplier effects of tourism.

Shifter investment strategies as outlined in the CRM Plan of the municipality (Annex 4.7) focuses on conservation and/or environment-friendly practices such as the establishment and management of marine parks, reserves, and sanctuaries. Also, tourist related activities are seen to help ease the pressure on the overexploitation of the coastal resources within the municipality's territorial jurisdiction.

Other strategies considered are values formation programs, skills training on alternative livelihood activities, and farming (workshop on August 13, 2004, Sangguniang Bayan Session Hall, Municipality of Moalboal).

#### 4.2.5 Incentives/Disincentives Utilized

Based on the responses indicated on incentives matrix form (Annex 4.8), Moalboal had started to collect fishery rentals, fees, and charges under the provisions of the Local Government Code. It is reported that Php21,700 was collected in 2001 while Php26,000 was collected in 2002 (*Item No. 1*). The former, however, was not reflected in the financial statements of the municipality indicating a need to reconcile the record practices involved with respect to this item.

It is also reported that incentives were granted to fishermen's associations under the provisions of the Fisheries Code (Section 24). Grants were made by the Bureau of Aquatic Resources/Department of Agriculture (BFAR/DA) and the LGU (*Item No. 8*).

In terms of catching individuals violating certain provisions of the Fisheries Code (with pertinent local ordinances), the municipality of Moalboal reported the following:

1. Section 88 on the Fishing Through Explosives, Noxious or Poisonous Substance, and/or Electricity (*Item No. 25*): 1 group, 2001.
2. Section 89 on the Use of Fine Mesh Net (*Item No. 26*): 1 group, 2002.
3. Section 90 on the Use of Active Gear in Municipal Waters and Bays and Other Fishery Management Areas (*Item No. 27*): 1 group, 2002.
4. Section 92 on the Ban on Muro-Ami, Other Methods and Gear Destructive to Coral Reefs and Other Marine Habitats (*Item No. 29*): 1 group, 2000.
5. Section 94 on the Conversion of Mangroves (*Item No. 31*): 1 individual, 2002.
6. Section 96 on the Fishing in Fishery Reserves, Refuge, and Sanctuaries (*Item No. 33*): individuals, 2001 (1); 2002 (3); 2003 (1).

A notable incentive mentioned in the workshop was the implementation of ordinances on the "user fees" system in the fish or marine sanctuaries in the LGU.

4.2.6 TAP Issues (to highlight on the quality of TAP in the processes undertaken in the following:)

Table 3. Overall T.A.P. Index by LGU Ecogovernance Activities – MOALBOAL

OVERALL T.A.P. INDEX		
I. Participation in RMU Planning	(A)	12
II. Transparency in RMU Planning	(C)	6
III. Accountability in RMU Planning	(E)	13
IV. Transparency in FFSW Budgeting	(G)	7
V. Accountability in FFSW Budgeting	(I)	7
VI. Participation in FFSW Budgeting	(K)	7
VII. Transparency in Contracting, Bidding and Procurement	(M)	6
VIII. Accountability in Contracting, Bidding and Procurement	(O)	2
IX. Participation in Contracting, Bidding and Procurement	(Q)	2
X. Accountability in the Issuance of Permits, Licenses	(S)	5
XI. Transparency & Participation in Issuance of Permits, Licenses	(U)	4
XII. Accountability in Enforcement	(W)	3
XIII. Transparency in Enforcement	(Y)	3
XIV. Participation in Enforcement	(AA)	4
Overall T.A.P. Score of Municipality (TOTAL SCORE divided by 137*)		81/137
<b>ECOGOVERNANCE INDEX OF MUNICIPALITY</b>		<b>59%</b>

\*IP's not present, hence not included in calculation

### 4.3 Panglao, Bohol

#### 4.3.1 Brief Description of Site

Panglao, a fifth class municipality, is one of the two municipalities in the island of Panglao located in the southwestern part of Bohol. It is composed of 11 barangays, all except one of which are coastal. It has a land area of 48 km<sup>2</sup> and a coastline length of 25 km. The population of the municipality as of 2000 was 21,337, and majority (20,521) lived in the coastal area. Population growth rate is 1.8%<sup>9</sup>.

Panglao envisions itself to be a tourism estate. Its western beaches are dubbed as “Little Boracay” and are lined with resorts. Its diving attraction is Balicasag I., a sitio of barangay Poblacion. Balicasag I. is a Naval station and the land is under the jurisdiction of the Philippine Navy.

#### 4.3.2 EcoGovernance Seen Within the Context of Over-all Fiscal Operations

<sup>9</sup> Data from the Municipal Coastal Database.

Based on the fiscal trends of the Municipality of Panglao (Fig. 15), revenues have consistently been higher than expenditures except in 1996 when the LGU incurred a deficit. During that year, the LGU had a substantial capital expenditure for which it in fact borrowed for it (Annex 4.9.0). The Panglao LGU's dependence on the IRA has slowly been reduced as can be seen Figure 16. The IRA-dependency ratio trend indicates a downward direction while the local sources-to-total revenues ratio trend line shows an upward trend. In 1994, Panglao was almost 100% dependent on the IRA for its operating expenditures. About seven (7) years after, the IRA-dependency ratio had been reduced by about 70%.

Figure 15. Trends in Revenues and Expenditures Municipality of Panglao, Province of Bohol 1994 - 2001

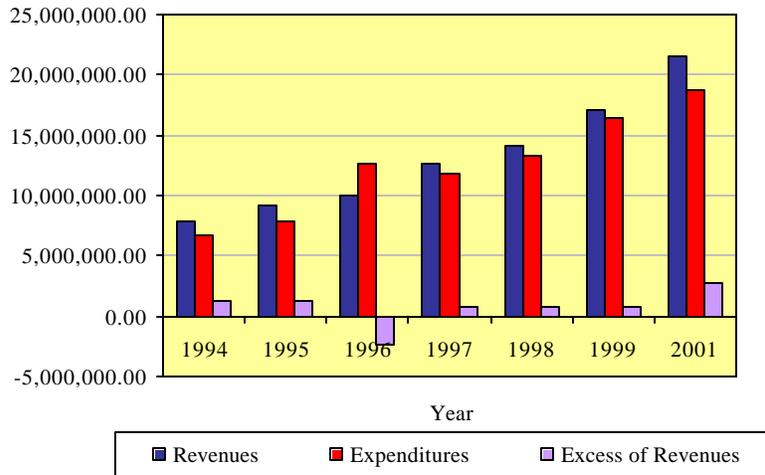
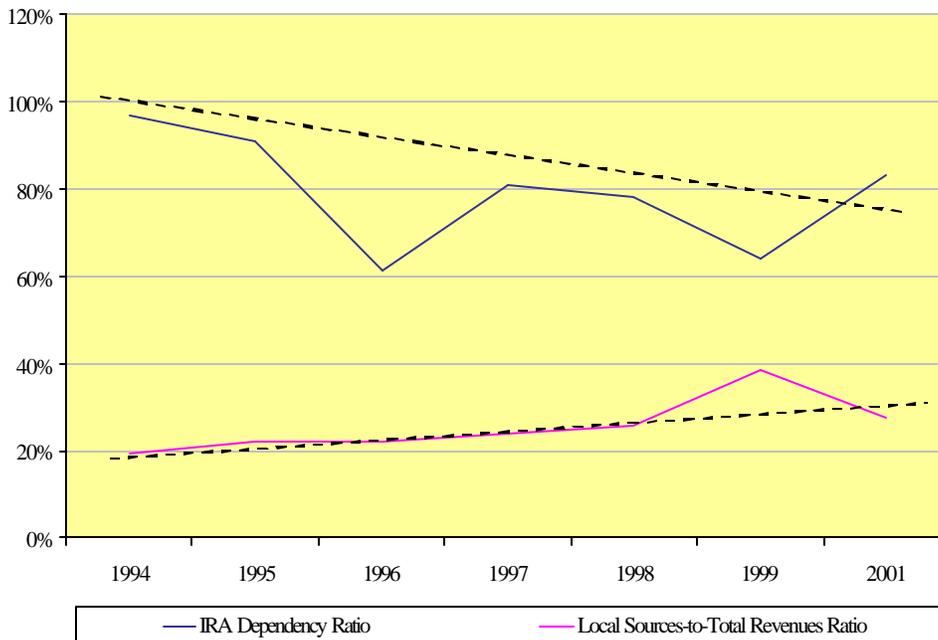
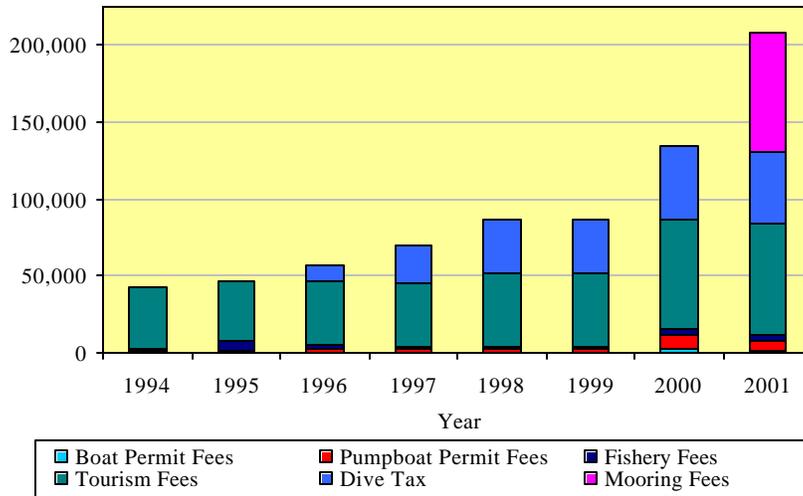


Figure 16. Trends in the Internal Revenue Allotment vis-à-vis Expenditures Municipality of Panglao, Province of Bohol 1994 - 2001



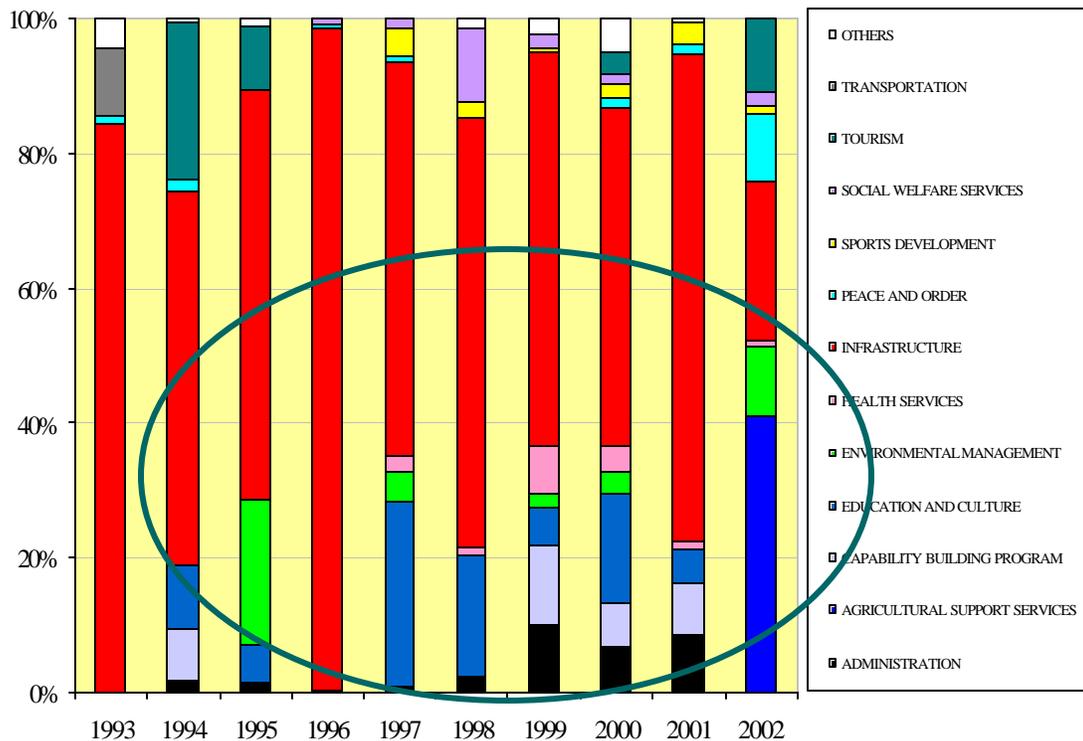
**Figure 17. Trends in Local Revenues Related to Coastal/Marine Resources  
Municipality of Panglao, Province of Bohol  
1994 - 2001**



It is remarkable to note that Panglao is able to generate fiscal revenues out of its coastal and marine resources. Panglao is able to raise funds from the following fees and charges: (a) boat/pumboat permit fees; (b) fishery fees; (c) tourism fees; (d) dive tax; (e) mooring fees. In 2001, the

combined receipts from these fees and charges totaled Php207,935 (Fig. 17). This situation, i.e., reduction in IRA dependence and the ability to generate fiscal resources

**Figure 18. Trends in the Allocation of the Economic Development Fund By Program/Project Theme  
Municipality of Panglao, Province of Bohol  
1993 - 2002**



from coastal and marine resources, may then allow the Municipality of Panglao to have excess funds that they can use to invest in activities such as ecogovernance.

As with other LGUs in this case study, infrastructure is also the priority sector of Panglao. In 1996, practically the whole EDF budget was devoted to infrastructure projects, i.e, 98.2% of total (Fig. 18). The proportion of this sector to total EDF resources started to taper down after that. In 2002, the percentage of infrastructure was down to 23.6%. That year, a substantial amount was allocated to agricultural support services at 41.0% of the total.

Average total allocation for environmental management for the period from 1994 to 2002 was 4.7%. Although a far cry from the infrastructure sector which had a total average allocation of 60.1% for the period, environmental management ranked 4<sup>th</sup> overall (Annex 4.10.2).

For the three (3) year averages starting 1995-1997, the average percentage share of environmental management was going down. For the period 1999-2001, its average share was only 1.7%.

Environmental management projects for funding under the EDF included the municipality's clean and green and solid waste management programs. In 1999, funds were set aside by the municipality in the amount of Php50,000 for the construction of mooring bouys (Annex 4.10.3).

Tourism projects are geared towards ecotourism making use of the coastal resources available in the area. As such, funds allocated for this purpose may be considered as part of the municipality's coastal resources management efforts and, hence, to be construed as within the ambit of its pursuit of its ecological balance mandate.

#### 4.3.3 Tenure and Access Instruments Provision

Apart from the general selection criteria, Panglao was specifically chosen because (1) it is fast becoming to be a tourist area (earning the nickname "Little Boracay"), (2) it has a unique tenurial issue with Balicasag I. (a sitio of barangay Poblacion) being a Naval station under the jurisdiction of the Philippine Navy, and (3) it is the site of the Bohol Marine Triangle Project, a UNDP-GEF funded marine biodiversity conservation project managed by the Foundation for the Philippine Environment.

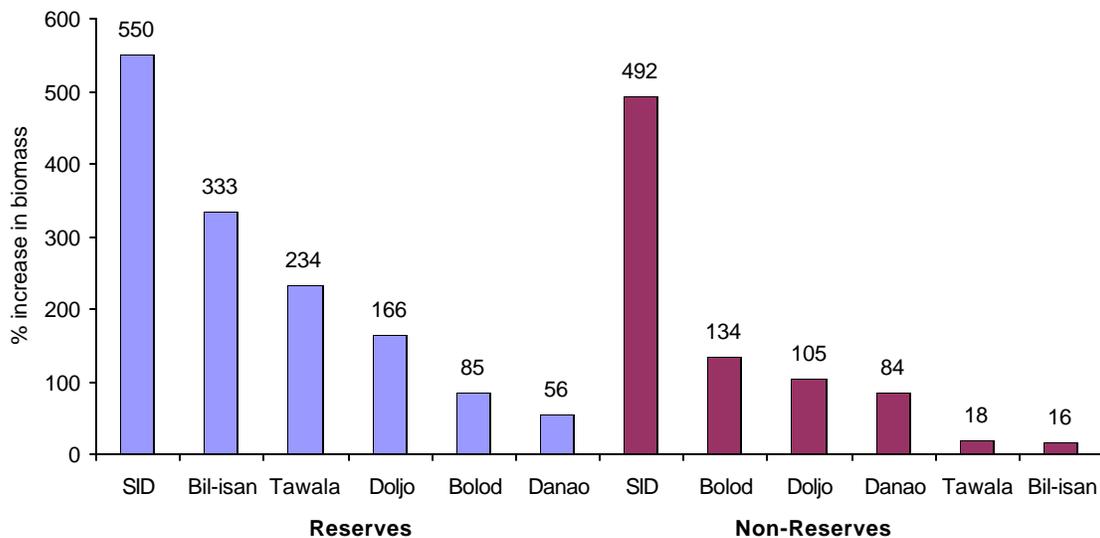
#### Area Restrictions

A total of six (6) restriction ordinances/resolutions were noted: Ord 5, S.1986 declaring fish sanctuaries (Bolod, Danao, Tawala, Doljo, Bil-isán, Poblacion), Ord 6, S. 1998 prohibiting sea crafts to moor or anchor by tying across the shoreline within the developed beaches of the municipality of Panglao, Bohol, Ord 8, S. 1998 declaring the whole island of Balicasag as Marine Park with the southwest portion as fish sanctuary,

and Ord 5 & 11, S 2003 delineating the municipal waters of Panglao. These specific ordinances are listed below.

1. Municipal Ordinance No. 5, Series of 1986 of the SB of Panglao. An ordinance declaring fish sanctuaries in the municipal seawaters of Panglao, Panglao, Bohol.
2. Municipal Ordinance No. 6, Series of 1998 of the SB of Panglao. An ordinance prohibiting all owners of any sea crafts to moor or anchor by tying across the shoreline within the developed beaches of the municipality of Panglao, Bohol.
3. Municipal Ordinance No. 8, Series of 1998 of the SB of Panglao. An ordinance declaring the whole island around Balicasag as Marine Park with the southwest portion as fish sanctuary.
4. Municipal Ordinance No. 5, Series of 2003 of the SB of Panglao. An ordinance delineating the boundaries of the municipal waters of the municipality of Panglao, Province of Bohol.
5. Municipal Ordinance No. 11, Series of 2003 of the SB of Panglao. An ordinance amending Municipal Ordinance No. 5, Series of 2003, entitled, “An ordinance delineating the boundaries of the municipal waters of the municipality of Panglao, Province of Bohol” by addition.

The effectiveness and enforcement of these restrictions may be gleaned from the graphs below where all restricted sites (marine sanctuaries) in Panglao showed significant numbers and biomass of target fish species (i.e., those species preferred by fishers).



**Figure 19.** Mean biomass of target reef fish per 500m<sup>2</sup> inside and outside selected marine reserves. Yellow bars indicate sites of potential reserves. ( $\pm 1$  S.E., n = 6). Data from B. Stockwell, BMT Final Report., 2004.

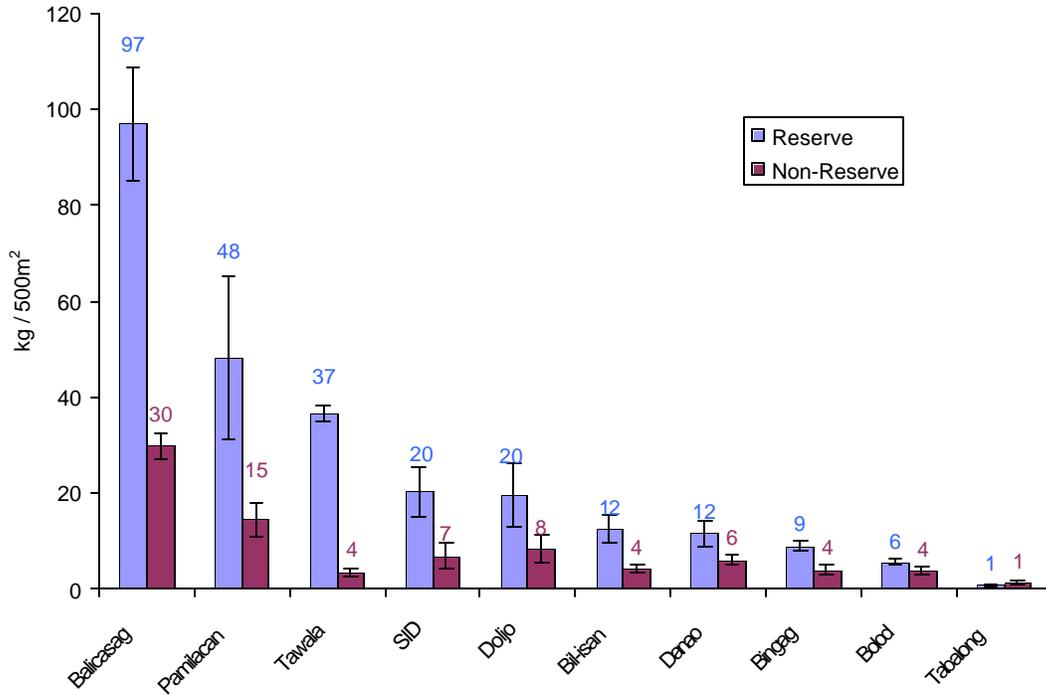


Figure 20. Per cent change in target fish biomass between the 2002 and 2003 surveys inside and outside the reserves. (SID = San Isidro/Dao) ( $\pm 1$  S.E., n = 6). Data from B. Stockwell, BMT Final Report, 2004.

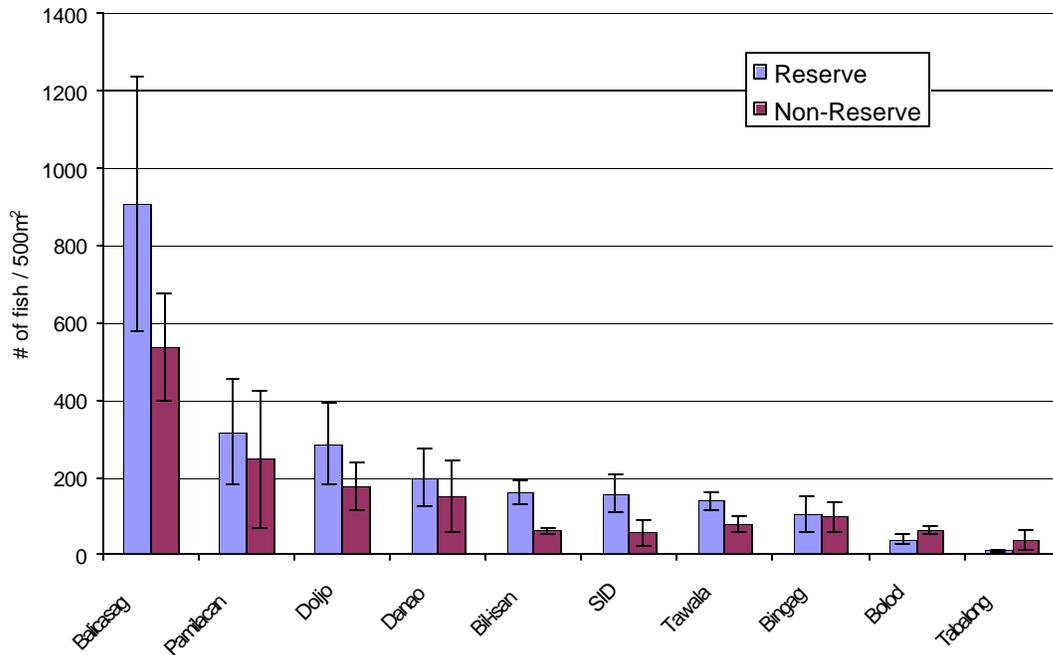


Figure 21. Mean number of target reef fish per 500m<sup>2</sup> inside and outside selected marine reserves for the 2003 survey. Except for SID (San Isidro/Dao), Bingag and Tabalong, all sites are in Panglao. ( $\pm 1$  S.E., n = 6). Data from B. Stockwell, BMT Final Report, 2004.

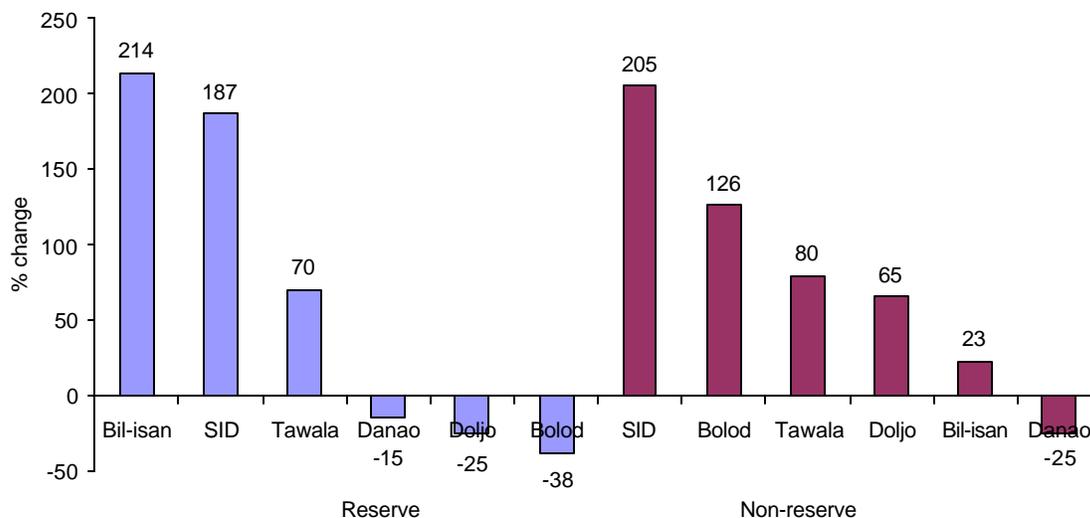


Figure 22. Per cent change in target fish densities between the 2002 and 2003 surveys inside and outside the reserves. ( $\pm 1$  S.E.,  $n = 6$ ). Data from B. Stockwell, BMT Final Report, 2004.

### Technological and Other Restrictions

Among the technological restrictions are Ord 6, S 1995, regulating the fishing method using drive-in-net which is locally known as “sagiwsiw”, Ord 04, S. 1999 banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao and Ord 01, S. 2000, which provides for comprehensive solid waste management. These specific ordinances are listed below.

1. Municipal Ordinance No. 13, Series of 1993 of the SB of Panglao. An ordinance regulating the business of operation of resorts, firm entities and establishments that cater to tourists.
2. Municipal Ordinance No. 6, Series of 1995 of the SB of Panglao. An ordinance separating and regulating the fishing method using drive-in-net which is locally known as “sagiwsiw” from the municipal fishery ordinance No. 1, series of 1988.
3. Municipal Ordinance No. 04, Series of 1999 of the SB of Panglao. An ordinance banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao, Bohol.
4. Municipal Ordinance No. 02, Series of 1999 of the SB of Panglao. An ordinance imposing mooring fee to all transient boats operating diving and cruising activities within the municipal seawaters of Panglao, Bohol.
5. Municipal Ordinance No. 04, Series of 1999 of the SB of Panglao. An ordinance banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao, Bohol.
6. Municipal Ordinance No. 05, Series of 1999 of the SB of Panglao. An ordinance regulating the operations of jet skis, speed boats and the like, within the municipal seawater of Panglao, Bohol.
7. Municipal Ordinance No. 01, Series of 2000 of the SB of Panglao. Comprehensive solid waste management ordinance of the municipality of Panglao, Bohol.

### Preferential Rights

The municipality also limits resource users by levying additional additional (1%) municipal tax on the amount paid by dive shops and other similar establishments by SCUBA diving customers and by imposing mooring fee to all transient boats operating diving and cruising activities within the municipal seawaters of Panglao. The specific ordinances for the above mentioned restrictions are listed below:

1. Municipal Ordinance No. 3, Series of 1995 of the SB of Panglao. An ordinance imposing an additional one percent (1%) municipal tax on the amount paid by dive shops and other similar establishments by SCUBA diving customers.
2. Municipal Ordinance No. 02, Series of 1999 of the SB of Panglao. An ordinance imposing mooring fee to all transient boats operating diving and cruising activities within the municipal seawaters of Panglao, Bohol.

#### 4.3.4 Implementation of Shifter Investments

The shifter investment strategies in Panglao are based on its main development agenda of making it a prime tourist destination. This is summarized in Annex 4.11. The development thrust of the municipality is seen the Panglao Island Comprehensive Land Use Plan (PICLUP).

Its general topography warrants that it pursues an improved farming system using environment-friendly technologies. Communities are also encouraged to manage/conservate marine habitats.

In terms of industry transfer activities, it is clear that the strategy is to shift the economic activities of the island towards tourism. More specifically, alternative livelihood activities are to be provided to those concerned fisherfolk engaged in illegal fishing activities like *'bantak'*, *'pokot'* and the like (Validation workshop, August 20, 2004, Municipality of Panglao). Alternative livelihood activities should be “support businesses” to the main “economic engine” which is tourism.

Activities that involve improving the efficiency of commodity/service flows include the conduct of market-matching activities/investment cliniquing and establishing/strengthening marketing cooperatives.

#### 4.3.5 Incentives/Disincentives Utilized

The responses indicated in the incentives matrix form (Annex 4.12) will show that there is no widespread utilization of the incentives provided for by law even if it was reported that fees and charges on the utilization and use of coastal and marine resources generated a significant amount of local revenues. In fact, an infrastructure support of Php600,000 from the Department of Agriculture in 2001 was the only form of

“incentive” received by municipal fisherfolks under Section 119 of the Fisheries Code (*Item No. 20*).

In terms of disincentives to illegal fishing and other destructive practices, the Panglao LGU reported the following:

1. Section 89 on the Use of Fine Mesh Net (*Item No. 26*): 2 apprehensions.
2. Section 90 on the Use of Active Gear in Municipal Waters and Bays and Other Fishery Management Areas (*Item No. 27*): 2 apprehensions.
3. Section 96 on Fishing in Fishery Reserves, Refuge and Sanctuaries (*Item No. 33*): 2 apprehensions.
4. Section 97 on Fishing or Taking of Rare, Threatened or Endangered Species (*Item No. 34*): 1 apprehension.

During the validation workshop in the municipality, the participants mentioned additional significant ideas on incentives. One of these included the giving of rewards or incentives to persons who can inform the authorities about illegal fishing activities (proposed).

4.3.6 TAP Issues (to highlight on the quality of TAP in the processes undertaken in the following:)

Table 4. Overall T.A.P. Index by LGU Ecogovernance Activities – PANGLAO

OVER-ALL T.A.P. INDEX		
I. Participation in RMU Planning	(A)	17
II. Transparency in RMU Planning	(C)	8
III. Accountability in RMU Planning	(E)	18
IV. Transparency in FFSW Budgeting	(G)	8
V. Accountability in FFSW Budgeting	(I)	10
VI. Participation in FFSW Budgeting	(K)	8
VII. Transparency in Contracting, Bidding and Procurement	(M)	7
VIII. Accountability in Contracting, Bidding and Procurement	(O)	1
IX. Participation in Contracting, Bidding and Procurement	(Q)	4
X. Accountability in the Issuance of Permits, Licenses	(S)	6
XI. Transparency & Participation in Issuance of Permits, Licenses	(U)	8
XII. Accountability in Enforcement	(W)	5
XIII. Transparency in Enforcement	(Y)	5
XIV. Participation in Enforcement	(AA)	4
Overall T.A.P. Score of Municipality (TOTAL SCORE divided by 128*)		109/128
<b>ECOGOVERNANCE INDEX OF MUNICIPALITY</b>		<b>85%</b>

\*IP's and Forests not present, hence not included

#### 4.4 Sibulan, Negros Oriental

##### 4.4.1 Brief Description of Site

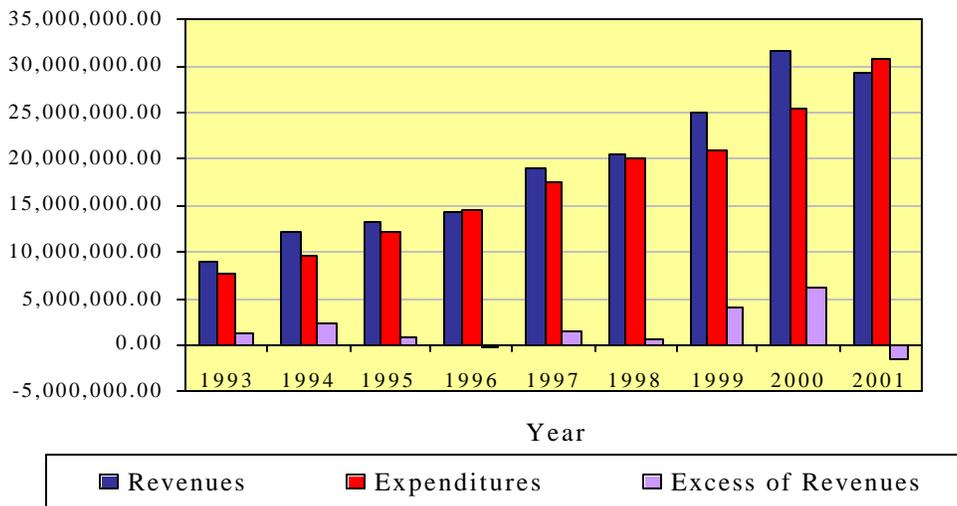
Sibulan is a fourth class municipality in the central portion of Negros Oriental located to the north of Dumaguete City, the provincial capital. It is composed of 15 barangays, 6 of which are coastal. It has a land area of 163 km<sup>2</sup> and coastline length of 9 km. The population of the municipality as of 2000 was 37,523.<sup>10</sup>

Sibulan was chosen as a case study site because (1) it is very dependent on its natural resources for livelihood with fishing and farming being the predominant livelihoods, (2) it is one of the Coastal Resource Management Project (CRMP) learning sites, the CRMP being a project of the DENR, (3) it has one NIPAS area, Lake Balinsasayao, and its municipal waters are within the NIPAS Tañon Strait Protected Seascape, and (4) it is rapidly urbanized, its income increasing due to the impressive volume of commercial establishments opening business in the existing commercial areas (Municipality of Sibulan Official Website, <http://www.sibulan.gov.ph/>).

##### 4.4.2 EcoGovernance Seen Within the Context of Over-all Fiscal Operations

The Municipality of Sibulan experienced an increasing trend in its revenues from 1993 – 2001 (Fig. 23). In 2001, the LGU experienced a reduction in its IRA, a situation that happened to the other municipality in Negros Oriental (Dauin) included in this case

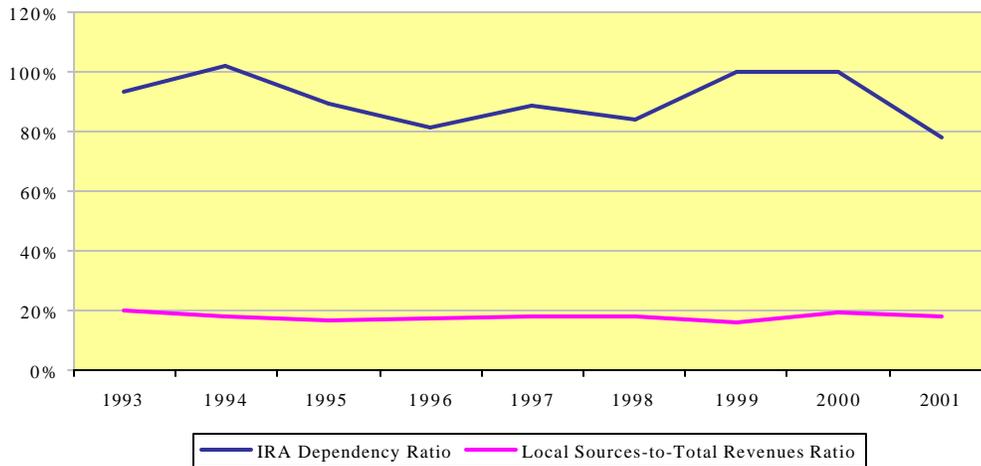
**Figure 23. Trends in Revenues and Expenditures  
Municipality of Sibulan, Negros Oriental,  
1993 - 2001**



study. Expenditures of the LGU were also increasing during the period, outpacing revenues in 1996 and 2001. During these years the Sibulan incurred operating deficits. About twenty percent (20%) of the municipality’s total revenues are generated from local

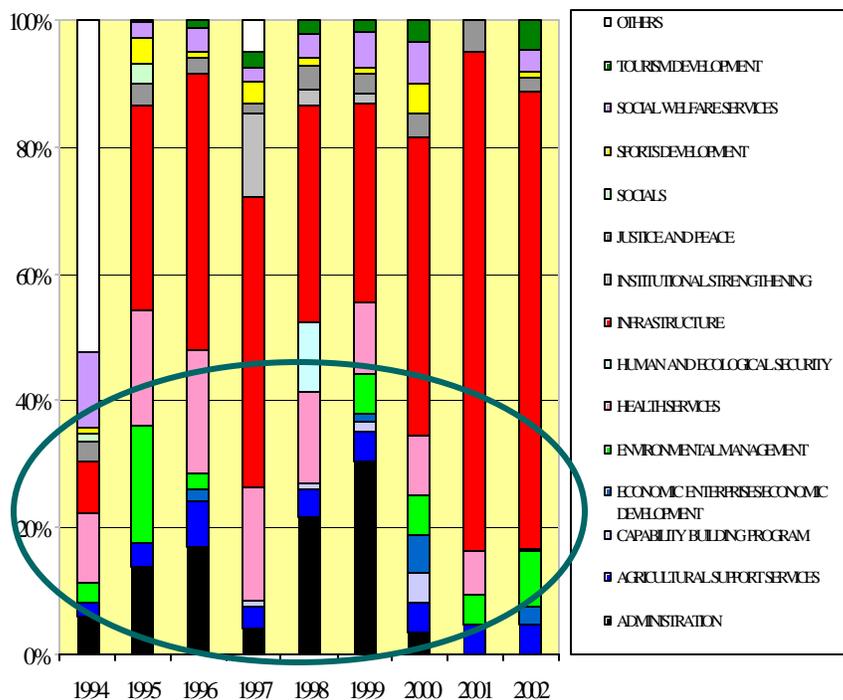
<sup>10</sup> Data from the Municipal Coastal Database.

**Figure 24. Trends in Internal Revenue Allotments vis-à-vis Expenditures Municipality of Sibulan, Negros Oriental, 1993 - 2001**



sources (Annex 4.13.0). This level is relatively stable as seen in the trend line in Fig. 24. The LGU is, however, still dependent on the IRA for about 80% of its operations. This

**Figure 25. Trends in the Allocation of the Economic Development Fund by Program/Project Theme Municipality of Sibulan, Negros Oriental, 1994 - 2002**



can be seen by the fact that it starts to incur a deficit, i.e., in 1996 and 2001, when its IRA dependency ratio falls at around 0.8 and below. With a slightly better fiscal position than that of Dauin, Sibulan may be able to allocate some of its surpluses towards ecogovernance activities. It can move towards increasing the

share of local sources to total revenues.

Revenues from fishery rentals and charges were quite significant in 1993 at Php52,501.50. In 1995 and 1997, receipts exceeded the Php100,000 mark. However, the amount began to taper off with the reported receipt in 2001. (Annex 4.13.2).

Infrastructure projects are also given the highest priority in the Municipality of Sibulan. The proportion of the EDF set aside for this sector has been increasing from 1993 to 2002 (Fig. 25). In 2001, about 80% of the budgeted EDF went to infrastructure projects. Health and social services, and environmental management were given priority attention after infrastructure activities (Annex 4.14.1).

Based on three-year averages (Annex 4.14.2), it is clear that infrastructure is getting the bulk of the attention for each of the terms of office of local officials from 1994-2002. The proportion of the EDF allocated for this purpose is also increasing over time. Health services follows infrastructure as the sector being next in priority. However, the allocation of EDF resources in this sector has been declining so much so that for the period 2001-2002, its share was only 3.6% from a relatively high allocation of 18.4% for the period 1995-1997. Environmental management, on the other hand, seems to be having an increasing share in the allocation of development funds. For the period 2001-2002, its share was 6.7% of the total. Aside from investments in solid waste management, the Municipality of Sibulan is also setting aside some of its EDF towards the strengthening of the Bantay Dagat with the program to purchase a patrol boat in 1999 (Annex 4.14.3). Also starting on that year, a regular amount is set aside for “Eco-System Development and Integrated Coastal Resources Management (ICRM)”. Except for 1999 when the fund allocation was Php60,000, the amount of Php80,000 has been set aside annually for this purpose.

If the share of tourism development is added, this could increase to about 10.0% of the total in the more recent years. Tourism development of the municipality is anchored on its natural resources – ecotourism.

#### 4.4.3 Provision of Tenure and Access Instruments

This municipality gives us an example of a governance process, with Ord. No. 07, s. 1993, which prohibits the reclamation of seawaters and the construction of structures on foreshores, shallow sea water areas, rivers and river banks within the municipality without the necessary permits from the appropriate government agencies. At present, a pier on metal piles services small pumpboats that ply the Sibulan-Liloan (Oslob) route. Another one is being constructed adjacent to the present to service vehicles (roll on-roll off), this time reclaiming a portion of the waters. An Environmental Compliance Certificate (ECC) has been obtained from the DENR but construction was stopped upon complaint of the PPA which has not issued a clearance permit. It seems like the term “*without the necessary permits from the appropriate government agencies*” was not complied with as PPA is also one of the agencies that will give a clearance permit.

Three ordinances were issued in 1988 restricting fishing and other extractive activities in three areas namely: Agan-an (Res. No. 74, max. 1 ha), Lo-oc (Res. No. 92)

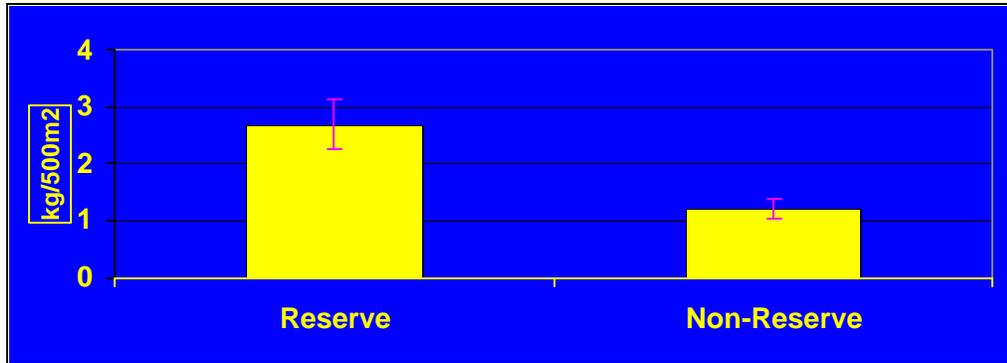
and Cangmating. Implementation of the provisions of this ordinance is directly under the MLGU.

### Area Restrictions

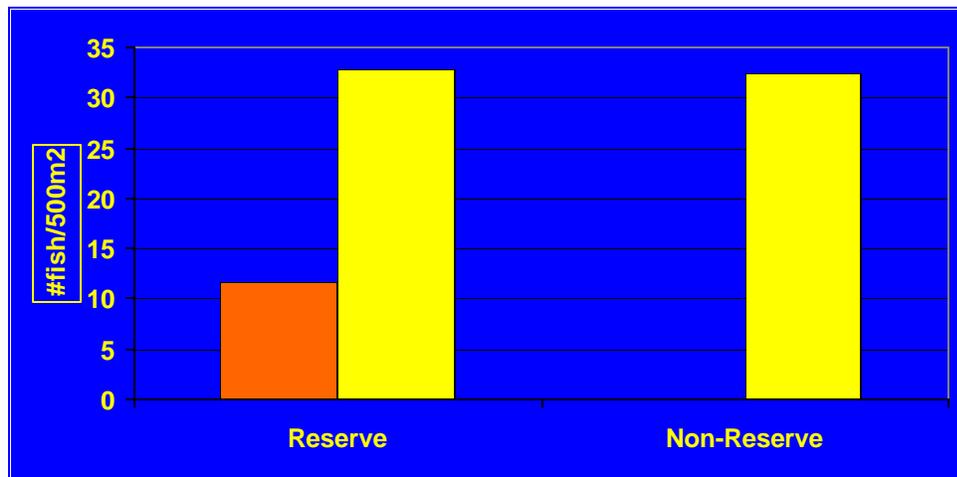
A total of 8 restriction ordinances/resolutions were noted. Among them were those regulating access to the sea, declaring marine sanctuaries, and giving the municipal government control of its coastal zone by applying for lease. These specific ordinances and resolutions are listed below.

1. Ordinance No. 23, s. 1981 of the SB of Sibulan. An ordinance amending ordinance No. 31, s. 1980 which requires owners of parcels of seashore lands within territorial jurisdiction of the municipality to provide access to the sea and providing penalties in violation thereof.
  - i. Sec. 1. ...a width of one (1) meter each from their common boundaries to be indicated by a permanent permanent marker ...
2. Ordinance No. 07, s. 1993 of the SB of Sibulan. Prohibiting the reclamation of seawaters and the construction of structures on foreshores, shallow sea water areas, rivers and river banks within the municipality without the necessary permits from the appropriate government agencies.
3. Ordinance No. 04, s. 1993 of the SB of Sibulan. Making available for reclamation the fresh and shallow seawater area fronting Barangay Agan-an, Maslog and a portion of Cangmating this municipality, under the build-operate transfer schemes pursuant to Section 10 of R.A. 6957.
4. Ordinance No. 05-A, s. 1989. An ordinance appropriating the amount of the thousand & 00/100 (P10,000.00) pesos to defray one-half (1/2) of the estimated cost of relocation survey of the foreshore lands from Sibulan airport (boundary) to Poblacion, Sibulan to be taken from the 20% development fund.
5. Res. No. 74, 1988. ...to set aside in this area of the shoreline of Agan-an, this municipality, measuring 100 x 50 m up to a maximum of 100 x 100 meters as a fish sanctuary.
6. Res. No. 74, 1988. ... to declare the foreshore or government lands in the coastal areas of this municipality tourism areas and for other purposes that this municipal government deemed it necessary
7. Res. No. 92, 1988. ...to declare a one hectare within the reserve area of municipality in the near shore of Lo-oc, Sibulan as a fish sanctuary.
8. Res. No. 93-98A of the SB of Sibulan. That this municipal government will apply for leasehold on all foreshores within the territorial jurisdiction of this municipality, with the DENR.
9. Ordinance No. 23, s. 1981 of the SB of Sibulan. An ordinance amending ordinance No. 31, s. 1980 which requires owners of parcels of seashore lands within territorial jurisdiction of the municipality to provide access to the sea and providing penalties in violation thereof.

Not much information is available with regard to the effectiveness of these restrictions. Based on the fish census data<sup>11</sup> (see graphs below), no significant difference was seen in the target fish density and biomass inside and outside the marine reserve in 2002. Baseline data for target fish density at the time of establishment in 1998 is given for comparative purposes. One of the reasons may be that the area may probably be too small. Another may be enforcement.



**Table 26.** Target fish biomass in Cangmating Marine Reserve in 2002. Data from B Stockwell, Unpubl.



**Table 27.** Target fish biomass in Cangmating Marine Reserve in 1998 (orange, data from SUML, unpubl.) and 2002 (yellow, data from B. Stockwell).

<sup>11</sup> SUML, 1998. Unpubl. Resource Assessment of Cangmating Marine Sanctuary, Sibulan, Negros Oriental and from B. Stockwell.

### Technological and Other Restrictions

Four ordinances were issued restricting fishing and other extractive activities in three areas (marine sanctuaries).

1. Res. No. 96-9 of the SB of Sibulan. Amending Sec. 2 and to insert Sec. 2A of Ordinance No. 8, s. 1992, “Adopting and ordaining the regulation of sagiwsiw<sup>12</sup> fishing in the municipality of Sibulan – within 1 km from the coastal waters, Sec. 2A: “Said operation is hereby authorized outside the 1 km provided however that operators secure mayor’s permit and pay corresponding fees thereof.””
2. Res. No. 95-129 of the SB of Sibulan. Prohibiting the use of compressors and scuba tanks affecting fishing and fisheries within one km from coastline.
3. Ordinance No. 01, s. 1996 of the SB of Sibulan. Amending Sec. 2 and to insert Sec. 2A of Ordinance No. 8, s. 1992, “Adopting and ordaining the regulation of sagiwsiw fishing in the municipality of Sibulan.
4. Ordinance No. 22, s. 1996 of the SB of Sibulan. Prohibiting the use of compressors and scuba tanks affecting fishing and fisheries within one kilometer from coastline of Sibulan and imposing penalties for violation thereof and for other purposes.

#### 4.4.4 Implementation of Shifter Investments

Annex 4.15 shows the shifter investment opportunities and strategies for the Municipality of Sibulan gleaned from its Coastal Resource Management Plan for the period 2001-2005. Similar to Dauin, Sibulan’s traditional main economic engines are fishing and farming. It is, however, noted that “the municipality is fast becoming a major commercial and industrial hub in the province. As part of the Metro Dumaguete concept, it is slowly turning into a ‘little Mandaue’.” (official website of the Municipality of Sibulan, <http://www.sibulan.gov.ph>).

Its CRM Plan mentions of conservation-friendly activities such as the establishment and maintenance of marine reserve/sanctuary, protection of seagrass beds and other marine resources development, sewage treatment plant, etc.

There is only one identified major industry transfer activity being considered and that is a shift towards tourism activities. A program for tourist guide skills development seeks to train resource users away from coastal resources to relieve pressure on its exploitation.

With the presence of practically all modes of transportation and storage facilities in the municipality, it may consider being an important transshipment area for coastal resource-based products especially in central and northern Negros, and southern Cebu. Although the transportation and storage system of the municipality is mentioned in the plan as opportunities, no strategy was indicated to leverage such facilities as a means to

---

<sup>12</sup>Using fine meshed nets less than 3 cm intended for flying fish and balo (needle-fish)

improve the efficiency of commodity flows in the province especially in regard to coastal resource-based products.

During the validation workshop on August 16, 2004 in Sibulan, additional significant shifter investment activities were mentioned by the participants one of whom was the municipal mayor:

- Establishment of CTEA (Community Training Employment Administration) which offered technical skills training (welding, carpentry, handicrafts, etc.) for out-of-school youth enabling them to engage in other forms of livelihood, even as their parents go fishing. (This is an on going undertaking of Sibulan)
- Promotion of ecotourism activities in all six (6) coastal barangays, plus the declaration of *Barangays Cangmating* and *Agan-an* as ecotourism zone which leads to the opening of several commercial establishments in that area thus creating job opportunities. Fisherfolk will be given preference in terms of hiring
- Construction of ports in *Barangays Poblacion* and *Lo-oc* thereby giving opportunities to the communities to engage in small-scale entrepreneurship
- Introduction of aquaculture and seaweed farming and backyard *tilapia* fishpond production. (There is an on going project for *tilapia* production involving former *muro ami* workers.)

#### 4.4.5 Incentives/Disincentives Utilized

The Municipality of Sibulan collected Php248,000 for the period 1998-2003 from the issuance of fishing permits to applicants and to bangus fry trawlers' associations. This incentive/disincentive is implemented by the LGU by virtue of Section 149 of the Local Government Code (*Item No. 1*). The LGU also utilized the provisions of Section 6 of the Fisheries Code especially through the issuance of Mayor's permits (*Item No. 5*). Under this group also, the Sibulan LGU grants fishing privileges in municipal waters pursuant to Section 17 of the Fisheries Code especially to bangus fry trawlers'/catchers' associations (*Item No. 7*). (Annex 4.16).

Under Section 24 of the Fisheries Code, the Department of Agriculture/BFAR and the Sibulan LGU extended livelihood projects to fisherfolks organizations for the period 1996-2003 (*Item No. 8*). This is the only item that Municipality of Sibulan utilizes under the group of incentives and other support to the sector.

A number of apprehensions were made by the Sibulan LGU pursuant to provisions of the Fisheries Code from 1997-2003:

1. Section 86 on Unauthorized Fishing or Engaging in Other Unauthorized Activities (*Item No. 24*): 123 apprehensions. Violations pertain to illegal fishing inside marine protected areas and violations of local municipal ordinances.
2. Section 88 on Fishing Through Explosives, Noxious or Poisonous Substance and/or Electricity (*Item No. 25*): 6 apprehensions.
3. Section 89 on the Use of Fine Net Mesh (*Item No. 26*): 2 apprehensions.

4. Section 92 on Ban on Muro-Ami, Other Methods and Gear Destructive to Coral Reefs and Other Marine Habitat (*Item No. 29*): 4 apprehension.
5. Section 93 on the Illegal Use of Superlights (*Item No. 30*): 1 apprehension.
6. Section 96 on Fishing in Fishery Reserves, Refuge and Sanctuaries (*Item No. 33*): 114 apprehensions.

Additional ideas of incentives and disincentives presented during the validation workshop included the following:

- Through the shifter investments, they provide additional income to the family (*i.e.*, incentive)
- Gives the opportunity to become self-reliant as they now provide their own needs (incentive)
- Expand fishing ground by entering joint agreements with neighboring LGUs so that fishing activities will NOT be limited only to *Sibulan* municipal waters (incentive). (This should follow the reciprocity rule).
- Strict implementation of fishing laws and local ordinances, rules and regulations (disincentive)
- Impose stiffer penalties for violation of fishery laws and local ordinances (disincentive)
- Financial assistance in the form of *bangka pangkabuhayan* to be awarded to law abiding fisherfolk who do not have any *bangkas* (incentive). (This is an on going project).

4.4.6 TAP Issues (to highlight on the quality of TAP in the processes undertaken in the following:)

Table 5. Overall T.A.P. Index by LGU Ecogovernance Activities – SIBULAN

OVER-ALL T.A.P. INDEX		
I. Participation in RMU Planning	(A)	17
II. Transparency in RMU Planning	(C)	8
III. Accountability in RMU Planning	(E)	16
IV. Transparency in FFSW Budgeting	(G)	8
V. Accountability in FFSW Budgeting	(I)	8
VI. Participation in FFSW Budgeting	(K)	9
VII. Transparency in Contracting, Bidding and Procurement	(M)	3
VIII. Accountability in Contracting, Bidding and Procurement	(O)	1
IX. Participation in Contracting, Bidding and Procurement	(Q)	4
X. Accountability in the Issuance of Permits, Licenses	(S)	10
XI. Transparency & Participation in Issuance of Permits, Licenses	(U)	6
XII. Accountability in Enforcement	(W)	6
XIII. Transparency in Enforcement	(Y)	4
XIV. Participation in Enforcement	(AA)	4

Overall T.A.P. Score of Municipality (TOTAL SCORE divided by 133*)		104/133
<b>ECOGOVERNANCE INDEX OF MUNICIPALITY</b>		<b>78%</b>

\*\*IPs not present hence not included in the calculation

#### **4.5 Synthesis and Conclusions**

Based on the review and assessment of the four (4) subject LGUs as regards its ecogovernance experience of coastal and marine resources, the following are the general observations and conclusions:

1. All the LGUs studied are dependent on the IRA for their operational needs. The implication of this is that IRA-dependent LGUs are vulnerable to the fiscal weaknesses and poor performances of the national government. IRA funds are utilized to deliver basic services at the local level and meet the mandates of the LGUs. When the IRA is reduced, basic services will be affected including the resources available for ecogovernance (to pursue the ecological balance mandate). Given this scenario, LGUs would need to seek sources outside of the IRA especially for those needed to support ecogovernance activities.
2. With the exception of Panglao, the ratio of the local sources-to-total revenues of all subject LGUs have stayed at the same level for the period that was reviewed. It is likewise worth mentioning that Panglao has been successful in generating additional sources of local revenues from the utilization of coastal and marine resources in the form of fishery rentals and charges, dive taxes, tourism fees, etc. When these funds are ploughed back to the improvement in the sustainable management of coastal and marine resources, it should be expected that more revenues can be generated from the said resources.
3. Regular development funds of the LGUs, i.e., the economic development fund (EDF) which is 20% of the IRA, have been primarily devoted to infrastructure projects. It is the municipality of Moalboal that reported a relatively high proportion of its EDF devoted to environmental management.
4. All the four subject LGUs use area restrictions and technological restrictions instruments. However, only Moalboal has species restrictions (ban on sharks and turtles) and has a specific ordinance granting preferential rights to its municipal fisherfolks by requiring transient fishers to get a mayor's permit when fishing in its municipal waters.
5. When tenure regimes and instruments are implemented properly especially with the participation of local communities and stakeholders, there are observed improvements in the quality of the coastal resources. This is the experience of Dauin and Panglao where the biomasses of target species in reserve areas were significantly higher than those in non-reserve areas.

6. The issue of control over the foreshore area was raised by LGUs in Negros Oriental. This was highlighted in the validating workshop held in Sibulan when the participants mentioned that the control of foreshore areas should be devolved to LGUs for the following reasons: (a) illegal structures and reclamations are not regulated; (b) limited access to the sea for marginal fisherfolk such as depriving them of sufficient ‘parking’ or docking area for their *bangkas*; (c) leaseholders claim that the beach is part of their leased property, thereby, limiting or prohibiting others from enjoying it; and (d) proliferation of beach houses or resorts of the affluent people actually limit access to the beach and the sea for bathers and other picnickers. Since the foreshore area is located between municipal waters and the land over which the LGU has jurisdiction, a hiatus in governance over foreshore areas happens especially that national government agencies having responsibility over them do not have the adequate manpower and resources to effectively monitor and implement laws in the area. This observation is prevalent in many, if not all places, in the Philippines especially those that are urbanizing and where resort areas are being established.
7. Moalboal presented during the validating workshop the idea of a co-management scheme with resort owners in establishing and maintaining marine sanctuaries.
8. Jurisdictional conflicts likewise were observed and mentioned between specific national government agencies and the LGUs. Examples of this included the following: (a) the 80-hectare coastal area “owned by the Philippine Tourism Authority” in Basdiot, Moalboal; (b) the entire island of Balicasag in Panglao being declared as a naval reserve; (c) a large portion of the island of Panglao to be established as the Panglao Island Tourism Estate (PITE) raising the question of who has jurisdiction over the estate and its concomitant benefits especially that no consultation with the LGUs were made as reported by the workshop participants; and (d) the difficulty of having funds released for the benefit of Apo I. as it is managed by a PAMB with all fees collected remitted to the IPAF. The Municipality of Sibulan is working out an agreement with neighboring LGUs across the Tañon Strait, e.g., the Municipality of Oslob (Liloan), in order to expand the fishing grounds of fishers in these LGU. This follows the reciprocity principle.
9. Shifter investment strategies are anchored principally on the development aspiration of all subject LGUs to make tourism as the main economic activity. The shift mainly from a farming and/or fishing producing community to a tourism-led development allows the LGUs to provide opportunities for traditional coastal users to transfer to more environment-friendly and conservation-focused activities. Industry transfer approaches such as from fishery to tourism activities is the predominant shifter strategy adopted by the subject LGUs. Destructive resource users are also encouraged to protect the coastal and marine resources by appointing them as Bantay Dagat as in the case of Dauin.

10. It is observed that the subject LGUs have only limited availment and/or utilization of those incentives/disincentives provided for by law. Out of a total of forty (40) incentive/disincentive items specifically provided for in RA 7160, RA 8550, and RA 8435, not even half of them were availed of by the subject LGUs. It would indicate that there is a low level of knowledge with respect to this incentives/disincentives. Another valid reason would be the lack of resources that implement/grant especially the incentives mentioned.
11. The subject LGUs presented that they pursue incentive programs other than those provided for by law. Some of these examples include the following: (a) in Dauin, they are giving a share to the Bantay Dagats in the total collection of fees from apprehensions that are made; (a) Dauin is also contemplating of legislating a reward system for those who will report or arrest violators. This is also being considered by the Panglao LGU; and (c) the Sibulan LGU has an on-going project called *bangka pangkabuhayan* to be awarded to law abiding fisherfolk who do not have any *bangkas*.
12. Looking at the four municipalities, Dauin scored highest in planning (50). Panglao (26) had the highest TAP score for budgeting followed by Sibulan (25), and Dauin (24). In terms of contracting, bidding, and procurement, Panglao (12) still holds the highest TAP score followed by Moalboal at 10. Sibulan (16) showed the highest TAP index in the area of issuance of permit and licenses. Finally, enforcement TAP scores had Sibulan (14) and Panglao (14) registering the highest scores. (Table 6).

In terms of the overall TAP index the following is the ranking from highest to lowest: Panglao (85%), Sibulan (78%), Dauin (76%), and Moalboal (59%).

Table 6. Overall T.A.P. Index by LGU Ecogovernance Activities – All Subject LGUs

OVER-ALL T.A.P. INDEX		Dauin	Moalboal	Panglao	Sibulan
I. Participation in RMU Planning	(A)	21	12	17	17
II. Transparency in RMU Planning	(C)	8	6	8	8
III. Accountability in RMU Planning	(E)	21	13	18	16
<b>Sub-Total, Planning</b>		<b>50</b>	<b>31</b>	<b>43</b>	<b>41</b>
IV. Transparency in FFSW Budgeting	(G)	7	7	8	8
V. Accountability in FFSW Budgeting	(I)	7	7	10	8
VI. Participation in FFSW Budgeting	(K)	10	7	8	9
<b>Sub-Total, Budgeting</b>		<b>24</b>	<b>21</b>	<b>26</b>	<b>25</b>
VII. Transparency in Contracting, Bidding and Procurement	(M)	3	6	7	3
VIII. Accountability in Contracting, Bidding and Procurement	(O)	1	2	1	1
IX. Participation in Contracting, Bidding and Procurement	(Q)	3	2	4	4
<b>Sub-Total, Contracting, Bidding,&amp;Procurement</b>		<b>7</b>	<b>10</b>	<b>12</b>	<b>8</b>

*Tenure, Shifter Investments, and Incentives – Results of Case Studies*

X. Accountability in the Issuance of Permits, Licenses	(S)	4	5	6	10
XI. Transparency & Participation in Issuance of Permits, Licenses	(U)	5	4	8	6
<b><i>Sub-Total, Issuance of Permits, Licenses</i></b>		<b>9</b>	<b>9</b>	<b>14</b>	<b>16</b>
XII. Accountability in Enforcement	(W)	4	3	5	6
XIII. Transparency in Enforcement	(Y)	4	3	5	4
XIV. Participation in Enforcement	(AA)	4	4	4	4
<b><i>Sub-Total, Enforcement</i></b>		<b>12</b>	<b>10</b>	<b>14</b>	<b>14</b>
Overall T.A.P. Score of Municipality (TOTAL SCORE divided by 133*)		102/134	81/137	109/128	104/133
<b>ECOGOVERNANCE INDEX OF MUNICIPALITY</b>		<b>76%</b>	<b>59%</b>	<b>85%</b>	<b>78%</b>

\*IPs not present hence not included in the calculation

## **CHAPTER 5 - SOME LOCAL AND INTERNATIONAL EXPERIENCES ON IMPROVING ECOGOVERNANCE**

This section discusses some approaches to improve ecogovernance. The list, following a review of literature available especially in the world wide web, is by no means complete. It is, however, a sampling of what can be utilized and tested, if need be, in the Philippine situation.

Most of the approaches discussed below may be considered for implementation using a combination of two or many. Each approach also may be pursued on a stand-alone basis.

### **5.1 BioVillages/EcoVillages: Expanding the Scope of Fisherfolk Settlement Areas**

There is a concept implemented in the Union Territory of Pondicherry, South India with the support of the United Nations Development Program (UNDP) that has been reported to be working successfully since 1994. This human-centered development approach called bio-villages seeks to address the twin (interlocking) objectives of poverty-alleviation and natural resource conservation.<sup>1</sup>

Dr. M. S. Swaminathan, an Indian agricultural scientist who is the prime mover of the bio-village concept, writes in the January 2001 issue of the Courier (the on-line publication of the United Nations Educational, Scientific and Cultural Organization) which in essence describes the rationale and features of the biovillage approach: *“The term ‘biovillage’ is derived from the Greek word bios, which means living, and our priority was just that: human-centred development. Poverty persists in conditions where human resources are undervalued whereas land and material resources are overvalued. The biovillage model of rural and agricultural development is designed to remedy this imbalance by conserving and enhancing natural resources, eradicating poverty and empowering women.*

*This programme has been in progress in 19 villages in Pondicherry since 1994, covering a population of 24,000 people, though we have plans to extend the scheme to around 375,000 people throughout the region by 2007. One leg of the programme is eco-farming, meaning that chemicals and capital—the building blocks of modern farming—are replaced with knowledge and biological inputs like vermiculture [exploitation of earthworms], bio-fertilizers and bio-pesticides; this in turn creates new eco-jobs in villages. The programme’s other leg is the creation of more avenues for rural non-farm employment based on marketing opportunities.*

*New opportunities for earning a living are devised through analyzing a family’s resources. As a result, landless labouring families take to household mushroom cultivation, ornamental fish-rearing, coir rope-making, rearing small ruminant animals*

---

<sup>1</sup> “A Human-Centric Concept,” in *Frontline* (India’s National Magazine from the Publishers of the THE HINDU), Volume 17 - Issue 05, Mar. 04 - 17, 2000.  
(<http://www.frontlineonnet.com/fl1705/17051170.htm>)

*under stall-fed conditions and other enterprises which are within their means. Those with a small plot of land can take to hybrid seed production, floriculture, dairying, poultry and other high value enterprises. Groups of assetless women engage in aquaculture in community ponds. All these exercises are based on micro-level planning, and enterprises supported by micro-credit.*

*A range of activities helps enhance total income (which has risen on average by \$23 per month per capita for villagers) and minimize risks. Education and training, social organization and producer-oriented marketing are all crucial to the programme's success. Self-help groups operate a community banking system involving low transaction costs and high loan recovery. Most importantly, the biovillage movement is based on inclusion and not exclusion. The local women and men who become trainers are inducted into a Biovillage Corps of Rural Professionals.*

*Most of the nearly 100 members inducted so far are either semi-literate or even illiterate, but they are the prime-movers and doers of the biovillage movement, proving beyond all doubt that the rural poor can take to new technologies like fish to water, provided they are able to learn through practical work experience and not classroom lectures.*

*How can such a biovillage movement spread? With the help of the Pondicherry administration, we propose to convert all 270 villages in the Territory into biovillages, a plan that will require a further \$15 million (most of which will come from ongoing programmes for the poor and possibly from the International Fund for Agricultural Development). Several institutional structures have accelerated the pace of change. A Biovillage Council, comprising a male and female member from each village, undertakes strategic planning. A Biocentre serves as a single-stop resource centre, providing the necessary inputs, information and training. And lastly, a rural knowledge centre with an Internet connection provides information to families on health, education, entitlements, eco-technologies and marketing.*

*The biovillage model helps bridge all four divides—demographic, digital, economic and technological. It promotes harmony with nature and with each other. It is based on eco-technologies, which are environmentally benign, economically viable and socially equitable. It shows the path to an ever-green revolution in agriculture, where productivity advances can take place without leading to ecological or social harm. The choice of technologies is flexible. And while the concept has certain ground rules, like a “pro-nature, pro-poor and pro-women” orientation to spreading technology and a partnership approach to eradicating poverty, the precise action plans are developed by the villagers in association with professionals. The virtual colleges linking scientists and rural families help to hasten the spread of such symbiotic partnerships. Under UNESCO's Asian Ecotechnology Network, the biovillage paradigm of sustainable human development is now spreading to other parts of India and to other nations. It has led to the emergence of many new voices and leaders in the villages, who in turn ensure the programme—like the communities it involves—can survive and prosper.”<sup>2</sup>*

A case study written by R.S.S. Hopper and K.N.N.S. Nair (Case Received: February 7, 1998 found in the archives of the Sustainable Rural Development Information System (SRDIS) of the Center for International Earth Science Information

---

<sup>2</sup> “Biovillages: A Blueprint for the Future?” in *The Courier* (the on-line publication of UNESCO), January 2001. ([http://www.unesco.org/courier/2001\\_01/uk/doss27.htm](http://www.unesco.org/courier/2001_01/uk/doss27.htm)).

System (CIESIN) of Columbia University and the World Bank) points out some lessons learned in the implementation of the biovillage model in Pondicherry. The authors write that: *“It is possible to improve the livelihood security of the resource-poor to some measure in the absence of the social (political and administrative) will and determination to bring about redistribution of the means of production especially the land as a means of alleviating poverty through giving access to the resource-poor to the knowledge asset used through training and fostering group action and by improving their asset base through accessing the usufructs of common property resources. The lessons are replicable in other situations with appropriate variations to suit the resource endowments and mandates of the participating actors. The potential of group action to act as an instrument in managing the natural resources and mobilising investment resources is universal. A consortium approach with full involvement of the actors concerned can bring in the necessary synergy and mobilise technical, financial and institutional support is also not unique to the case under discussion.”*<sup>3</sup>

The concept may not be unique to India, but the biovillage model is something that is worth pursuing especially in the Philippine situation. At least it is a reminder that an integrated community-based approach to development with the twin goals of poverty alleviation and natural resource management is workable.

A similar concept called ecovillages is being established in many localities around the world. A network in the world wide web called the Global Ecovillage Network provides information about this model of local management. Its website defines ecovillages as *“urban or rural communities of people, who strive to integrate a supportive social environment with a low-impact way of life. To achieve this, they integrate various aspects of ecological design, permaculture, ecological building, green production, alternative energy, community building practices, and much more.”*<sup>4</sup>

Under the Fisheries Code, there are opportunities for the bio village/ecovillage models or similar approaches to be adopted in an institutionalized manner. In the said Code, there are to be established and created by the Department of Agriculture so-called fisherfolk settlement areas. These fisherfolk settlement areas “are certain areas of the public domain, specifically near fishing grounds, that shall be reserved for the settlement of the municipal fisherfolk. Nothing in this section shall be construed to vest ownership of any resettlement area to a municipal fisherfolk for whom said areas may have been reserved for or had been actually granted to.”<sup>5</sup> In the Implementing Rules and Regulations, fisherfolk settlement areas are to be seen in the context of an integrated, holistic and self-reliant community to include alternative sources of income.<sup>6</sup>

---

<sup>3</sup> “Community Resource Management for and by the Resource Poor”, under Community Based Natural Resource Management (CBNRM) Case Studies (India) of the Sustainable Rural Development Information System Project of Center for International Earth Science Information Network (CIESIN, Columbia University) and the World Bank. (<http://srdis.ciesin.org>).

<sup>4</sup> <http://gen.ecovillage.org/>

<sup>5</sup> Section 108, Fisheries Code of 1998 (Republic Act No. 8550).

<sup>6</sup> Rule 108.1, Implementing Rules and Regulations, Fisheries Code of 1998.

In the establishment of fisherfolk settlement areas (FSAs) within the jurisdiction of an LGU, it would be well worth considering following as guidelines the principles of biovillages/ecovillages. The objectives of poverty alleviation and environmental conservation should not be seen as an either-or proposition, but rather as an integrated whole.

The Fisheries Code as it is presently written vests in the Department of Agriculture-BFAR, a national government agency, the authority to create fisherfolk settlement areas (FSAs). This seems to contradict the idea of decentralization with LGUs having primary jurisdiction over territories assigned to them. An amendment to the Code may be necessary to “delegate” the authority to establish and create FSAs to LGUs especially areas within their territorial boundaries. The DA-BFAR can provide the guidelines and parameters within which the LGUs can act. Although such authority is delegated, it is clear that ownership of the resources within the FSA to include the land that it will occupy, as well as adjacent fishing grounds, still belong to the State as is clearly stated in Section 108 of the Fisheries Code.

Fisherfolk settlement areas following the paradigm of biovillages/ ecovillages can be a mechanism whereby the State through the LGUs acting within the national framework to attain the constitutional and legal mandate of ecological balance can manage coastal resources in delineated areas consistent with a decentralized, transparent, accountable, participatory, and sustainable approach to governance. These settlement areas can be organized as cooperatives (under the Cooperative Code of the Philippines, Republic Act No. 6938) or as conservation foundations (see Section 5.4).

An article in the on-line publication of Foundation for Research on Economics and the Environment (F.R.E.E.) writes of Japanese fishing villages that *“receive a lot of attention for their community- and culture-based management system. Entry into a fishery is limited to members of local "cooperatives". With a relatively stable number of participants, social pressures are then used to sanction those members of the cooperative who fish improperly or against cooperative rules. Longstanding custom and tradition have produced effective systems for generating rules and monitoring compliance. In many cases, such as in Shichigahama, cooperatives operate under strict national standards but are free to determine the details of how they meet them. Flexible, local implementation is critical to the success of management.”*<sup>7</sup> (Emphasis supplied).

The same article also discusses the idea of community fishing corporations whereby it introduces *“the notion of distributed governance through community fishing corporations. By incorporating fishing communities, Professor Ralph Townsend of the University of Maine and Dr. Sam Pooley of NMFS argue, the communities could then act as a single owner of the fishery, with much the same sense of responsibility as the FFA, ITQ holder, or other property owner. The community corporation would act to maintain the fishery in a state that provides the optimum benefits for "shareholders". In this case, community shareholders could be fishermen, corporate interests,*

---

<sup>7</sup> Noonan, Douglas N., “Saving Commercial Fisheries” in the on-line publication of the Foundation for Research on Economics and the Environment (F.R.E.E.). July 1, 1997.

*conservationists, processors, concerned citizens, or anyone else able to meet the criteria of community membership. Their shares would give them proportional representation in decision-making processes and in sharing of the pure profit (or "economic rent") of the fishery. The shares would also be fully transferable, so long as no more than a certain percentage leaves the community. By giving shareholders a formal, secure stake in the fishery, they would have the incentive to vote and behave in ways that promote the value of their share. Knowledge for decision-making would remain local, respecting local conditions, customs, and values.”<sup>8</sup>*

These are some examples of how some local ecogovernance models can be adopted in the Philippines by expanding the concept of fisherfolk settlement communities under the Fisheries Code – *a management approach that allows organized coastal communities to exercise quasi-ownership rights over coastal resources as delegated by the State through the concerned LGU.*

## **5.2 Performance-Driven Incentive Systems**

As a means to direct the management of coastal resources towards desired goals, performance-driven incentive systems can be devised and implemented for certain localities. This approach will entail the setting-up of performance criteria and targets the accomplishment of which would ensure the sustainable use of coastal resources. A system of rewards can be put in place for those coastal localities that are able to meet the performance standards set. Rewards and incentives can be in the form of additional funds for environment-friendly livelihood projects, technical assistance, scholarship programs for dependents/children of fisherfolks, etc.

There are several performance evaluation models available that can be adopted in the management of coastal resources. For instance, the certification framework of the International Organization for Standardization on environmental management systems (ISO 14000) can be modified to suit the management system for coastal communities. If a fisherfolk settlement area will be made as the basic management unit at the local level, then an ISO-like assessment approach can be the foundation for a performance evaluation system.

The Global Ecovillage Network has developed an instrument for assessing the “livability” of a locality with its Community Sustainability Assessment (CSA) checklist (<http://gen.ecovillage.org/activities/csa/pdf/CSA-English.pdf>). Three aspects of community living is assessed in the instrument. These are the social, ecological, and spiritual dimensions. This assessment tool can be modified to suit local conditions in the Philippines. With such a checklist, improvement on the overall community sustainability index can be a measure of “improved” performance of a coastal community (a fisherfolk settlement area) which presumably leads to higher levels of sustainable living and a better quality of life.

---

<sup>8</sup> Noonan, *Ibid.*

Performance systems for coastal communities can also be adopted from modern management models. One trend that is gaining popularity among major organizations is the Balanced Scorecard.<sup>9</sup> This approach, developed by Robert S. Kaplan of the Harvard Business School and David P. Norton, President of Renaissance Solutions, Inc., was introduced in three seminal articles in the Harvard Business Review in the early 1990s.

The Balanced Scorecard is actually several things which can be applicable to the public and not-for-profit sector. It is a management tool that is considered a measurement system, a strategic management system, and a communication tool. It normally looks into four perspectives, namely: the customer (or public/client) perspective, the internal process perspective, learning and growth perspective, and the financial perspective. What is emphasized in the Balanced Scorecard is the cause-and-effect linkages of performance measures. In many performance systems, this seems to be not important. Also, as the term implies the Balanced Scorecard seeks to “balance” the impact of all performance parameters/measures. The conventional wisdom, especially for profit organizations, is that many of the performance measures center on the financial health of the organization. This can also be the case for performance models being introduced for coastal resource management activities and projects where there is a strong focus on a certain performance parameter without considering other aspects that contribute to overall success. In the Balanced Scorecard the other perspectives are also given adequate importance.<sup>10</sup>

Performance-driven incentive systems can be tied to the concept of fisherfolk settlement areas (as biovillages/ecovillages). This way, performance parameters and measures on the status of coastal resources can be cascaded from the National Government to the local government unit and finally to the fisherfolk settlement area. This cascading of performance parameters and measures will help make local actions to be aligned with national goals on ecological balance and sustainable development. This is an approach consistent with a performance system such as the Balanced Scorecard.

### **5.3 Making Property Rights Marketable: Individual Transferable Quotas**

A management system that is gaining popularity is what is known as the Individual Transferable Quota (ITQ) system. The mechanics of this system as implemented in New Zealand involves the following: “Government scientists annually assess fish stock levels, and determine maximum total allowable catches (TAC) for controlled species. New Zealand legislation requires that the TAC levels are consistent with the stock levels that can deliver maximum sustainable yields (although that is not the only way in which TAC levels can be set). The TAC is then divided among fishers, with the shares being allocated on the basis of individual catches in recent years. Each fisher

---

<sup>9</sup> Kaplan, Robert S. and David P. Norton. The Balanced Scorecard: Translating Strategy Into Action. (President and Fellows of Harvard College, 1996).

<sup>10</sup>Niven, Paul R. Chapter 1, “Performance Measurement and the Balanced Scorecard,” Balanced Scorecard, Step-by-Step: Maximizing Performance and Maintaining Results. (New York: John Wiley and Sons, Inc.), pp. 3-24.

can fish up to the amount of the quota it holds, **or the quotas can be sold or otherwise traded.**<sup>11</sup> (Emphasis supplied).

An important feature of the ITQ is the fact that it takes on the characteristics of a property right for the individual holder. This “property right” can be sold for an amount if the holder so decides that he/she no longer wants to exercise the “right to fish an allocated amount” and pass it on to another. The ITQ may also be the basis of a collateral if the holder so decides to take a loan with a financial intermediary like a bank. If successfully implemented, an ITQ system can be a good mechanism for shifter investments.

The ITQ system seems to be successful in some aspects. According to an article by John A. Baden, the Chairman of the Foundation for Research on Economics and the Environment, *“With an ITQ system, quota holders have secure claims to a percentage of the total allowable catch. Only those with quotas may fish. Fishermen need not race to get their share. An extended fishing season means fewer days at sea for long hours or in dangerous weather. We’d also expect reductions in bycatch.*

*Quotas give their owners incentives to conserve fish. As long as fisheries remain a commons, there are strong incentives to catch as many fish as quickly as possible. With ITQs, fishermen can increase the value of their quota and the size of their future catch, by allowing fish populations to increase. Such behavior has already been observed in the wreckfish, Southern bluefin tuna and various shellfish fisheries.*

*With ownership, quotas can be bought and sold. Some fishermen will exit the industry. The more efficient fishermen and those who love fishing will buy or retain quotas and remain. Fewer ships and less equipment will be needed to catch a given amount of fish, reducing overhead and improving efficiency. And ITQs do not necessarily favor large operations over smaller ones.*

*An increasing number of professional environmentalists, including well-respected economists with the Environmental Defense Fund, are showing an interest in ITQs. ITQs have the support of associations representing more than 80 percent of the seafood harvested in the North Pacific fisheries. They are the least painful way to downsize an industry made dangerous by short seasons and by federal subsidies that have promoted excessive investments in men, ships and equipment.”<sup>12</sup>*

Also, it is pointed out that *“The evidence of the ITQ system in operation suggests that, in comparison with other alternative management regimes that might have been implemented, it has been successful both as a conservation tool and in terms of reducing the size of the uneconomically large fleets.”<sup>13</sup>*

---

<sup>11</sup> World Resources 1994-95, Chapter 10 as cited in Roger Perman, et. al. Natural Resource and Environmental Economics. (England: Addison Wesley Longman Limited, 1996), p. 185.

<sup>12</sup> Baden, John A. and Tim O’Brien, “Quotas Give Individuals Incentives to Fish Wisely”, in the on-line publication of the Foundation for Research on Economics and the Environment (November 2, 1994). <http://www.free-eco.org>.

<sup>13</sup> Perman, et. al. Ibid..

Of course, like any management system, there are pitfalls that need to be considered. Douglas Noonan also of F.R.E.E points out that: *“ITQs are not perfect, however. Initial allocation of ITQs is highly political. Some criticize that processors and non-fishers are excluded from most initial allocation schemes. Furthermore, many fear that corporate powerhouses will buy up all the ITQs, abandon small fishermen, and gain monopolistic control over the fishery. Community development quotas, a variant of ITQs, are assigned to communities (usually indian tribes) to be transferred freely within but not to be traded outside of the community.*

*Criticisms of ITQs are not limited to initial allocation issues. Quota systems are extremely expensive to monitor and regulate. Onboard NMFS observers during a four-day season are much cheaper than year-round observers. Fishermen still have an incentive to poach, especially in high-value fisheries. Finally, quotas are still determined through a political process. The pathologies of "scientific" assessments conducted by government agencies are not resolved under an ITQ system. If anything, the total quota becomes more important.”<sup>14</sup>*

The Fisheries Code provides for some items that can be the foundations for an ITQ system. In Section 19, an LGU is required to maintain a Registry of Municipal Fisherfolk which shall be updated annually or as may be necessary. Section 21 gives priority to resident municipal fisherfolk to exploit municipal and demarcated fishery areas of the said LGU. Likewise, registered fisherfolk organizations/cooperatives shall have preference in the grant of fishery rights by the LGU (Section 17).

While the Fisheries Code speaks of fishery rights to municipal fisherfolks and organizations, it does not spell the conditions for the exercise of such right. It can be taken to mean that for so long as one is issued a permit or license, he/she can extract fishery resources without limit within municipal waters.

The Code also defines TAC and Maximum Sustainable Yields (MSY). However, beyond the definitions there seem to be no mention as to how these concepts will be applied and implemented especially in municipal waters. There may be an opportunity to improve the Code by introducing the concept of a culturally-sensitive ITQ system in the Philippines.

#### **5.4 Conservation Foundations**

When coastal communities are organized (following models of biovillages, for example), there are several institutional vehicles that they can adopt. The legal personality they may take on can be that of a cooperative, which is the most common, or even that of a non-stock, non-profit corporation. Whatever the institutional organization the community decides, an important **functional** feature of the organization should be the raising of funds for its activities especially those directed towards ecological conservation and management, and poverty alleviation.

---

<sup>14</sup> Noonan, *Ibid.*

Coastal villages should be able to access non-traditional sources of funds to support their activities especially those coming from philanthropic giving, foundation grants, etc. In developed countries, fund raising has been elevated to become a profession in itself with many institutions organizing what they call development offices.

Although coastal and fishing villages may be granted quasi-property rights over coastal and marine resources following the FSA model discussed above, the conservation of these resources is both a local and global concern. Hence, funds may be sourced from outside the community to help with this effort.

Sources generated by non-profit organizations are intended to address urgent social problems. *“For decades, foundations have been making large grants to nonprofit organizations in the hope of meeting a wide range of society’s pressing and vital needs. In 1995 alone, foundations invested more than \$10 billion in programs dealing with, for example, poverty, homelessness, the environment, education, and the arts.”*<sup>15</sup>

Raising non-traditional sources of funds can be pursued in various forms. Tested approaches which have worked include the following: (1) solicitation for major gifts; (2) capital campaigns; (3) planned giving programs; (4) grants; (5) earned income; (6) direct mail; (7) fund raising through special events; and (8) other fund raising activities.<sup>16</sup>

If coastal villages are organized with a fund raising function, its members should be trained and equipped to undertake the tasks involved in such an operation. More than asking for money and spending the funds raised, basic management concepts and techniques will need to be learned by members of the community such as accounting, finance, marketing, etc.

Local communities organized as “conservation foundations” should be eligible to receive contributions and donations from individuals and corporate entities which are tax deductible. This can be a good source of funds for local communities to support their conservation-poverty alleviation programs and activities. In the Philippines, tax-deductible contributions can be encouraged to help government address many issues that society is confronted with.

Congressman Herminio Teves (3<sup>rd</sup> District of Negros Oriental), the Vice Chair of the Ways and Means Committee of the 12<sup>th</sup> Philippine Congress, was quoted in a regional daily newspaper that “there are supposedly 2,020,510 families who are taxable but only a total of 470,948 filed their individual income tax” and that “out of the 431,000 corporations that registered with the Securities and Exchange Commission, only 10,833 filed income tax returns.”<sup>17</sup> The figures cited by Congressman Teves would indicate that

---

<sup>15</sup> Letts, Christine W., et. al. “Virtuous Capital: What Foundations Can Learn from Venture Capitalists.” *Harvard Business Review on Non-Profits*. (USA: President and Fellows of Harvard College, 1999), p. 92.

<sup>16</sup> Quebral, Mayan G. Chapter 6, “Success Seed # 6: Ask”, *The Fund Raiser’s Guide to Fund Raising: Seven Success Seeds for Growing Your Non-Profit Organization*. (Manila: Venture for Fund Raising, 2002), pp. 82-127.

<sup>17</sup> “Lack of data cause of poor revenue collection: Teves”, *Visayan Daily Star* (April 29, 2004).

only 25% of the total potential taxpayers in the country are, in fact, paying their taxes. There is a large potential to access funds from the untapped 75%. A segment of this potentially “taxable” population can be encouraged to donate and contribute to conservation-poverty alleviation programs of coastal communities (which are organized as fisherfolk settlement areas). Any contribution and donation for such purpose can be considered by the government as a tax credit or deduction from taxes due. There can be a strong motivation for people and corporations to participate in a program such as this as they will see the direct benefits of their contributions and will exactly know “where their money is going”. Many corporations can, in fact, include their donations and contributions as part of their corporate social responsibility programs (CSR) which in the long-run will redound to their benefit.

Aside from raising funds for conservation programs and projects within their localities, coastal villages may operate as “land trusts”. As such, it may own land by purchasing property adjacent to the coastal zone so that it is able to provide a buffer zone against real and potential overexploitation of coastal resources and illegal practices in their extraction and utilization. Or it may consider long-term leases with property owners along the coastline for the purpose of conservation management. For uninhabited coastal areas considered as part of the public domain, conservation foundations may lease them from the government with the main purpose of ecological conservation. This model may, in fact, be tried and tested in protected areas and seascapes especially where there are no local communities. The government should consider including in the jurisdiction of the “conservation trust” not only the land area adjacent to the coastal zone, but coastal waters and the resources within that are critical to ecological balance.

## **5.5 Debt-for-Nature Swaps**

Countries like the Philippines can consider programs like “debt-for-nature swaps” as a means to address two problems simultaneously, the increasing debt burden that puts a drag on national development efforts and environmental degradation. Resources of the country that will be used to “pay” external financial obligations in the form of environmental programs and projects can be directed towards coastal communities.

A recent agreement was signed between the United States and the Philippines to let the latter “*to devote \$8.2 million (P429.884 million) to finance tropical forest conservation activities in the Philippines over the next 14 years under the Tropical Forest Conservation Act (TFCA) ... Under this agreement, every \$1 owed by the Philippines to the US will be paid for by \$1.70 allotted by the Philippine government for projects and activities for conserving the tropical forests of the country. This means the US government will provide \$5.5 million to cancel \$8.2 million in loan interest payments due from the Philippines.*”<sup>18</sup>

The Philippines had earlier undertaken a debt-for-nature swap that resulted in the creation of the Foundation for the Philippine Environment: “*From 1988-1993, WWF*

---

<sup>18</sup> “RP to Gain \$8.2-M in Debt-For-Nature Agreement”, *Philippine Headline News Online* (September 26, 2002). (<http://www.newsflash.org/2002/09/be/be002172.htm>).

*negotiated four commercial debt-for-nature swaps in the Philippines, which generated a total of \$27.3 million in conservation funds. A large number of projects funded through debt-for-nature swaps were aimed at the conservation of marine biodiversity. In 1993, WWF (with funding provided by the U.S. Agency for International Development-USAID) was able to purchase debt owed by the Philippine government to international commercial banks that had a face value of \$19 million for a price of only \$13 million. In exchange for WWF's cancellation of the debt, the Philippine government allocated the equivalent of \$17 million in Philippine pesos to establish a permanent endowment for the newly created Foundation for the Philippine Environment (FPE). The income earned by investing FPE's endowment has been used to make hundreds of grants to NGOs and local community groups. The Bank of Tokyo also donated debt, which was subsequently sold on the secondary debt market to generate additional funding for FPE.*"<sup>19</sup>

The mechanics of a debt-for-nature swap typically entails the following: *"conservation groups buy some portion of the nation's debt, usually in secondary markets at discounted prices, in return for long-term commitments from the country to preserve domestic ecological zones."*<sup>20</sup>

*"The first facilitated debt-for-nature swap was between Bolivia and Conservation International in 1987. This swap involved the purchase of \$650,000 of outstanding debt. The debt was discounted to approximately \$100,000 and a Swiss bank purchased it through Citibank Investment Bank. In return, the government of Bolivia agreed to preserve approximately 3,700,000 acres surrounding the pre-existing 334,000 acre Beni Biosphere Reserve. The initial Bolivian - Conservation International swap has served as a model for subsequent swaps in Costa Rica, the Dominican Republic, Ecuador, Madagascar, Mexico, Peru, the Philippines, Poland, Tanzania, and Zambia. As of late 1991, approximately \$101,726,000 worth of LDC debt had been retired at a cost of approximately \$18,495,000. The average discount in the secondary debt markets over all of these exchanges has been 82%"*<sup>21</sup>

Assuming that coastal communities are organized with "conservation foundation" functions, they can be recipients of government funds which otherwise would have been considered as debt service payments without a debt-for-nature swap arrangement. Funds allocated for this purpose by the National Government can be credited to the debt-for-nature program.

According to the Bangko Sentral ng Pilipinas, the country's outstanding external debt stood at US\$56.347 billion as of September 2003 ([http://www.bsp.gov.ph/archive/news\\_2003/2003-12/news-12292003a1.htm](http://www.bsp.gov.ph/archive/news_2003/2003-12/news-12292003a1.htm)). Aside from providing potential resources for ecological conservation management, a debt-for-nature

---

<sup>19</sup> Spergel, Barry and Melissa Moyer, "Financing Marine Conservation: A Menu of Options", (Building Conservation Capital for the Future, Center for Conservation Finance, World Wildlife Fund: January 2004), pp. 16-17.

<sup>20</sup> Hobbs, Bradley K., "Debt-for-Nature Swaps and the Coase Theorem", *Journal for Economic Educators* (Fall 2001, Vol. 3, No. 3). [http://www.mtsu.edu/~jee/PDF\\_Files/Hobbs.pdf](http://www.mtsu.edu/~jee/PDF_Files/Hobbs.pdf)

<sup>21</sup> Hobbs, *Ibid*.

strategy frees up resources for the country which indirectly will also benefit the environment. Several social service programs such as population management, health and nutrition, education, etc. can have higher budgetary allocations.

At the international level, debt-for-nature swaps and similar programs are seen as a means of compensating less developed countries (LDCs) for preserving globally-significant environmental resources. An example of this is the view “that LDCs should be compensated for their provision of large-scale carbon sinks that offset the relatively high carbon dioxide emissions of high-income countries.”<sup>22</sup> Or it can be the maintenance of biodiversity to ensure future use and existence values.

A welcome development in this field was a pending proposal in the United States Congress. During the 107<sup>th</sup> Congress, House Bill No. 2272 was referred to the U.S. Senate proposing to amend the Foreign Assistance Act of 1961 to provide for debt relief to developing countries who take action to protect critical coral reef habitats.<sup>23</sup> If this proposal is signed into law, it should help countries like the Philippines a chance to be able to have its debt condoned in exchange for the protection and management of its coastal resources especially coral reefs.

## **5.6 Fiscal Instruments: Taxes, Charges, Fees and Bond Flotation**

Local government units can avail of fiscal instruments to raise resources needed to fund their operations. The means by which LGUs can generate resources are outlined in the Local Government Code of 1991. Section 129 of the LGC states that “each local government unit shall exercise its power to create its own sources of revenue and to levy taxes, fees and charges subject to the provisions herein, consistent with the basic policy of local autonomy. Such taxes, fees, and charges shall accrue exclusively to the local government units.”

There are basically three (3) ways by which LGUs are able to raise fiscal resources: (1) taxes ; (2) fees; and (3) charges. A tax is “a compulsory payment to the government in return for which the payer gets no definite, specific commodity or service.”<sup>24</sup> Examples of these are real property taxes, business taxes, etc.

A “fee” as defined in Section 131(l) by the LGC “means a charged fixed by law or ordinance for the **regulation or inspection** of a business or activity.” (*Emphasis supplied*). When a desired outcome or behavior is the main consideration, a fee is imposed principally for the purpose of regulation. Examples of these would be the mayor’s permit and the building permit fees. The issuance of fishing licenses may be

---

<sup>22</sup> Hobbs, *Ibid.*

<sup>23</sup> House Bill No, 2272, 107<sup>th</sup> Congress, United States Congress (October 17, 2001). (<http://thomas.loc.gov/cgi-bin/query/z?c107:H.R.2272>:).

<sup>24</sup> Eduardo Z. Romualdez, Sr., et. al., *Philippine Public Finance* (Manila; Philippines: GIC Enterprises and Co., Inc., 1973), p.220, citing Edwin R. A. Seligman, *Essays in Taxation*, 10<sup>th</sup> edition (New York: Macmillan & Co., Ltd., 1925), p. 432.

considered as a means to regulate the number of fisherfolk allowed to fish in an LGU's municipal waters.

A “charge” or a “service fee”, on the other hand, are those imposed for services rendered by the LGU (Section 153, LGC). In this case, there is a semblance of benefit that the entity paying will receive as a result of the payment of the charge or service fee. Fishery rentals, fees, and charges as provided for in Section 149 of the LGC can fall under this category as a fiscal instrument. The reason for this is that the grant of the privilege bestows upon the grantee certain benefits that excludes others such as being able to extract coastal-based products from a definite zone delineated in the LGUs waters within its jurisdiction.

Charges can be imposed on the utilization, exploitation, and enjoyment of coastal resources. Some LGUs are already availing of this type of revenue-raising measure as in the Municipality of Panglao. In the said LGU, dive taxes, mooring and tourism fees are imposed. These type of charges which are also called “user fees” are becoming more popular because of the ease of administration compared to taxes.

In the Final Report of the Secretariat for Eastern African Coastal Area Management (SEACAM) on ‘Sustainable Financing of Coastal Management Activities In Eastern Africa’ it was pointed out that:

*“The difference between taxes and user fees/charges rests on whether a defined access right or service is received in return (for example, contrast fish landing taxes with fishery license fees). In theory, taxes on users of a coastal resource should compensate for the costs to society of that use - the polluter pays principle. Well-designed taxation systems also create incentives for responsible use. In practice, most revenues raised are usually directly to the central treasury, and only a proportion is retained to cover the costs of management.*

*In developing countries, three constraints limit the use of taxation to finance coastal management: the need to attract investment has led to government reluctance to impose higher taxes or resource use charges; limited enforcement and revenue collection capacity; the urgent need to increase central budgets limits the scope/willingness for revenue retention at the local or sector level.*

*This study has found an emphasis on user fees, especially entrance fees for tourists to protected areas. They are administratively easy to collect, especially where high income users with single entry point. It is important to set the price correctly, so that it either covers management costs or raises the maximum amount of net revenue, without exceeding carrying capacity. Increased charges will, in most cases, reduce the total number of users or amount of use. As noted above, it is also important that both user fees and revenue retention are backed by legislation (van Ingen, pers. com.).*

*A widespread concern in developing countries is that many local users are poor and cannot afford to pay charges which would cover the collection costs. However, it is generally accepted that willingness-to-pay is much greater where funds are reinvested in conservation/ management (Ngoile, pers. com.; van Ingen, pers. com.).*

*The legality of the retention mechanism is doubtful. Some coastal managers argue that user fees could be charged on a much wider range of local activities (for example, fuelwood and charcoal extraction) especially if locally-controlled and reinvested. Cultural factors also play a role. In southern Mozambique, where most of the tourists are South Africans, willingness-to-pay is very low as user fees for state-managed resources in their own country are generally low, and (probably) they doubt that funds will be spent effectively. Operators do not cooperate and retain most of the revenues themselves. It is also clearly essential to ensure that user charges do not encourage unsustainable levels of use (Ngoile, pers. com.), especially as high species diversity implies low population numbers for particular species (Rumisha, pers. com.).”<sup>25</sup>*

Aside from resources raised annually or periodically through taxes, fees, and charges, LGUs may also generate funds by issuing bonds. Section 299 of the LGC authorizes LGUs to issue bonds, debentures, securities, collaterals, notes and other obligations to finance self-liquidating, income-producing development or livelihood projects pursuant to the priorities established in the approved local development plan or the public investment program.

This type of resource-generating instrument has been utilized in developed countries like the United States. Bonds are issued by the government primarily support the operations of parks, the acquisition of open spaces, and for habitat restoration. Money owed to those who purchase the bonds need to be paid at a future date. Retirement of the bonds or payment of this form of debt can be paid out of the future tax collections of the issuing government instrumentality or from the “service fees” or charges from the specific environmental program or project being funded. Although bonds can generate substantial sums of money for big projects like wastewater treatment plants and drinking water, their administration and management can also be very tedious and complex.<sup>26</sup>

Under the LGC, bonds can be issued can be issued for three (3) types of projects. Those that are: (1) self-liquidating, (2) income-producing development, or (3) livelihood projects. Coastal resource management programs to be funded out of a bond flotation will have to be justified under any of the three (3) categories.

## **5.7 Summary and Recommendations**

In the interest of transparency, accountability, participation, and sustainability in ecogovernance, there is a need to explore management schemes that can be made applicable in the Philippines. It should be worth considering the following:

---

<sup>25</sup> “Sustainable Financing of Coastal Management Activities In Eastern Africa (FINAL REPORT, April 2001). Secretariat for Eastern African Coastal Area Management (SEACAM): Oxford Centre for Innovation, Mill Street, Oxford OX2 OJX, United Kingdom.

<sup>26</sup> Spergel, Barry. *Ibid.* p. 10.

1. Local Co-Management of Coastal/Marine Resources. The establishment of Fisherfolk Settlement Areas (FSA) along the concept of bio-villages/ecovillages should be explored. Local fishing villages can be organized similar to Japanese fishing villages, community fishing corporations, conservation foundations, or even cooperatives under the Cooperative Code of the Philippines.

The revised concept of a FSA being recommended here shall have the following distinct principles and guidelines:

- a. An FSA shall have primary responsibility for the sustainable management of coastal and marine resources in an area that is assigned to. Technically, the FSA as a legal entity will serve as an agent of the State (through the LGU) in addressing the balanced ecology mandate.
  - b. A major function/power of the FSA as an organization is to generate/raise resources (fundraising) for its operations so that it can fulfill its primary responsibility of conservation management
  - c. The FSA shall be responsible for meeting performance targets to be set and agreed upon with the LGU and with the technical assistance of concerned national government agencies.
  - d. Rights and privileges of the FSA may include such instruments as individual transferrable quotas.
2. Responsibility of the LGUs. Consistent with the principle of decentralization and to let LGUs support the development goals of the national government, the following may be instituted:
    - a. The authority to establish an FSA should be transferred to the concerned LGU that has jurisdiction over the area to be so designated. Technical assistance can be provided by national agencies such as the DA-BFAR and the DENR. This is especially so for foreshore areas where local fishing communities will settle. In this regard, a change/amendment in the pertinent legal provisions may have to be made.
    - b. The concerned LGU will also establish performance standards and targets with the concerned national agencies (DA-BFAR, DENR, etc.) especially with respect to the twin goals of food security and conservation management of coastal resources. A performance system cascaded down to the FSA (e.g, Balanced Scorecard) can be institutionalized.
    - c. LGUs will continue to have fiscal instruments at their disposal and should look into ways of generating additional resources from coastal and marine resources especially in terms of user fees. With resources that are available, a reward system can be set up for good-performing FSAs.
  3. National Government Supervision. Agencies of the national government that have to do with coastal resource management can provide a supervisory and supportive role to LGUs. The present system of allowing such agencies to deal directly with local fishing communities in terms of programs and projects should be

discouraged as it negates the concept of accountability in governance. Such should be delegated to the concerned LGUs. National government agencies can see their roles under the revised national management framework for coastal and marine resources as follows:

- a. Provide technical assistance and support to LGUs in all aspects of coastal and marine resource governance/management.
- b. Set the performance standards on sustainable coastal management with LGUs.
- c. Encourage a policy environment that will allow individual and corporate citizens to contribute to local efforts of conservation management in the coastal zone through tax deduction and credit mechanisms.
- d. Aggressively work out debt-for-nature swaps. Resources generated out of this effort can be used as the means by which national agencies can direct local efforts towards good ecogovernance goals especially a reward and incentive system for LGU exhibiting good performance.

## **CHAPTER 6 – SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

After reviewing the experiences of the four (4) coastal municipalities in Central Visayas on ecogovernance and the use of ecogovernance instruments, the following final points are made:

1. All LGUs that were included in the case study showed a dependency on the Internal Revenue Allotment (IRA) from about 80% to 100%. The implication of this is that LGUs are vulnerable to cutbacks in the IRA especially that local sources of revenues may not provide sufficient buffers. With the competing demands on the LGU for basic services (education, health, environment, etc.), the art of balancing the needs of their constituents becomes a formidable challenge. Meager fiscal resources would mean little leeway in performing the overall governance functions and that LGUs will need to be creative in meeting competing demands. In many instances, ecogovernance (i.e., meeting the balanced ecology mandate) becomes of a lower priority when resources are scarce.
2. There is evidence to show that LGU can generate significant revenues from coastal/marine-based activities that are environment-friendly such as ecotourism (dive fees, entrance fees, etc.). This is the case of Panglao and Apo I. in Dauin. For the latter, however, the issue of having the funds collected being controlled by a national agency poses a challenge to the systematic flow of funds for the further development of the island's natural resources. There is, therefore, a need to review the present mechanism so that the success of Apo I. does not become its own folly.
3. Results of earlier surveys provide an argument for regulating and restricting the utilization, exploitation, and use of coastal and marine resources. Fish catches and fish biomass have increased significantly for areas that enjoyed protection compared to areas that were not. Practically all LGUs studied have promulgated local legislation using area and technological restriction instruments as a means to regulate and manage coastal resources. The levels of success in this regard for each LGU vary. Factors affecting success include enforcement capacity, community involvement, and programs to sustain efforts (such as shifter investments and incentive mechanisms).
4. Shifter investment strategies of all LGUs are observed to be directed towards tourism-related activities. This is based on the recognition by the LGUs that benefits can be derived from coastal and marine resources especially when they are utilized and managed in a sustainable manner.
5. Incentives/disincentives pursued by LGUs are principally those that are initiated at the local level. There are many incentives/disincentives outlined in the Local Government Code, the Fisheries Code, and the AFMA Law, but many are not felt

by the LGUs. From the standpoint of the LGU, therefore, these are “dead letter” laws. What seems to be effective are those that LGUs think of in cooperation with the main implementers (as in the case of the Dauin Bantay Dagat sharing scheme).

6. Given the lessons derived from the experiences of the four (4) subject LGUs, a new coastal governance framework in the country is recommended in order to improve the accountability of LGUs, NGAs, and local communities over coastal and marine resources located within the jurisdiction of the LGU. Aside from this, the other indicators of good governance (transparency, participation, and sustainability) will likewise be enhanced if the new coastal governance framework is adopted.

The outline of the new coastal governance framework was presented in Chapter 5 specifically in the Summary and Recommendations section. In the said section, the roles and functions of each level of coastal governance, i.e., local communities, the LGU, and the concerned national government agencies.

7. To implement the new coastal governance concept, a prototype ordinance is being presented in Attachment A. The prototype ordinance applicable to either a coastal city or municipality assumes that the new coastal governance concept operates under the existing legal regime of natural resource management. In this case, related administrative orders of and cooperative agreements with concerned national agencies (DA-BFAR, DENR, DILG, etc.) will need to be crafted and promulgated.

## CHAPTER 7 - REFERENCES

- Caddy, J.F. and R. Mahon. 1995. Reference points for fisheries management. FAO Fish. Tech. Paper. No. 347. Food and Agriculture Organization (FAO), Rome. 83 p.
- Calumpong, H.P., C. Reboton and P.L. Cadiz. Cost and Benefit of Maintaining Apo Island Protected Landscape and Seascape. Second International Tropical Marine Ecosystems Management Symposium, Manila, Philippines, 24-27 March 2003.
- Calumpong, H. P., M.F. Divinagracia, C.E. Acedo, (Eds.). 1997a. Assessment of the Central Visayas Regional Project I: Nearshore Fisheries Component. Dumaguete City, Philippines: Silliman University Marine Laboratory and the Center of Excellence in Coastal Resources Management. 120 p.
- Calumpong, H. P., J.S. Estacion, M.V. Lepiten, C.E. Acedo, (Eds.). 1997b. Status of the Coastal Resources of the Negros Oriental Learning Site (Manuyod to Dauin). Vol. 1. Dumaguete City, Philippines: Silliman University Marine Laboratory and the Center of Excellence in Coastal Resources Management. 195 p.
- Calumpong, H. P., J.S. Estacion, C.E. Acedo, (Eds.). 1997c. Status of the Coastal Resources of the Bohol Learning Site (Jetafe to Calape). Vol. III. Dumaguete City, Philippines: Silliman University Marine Laboratory and the Center of Excellence in Coastal Resources Management. 150 p.
- Coastal Resource Management Project. 2003. Workshop Proceedings of the Workshop/Meeting on the Drafting of a Fisheries Licensing Policy for the Philippines. July 2003. unpublished.
- Dauin Municipal Coastal Database.
- Department of Environment and Natural Resources, Bureau of Fisheries and Aquatic Resources of the Department of Agriculture, and the Department of Interior and Local Government. 2001. Philippine Coastal Management Guidebook No. 2: Legal and Jurisdictional Framework for Coastal Management. Coastal Resource Management Project of the Department of Environment and Natural Resources, Cebu City, Philippines, 170 pp.
- EcoGov-DAI. Proposed Framework for Shifter Investments: Decision Framework for Shifting Consumption and Production.
- English, T.S., ed. 1973. Ocean Resources and Public Policy. University of Washington Press, Seattle, 184 pp. Philippine Constitution
- Green, S.J., Monreal, R.P., A.T. White and T.G. Bayer. 2001. Coastal Environmental Profile of Negros Oriental, Philippines. Coastal Resource Management Project, Cebu City, Philippines, 113 pp.
- Kooiman, J. 2003. Governing as governance. Sage Publications, London.
- Marine Conservation and Development Program. 1986. Final Report and Evaluation. Silliman University, Dumaguete City. Unpublished.
- Morgan, G.R. 1997. Individual quota management in fisheries: methodologies for determining catch quotas and initial quota allocation. FAO Fish Tech. Paper No. 371. Food and Agriculture Organization (FAO), Rome. 41 p.

- Olsen, S.B.O. (ed.) 2003. *Crafting Coastal Governance in a Changing World*. Coastal Management Report #2241, ISBN #1-885454-50-3. The Coastal Resources Management Program, USAID and the University of Rhode Island Coastal Resources Center. 376 pp.
- Panglao Municipal Coastal Database.
- Sibulan Municipal Coastal Database.
- Pimentel, A. Jr. Q., *The Local Government Code of 1991: The Key to National Development*. (Cacho Publishing House, Inc., 1993), p. 14.
- Republic Act 8550: Fisheries Code of 1998 and its Implementing Rules and Regulations
- Republic Act 8435: Agriculture and Fisheries Modernization Act of 1997
- Reboton, C. and H.P. Calumpong. 2002. How much damage do divers and snorkelers do to corals? *Proceedings of the Ninth International Coral Reef Symposium, Bali, 23-27 October 2000*, 1: 787-790.
- Republic Act 7160: Local Government Code of 1991 and its Implementing Rules and Regulations.
- Rodee, Carlton Clymer, Totton James Anderson, and Carl Quimby Christol. Introduction to Political Science (Second edition), Mc-Graw Hill Book Company (1967), pp. 29-39.
- Samuelson, Paul A. and William D. Nordhaus, *Economics* (13<sup>th</sup> edition), Mc-Graw Hill Book Company (1989), pp. 669-670 citing Garret Hardin.
- Savina, G. 1986. Community development. In: *Marine Conservation and Development Program. Final Report and Evaluation*. pp. 44-72. Silliman University, Dumaguete City. Unpublished.
- Serofia, G.D. and L.F. Napilan. 2003. Final Report. Inventory and Analysis of Selected National Fisheries Laws in the Philippines. Institute of Fisheries Policy and Development Studies, College of Fisheries and Ocean Services, University of the Philippines in the Visayas.
- Torell, M. and A.M. Salamanca, eds. 2002. *Institutional Issues and Perspectives in the Management of Fisheries and Coastal Resources in Southeast Asia*. ICLARM Technical report 60, 212 pp.
- United States Agency for International Development (USAID). March, 2000. "Cities Matter: Local Economic Development, Trainer's Guide", p. 48.
- Yambao, A.C., A.T. White, W.E. Ablong and M.R. Alcala. 2001. *Coastal Environmental Profile of Negros Oriental, Philippines*. Coastal Resource Management Project, Cebu City, Philippines, 107 pp.
- White, A. and H.P. Calumpong. 1992. *Earthwatch Expedition to the Philippines – Central Visayas*.
- World Resources Institute, 2003, [[http://pubs.wri.org/pubs\\_description.cfm?PubID=3764](http://pubs.wri.org/pubs_description.cfm?PubID=3764)]
- World Resources 2002-2004: *Decisions for the Earth: Balance, voice, and power*. United Nations Development Programme, United Nations Environment Programme, World Bank, World Resources Institute.

#### Municipal Ordinances/Resolutions

- Ordinance No. 01-01 of the SB of Dauin. A comprehensive ordinance providing for the sustainable management, development and conservation of the municipal waters

- and its fisheries resources, harmonizing and integrating all ordinances pertinent thereto and for other purposes.
- Ordinance No. 2, series of 2000 of the SB of Dauin. An ordinance declaring a portion of municipal waters east of barangay Maayong Tubig Dauin, Negros Oriental consisting of an area of 70,129 sq. m as marine reserve area and regulating activities in the said marine reserve and for other purposes.
- Ordinance No. 01-01 of the SB of Dauin. An ordinance declaring a portion of the municipal waters fronting District I municipality of Dauin Province of Negros Oriental as a marine reserve area to be managed by two fisher folks organization.
- Ordinance No. 02-01 of the SB of Dauin. An ordinance supplementing Sec. 3(Definition of Terms) and Sec. 4 (Prohibition) of Ordinance No. 97-02 declaring a portion of the municipal waters located east of Masaplod Norte, Dauin, Negros Oriental as marine reserve for the protection, conservation, regeneration and rehabilitation of the fishery & aquatic resources of this municipality and amending Sec. 5 (Fees) & Sec. 6 (Allocation of Shares) PAR. “a”, “b” & “c”.
- Ordinance No. 2-99 of the SB of Dauin. An ordinance the use of compressors and SCUBA tanks in fishing within the municipal waters of the municipality of Dauin and imposing penalties for violations thereof.
- Ordinance No. II s. 1997 of the SB of Dauin. An ordinance controlling and regulating the activities of visitors, scuba divers. Tourists, snorkelers, pumpboats and other visitors.
- Ordinance No. 97-02 of the SB of Dauin. An ordinance declaring a portion of the municipal waters located east of Masaplod Norte, Dauin, Negros Oriental as marine reserve area Ordinance No. 96-01 of the SB of Dauin. An ordinance declaring a portion of the public domain situated in the barangays of Bulak and Lipayo, municipality of Dauin, as an integrated coastal zone/municipal public beach resort and withdrawing it from alienation and disposition under Chapter IX of Public Land Law.
- Ordinance No. 95-019 of the SB of Dauin. An ordinance granting exclusive fishery privileges to fishermen’s association that established artificial reefs in the municipality.
- Ordinance No. 96-046 of the SB Dauin. Declaring valid Res. No. 96-046 adopting ordinance No. 96-03 which prohibit the operation of fishing vessels of more than three tons gross within the municipal waters.
- Ordinance No. 8-88 of the SB Dauin. Ordinance declaring the coral reef of Apo I. as marine reserve.Municipal Ordinance No. 11, s. 2002 of the SB of Moalboal, Cebu. “Ban on the taking or catching o, selling, possessing and transporting turtles and reef sharks”.
- Municipal Ordinance No. 10, s. 2001 of the SB of Moalboal, Cebu. “An ordinance imposing regulatory measures for the protection of the fish sanctuary at Barangays Basdiot and Saavedra, Moalboal, Cebu, and to provide penalties for its violations.” Amendment to Ordinance No. 9-A s. 1988.
- Municipal Ordinance No. 01, s. 2000 of the SB of Moalboal, Cebu. “Banning the operation of kobkob (Ring net operation), trawl fishing, spearfishing and all other methods/forms of fishing using compressor, catching tropical fish for aquarium

- purposes, netfishing and capturing immature species in the municipal waters of Moalboal, Cebu, and to impose penalties for violation hereof”.
- Municipal Ordinance No. 115, Series of 1999 of the SB of Moalboal, Cebu. “An ordinance adopting the comprehensive zoning ordinance for the Municipality of Moalboal and providing for the administration, enforcement, and amendment thereof, and for the repeal of all ordinances in conflict therewith”.
- Municipal Ordinance No. 104 of the SB of Moalboal, Cebu. “An ordinance prohibiting the opening of new dive shops in Panagsama, Basdiot, Moalboal, Cebu, for the next five years effective this year, 1997”.
- Municipal Ordinance No. 118 of the SB of Moalboal, Cebu. “An ordinance repealing ordinance No. 104 s. 1997 and the amending ordinance No. 114 s. 1999”.
- Municipal Ordinance No. 98, s. 2002 of the SB of Moalboal, Cebu. “Mayor’s Permit of five hundred pesos (P500.00) per fishing for transient fishermen fishing in the municipal waters within the jurisdiction of Moalboal, Cebu”.
- Municipal Ordinance No. 99 of the SB of Moalboal, Cebu. “Prohibiting operators of pumpboat for hire, diveshop operators and any other similar sea transport to allow any person to carry or transport speargun used for scuba spearfishing in Pescador Island and other areas declared as fish sanctuary such as Tongo, Basdiot and Bangag, Saavedra, Moalboal”.
- Municipal Ordinance No. 110 of the SB of Moalboal, Cebu. “An ordinance declaring Busay water source and its surroundings as watershed area”.
- Municipal Ordinance No. 111 of the SB of Moalboal, Cebu. “An ordinance prohibiting/banning persons from other towns to put-up/install fish pens like “dumpil or bunsod” within the municipal waters of Moalboal, Cebu, and to impose penalties for violation thereof ”.
- Municipal Ordinance No. 112 of the SB of Moalboal, Cebu. “An ordinance amending ordinance No. 4 s. 1981: Prohibiting anybody to take or get sands from all beaches, seashore and seabed located within the municipality of Moalboal, Cebu”.
- Municipal Ordinance No. 113 of the SB of Moalboal, Cebu. “Banning the operation of kobkob (Ring net operation), trawl fishing, spearfishing and all other methods/forms of fishing using compressor, catching tropical fish for aquarium purposes, netfishing and capturing immature species in the municipal waters of Moalboal, Cebu, and to impose penalties for violation hereof”.
- Municipal Ordinance No. 64, s. 1994 of the SB of Moalboal, Cebu. “An ordinance prohibiting fishpond operators/caretakers to drain water containing poisonous substance before the duration of seven (7) days and also prohibiting the gathering or selling of poisoned fish by any person and to provide penalty thereof”.
- Municipal Ordinance No. 69 of the SB of Moalboal, Cebu. “An ordinance demolishing the illegally constructed dikes along the shore of Panagsam Beach, Basdiot, Moalboal, Cebu ”.
- Municipal Ordinance No. 73 of the SB of Moalboal, Cebu. “Requiring all households and establishments to have garbage receptacle in their respective places or area”.
- Municipal Ordinance No. 74 of the SB of Moalboal, Cebu. “Locational clearance”. Sec. 1. All persons, company and corporations who will construct buildings and similar structures within a distance of 100 meters from the shoreline will be required to get Locational Clearance in the local government of Moalboal, Cebu.

- Municipal Ordinance No. 79 of the SB of Moalboal, Cebu. “Locational clearance”. Sec. 1. All persons, company and corporations who will construct buildings and similar structures within a distance of 100 meters from the shoreline will be required to get Locational Clearance in the local government of Moalboal, Cebu. Resolution No. 1077 “A resolution enacting an ordinance in order to declare and establish Pescador Island as municipal marine park with a marine sanctuary”.
- Municipal Ordinance No. 76 of the SB of Moalboal, Cebu. “An ordinance imposing regulatory measures in the area declared as municipal marine park with a marine sanctuary at Pescador Island, Moalboal, Cebu”.
- Municipal Ordinance No. 78 of the SB of Moalboal, Cebu. “An ordinance requiring any foreigner who wish to construct buildings residential or commercial and/or cottages and /or set up any business establishments to pay a regulatory fee of ten thousand pesos (P10,000) and to pay penalties for violation thereof”.
- Municipal Ordinance No. 81 of the SB of Moalboal, Cebu. “Requiring all business establishments in Piangsam and Basdako to register at Moalboal Tourism Council”.
- Municipal Ordinance No. 83 of the SB of Moalboal, Cebu. “Declaring the entire jurisdiction of the municipality of Moalboal as bird sanctuary”.
- Municipal Ordinance No. 87 of the SB of Moalboal, Cebu. “An ordinance imposing annual municipal license for professional dive center, dive instructor and dive master within the jurisdiction of Moalboal, Cebu”.
- Municipal Ordinance No. 88 of the SB of Moalboal, Cebu. “Mandatory registration of tourist coming in the town of Moalboal, Cebu”.
- Municipal Ordinance No. 89 of the SB of Moalboal, Cebu. “An ordinance prohibiting the throwing of all garbage within a distance of fifty (50) meters along the side of a barangay, municipal and provincial road in the municipality of Moalboal, Cebu, and to provide penalties for violation”. Municipal Ordinance No. 5, Series of 1986 of the SB of Panglao. An ordinance declaring fish sanctuaries in the municipal seawaters of Panglao, Panglao, Bohol.
- Municipal Ordinance No. 13, Series of 1993 of the SB of Panglao. An ordinance regulating the business of operation of resorts, firm entities and establishments that cater to tourists.
- Municipal Ordinance No. 3, Series of 1995 of the SB of Panglao. An ordinance imposing an additional one percent (1%) municipal tax on the amount paid by dive shops and other similar establishments by SCUBA diving customers.
- Municipal Ordinance No. 4, Series of 1995 of the SB of Panglao. An ordinance regulating garbage collection and disposal in the municipality of Panglao and imposing fees thereof.
- Municipal Ordinance No. 6, Series of 1995 of the SB of Panglao. An ordinance separating and regulating the fishing method using drive-in-net which is locally known as “sagiwsiw” from the municipal fishery ordinance No. 1, series of 1988.
- Municipal Ordinance No. 04, Series of 1999 of the SB of Panglao. An ordinance banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao, Bohol.

- Municipal Ordinance No. 3, Series of 1996 of the SB of Panglao. An ordinance creating the Bantay Panglao, defining its powers and functions, providing funds therefore and for other purposes.
- Municipal Ordinance No. 6, Series of 1998 of the SB of Panglao. An ordinance prohibiting all owners of any sea crafts to moor or anchor by tying across the shoreline within the developed beaches of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 8, Series of 1998 of the SB of Panglao. An ordinance declaring the whole island around Balicasag as Marine Park with the southwest portion as fish sanctuary.
- Municipal Ordinance No. 02, Series of 1999 of the SB of Panglao. An ordinance imposing mooring fee to all transient boats operating diving and cruising activities within the municipal seawaters of Panglao, Bohol.
- Municipal Ordinance No. 04, Series of 1999 of the SB of Panglao. An ordinance banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao, Bohol.
- Municipal Ordinance No. 05, Series of 1999 of the SB of Panglao. An ordinance regulating the operations of jet skis, speed boats and the like, within the municipal seawater of Panglao, Bohol.
- Municipal Ordinance No. 01, Series of 2000 of the SB of Panglao. Comprehensive solid waste management ordinance of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 6, Series of 2002 of the SB of Panglao. An ordinance creating the Municipal Fisheries and Aquatic Resource Management Council (MFARMC) of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 3, Series of 2003 of the SB of Panglao. An ordinance creating the barangay Fisheries and Aquatic Resource Council (BFARMC) of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 5, Series of 2003 of the SB of Panglao. An ordinance delineating the boundaries of the municipal waters of the municipality of Panglao, Province of Bohol.
- Municipal Ordinance No. 11, Series of 2003 of the SB of Panglao. An ordinance amending Municipal Ordinance No. 5, Series of 2003, entitled, "An ordinance delineating the boundaries of the municipal waters of the municipality of Panglao, Province of Bohol" by addition.
- Ordinance No. 01, s. 1996 of the SB of Sibulan. Amending Sec. 2 and to insert Sec. 2A of Ordinance No. 8, s. 1992, "Adopting and ordaining the regulation of sagiwsiw fishing in the municipality of Sibulan.
- Ordinance No. 22, s. 1996 of the SB of Sibulan. Prohibiting the use of compressors and scuba tanks affecting fishing and fisheries within one kilometer from coastline of Sibulan and imposing penalties for violation thereof and for other purposes.
- Ordinance No. 07, s. 1993 of the SB of Sibulan. Prohibiting the reclamation of seawaters and the construction of structures on foreshores, shallow sea water areas, rivers and river banks within the municipality without the necessary permits from the appropriate government agencies.
- Ordinance No. 04, s. 1993 of the SB of Sibulan. Making available for reclamation the fresh and shallow seawater area fronting Barangay Agan-an, Maslog and a portion

- of Cangmating this municipality, under the build-operate transfer schemes pursuant to Section 10 of R.A. 6957.
- Ordinance No. 08, s. 1992 of the SB of Sibulan. Adopting and ordaining the regulation of sagiwsiw fishing in the municipality of Sibulan, Negros Oriental.
- Ordinance No. 05-A, s. 1989. An ordinance appropriating the amount of the thousand & 00/100 (P10,000.00) pesos to defray one-half (1/2) of the estimated coast of relocation survey of the foreshore lands from Sibulan airport (boundary) to Poblacion, Sibulan to be taken from the 20% development fund.
- Res. No. 74, 1988. ...to set aside in this area of the shoreline of Agan-an, this municipality, measuring 100 x 50 m up to a maximum of 100 x 100 meters as a fish sanctuary.
- Res. No. 74, 1988. ... to declare the foreshore or government lands in the coastal areas of this municipality tourism areas and for other purposes that this municipal government deemed it necessary.
- Res. No. 92, 1988. ...to declare a one hectare within the reserve area of municipality in the near shore of Lo-oc, Sibulan as a fish sanctuary.
- Res. No. 93-98A of the SB of Sibulan. That this municipal government will apply for leasehold on all foreshores within the territorial jurisdiction of this municipality, with the DENR.
- Ordinance No. 23, s. 1981 of the SB of Sibulan. An ordinance amending ordinance No. 31, s. 1980 which requires owners of parcels of seashore lands within territorial jurisdiction of the municipality to provide access to the sea and providing penalties in violation thereof.

## CHAPTER 7 - REFERENCES

- Caddy, J.F. and R. Mahon. 1995. Reference points for fisheries management. FAO Fish. Tech. Paper. No. 347. Food and Agriculture Organization (FAO), Rome. 83 p.
- Calumpong, H.P., C. Reboton and P.L. Cadiz. Cost and Benefit of Maintaining Apo Island Protected Landscape and Seascape. Second International Tropical Marine Ecosystems Management Symposium, Manila, Philippines, 24-27 March 2003.
- Calumpong, H. P., M.F. Divinagracia, C.E. Acedo, (Eds.). 1997a. Assessment of the Central Visayas Regional Project I: Nearshore Fisheries Component. Dumaguete City, Philippines: Silliman University Marine Laboratory and the Center of Excellence in Coastal Resources Management. 120 p.
- Calumpong, H. P., J.S. Estacion, M.V. Lepiten, C.E. Acedo, (Eds.). 1997b. Status of the Coastal Resources of the Negros Oriental Learning Site (Manuyod to Dauin). Vol. 1. Dumaguete City, Philippines: Silliman University Marine Laboratory and the Center of Excellence in Coastal Resources Management. 195 p.
- Calumpong, H. P., J.S. Estacion, C.E. Acedo, (Eds.). 1997c. Status of the Coastal Resources of the Bohol Learning Site (Jetafe to Calape). Vol. III. Dumaguete City, Philippines: Silliman University Marine Laboratory and the Center of Excellence in Coastal Resources Management. 150 p.
- Coastal Resource Management Project. 2003. Workshop Proceedings of the Workshop/Meeting on the Drafting of a Fisheries Licensing Policy for the Philippines. July 2003. unpublished.
- Dauin Municipal Coastal Database.
- Department of Environment and Natural Resources, Bureau of Fisheries and Aquatic Resources of the Department of Agriculture, and the Department of Interior and Local Government. 2001. Philippine Coastal Management Guidebook No. 2: Legal and Jurisdictional Framework for Coastal Management. Coastal Resource Management Project of the Department of Environment and Natural Resources, Cebu City, Philippines, 170 pp.
- EcoGov-DAI. Proposed Framework for Shifter Investments: Decision Framework for Shifting Consumption and Production.
- English, T.S., ed. 1973. Ocean Resources and Public Policy. University of Washington Press, Seattle, 184 pp. Philippine Constitution
- Green, S.J., Monreal, R.P., A.T. White and T.G. Bayer. 2001. Coastal Environmental Profile of Negros Oriental, Philippines. Coastal Resource Management Project, Cebu City, Philippines, 113 pp.
- Kooiman, J. 2003. Governing as governance. Sage Publications, London.
- Marine Conservation and Development Program. 1986. Final Report and Evaluation. Silliman University, Dumaguete City. Unpublished.
- Morgan, G.R. 1997. Individual quota management in fisheries: methodologies for determining catch quotas and initial quota allocation. FAO Fish Tech. Paper No. 371. Food and Agriculture Organization (FAO), Rome. 41 p.

- Olsen, S.B.O. (ed.) 2003. *Crafting Coastal Governance in a Changing World*. Coastal Management Report #2241, ISBN #1-885454-50-3. The Coastal Resources Management Program, USAID and the University of Rhode Island Coastal Resources Center. 376 pp.
- Panglao Municipal Coastal Database.
- Sibulan Municipal Coastal Database.
- Pimentel, A. Jr. Q., *The Local Government Code of 1991: The Key to National Development*. (Cacho Publishing House, Inc., 1993), p. 14.
- Republic Act 8550: Fisheries Code of 1998 and its Implementing Rules and Regulations
- Republic Act 8435: Agriculture and Fisheries Modernization Act of 1997
- Reboton, C. and H.P. Calumpong. 2002. How much damage do divers and snorkelers do to corals? *Proceedings of the Ninth International Coral Reef Symposium, Bali, 23-27 October 2000*, 1: 787-790.
- Republic Act 7160: Local Government Code of 1991 and its Implementing Rules and Regulations.
- Rodee, Carlton Clymer, Totton James Anderson, and Carl Quimby Christol. Introduction to Political Science (Second edition), Mc-Graw Hill Book Company (1967), pp. 29-39.
- Samuelson, Paul A. and William D. Nordhaus, *Economics* (13<sup>th</sup> edition), Mc-Graw Hill Book Company (1989), pp. 669-670 citing Garret Hardin.
- Savina, G. 1986. Community development. In: *Marine Conservation and Development Program. Final Report and Evaluation*. pp. 44-72. Silliman University, Dumaguete City. Unpublished.
- Serofia, G.D. and L.F. Napilan. 2003. Final Report. Inventory and Analysis of Selected National Fisheries Laws in the Philippines. Institute of Fisheries Policy and Development Studies, College of Fisheries and Ocean Services, University of the Philippines in the Visayas.
- Torell, M. and A.M. Salamanca, eds. 2002. *Institutional Issues and Perspectives in the Management of Fisheries and Coastal Resources in Southeast Asia*. ICLARM Technical report 60, 212 pp.
- United States Agency for International Development (USAID). March, 2000. "Cities Matter: Local Economic Development, Trainer's Guide", p. 48.
- Yambao, A.C., A.T. White, W.E. Ablong and M.R. Alcala. 2001. *Coastal Environmental Profile of Negros Oriental, Philippines*. Coastal Resource Management Project, Cebu City, Philippines, 107 pp.
- White, A. and H.P. Calumpong. 1992. *Earthwatch Expedition to the Philippines – Central Visayas*.
- World Resources Institute, 2003, [[http://pubs.wri.org/pubs\\_description.cfm?PubID=3764](http://pubs.wri.org/pubs_description.cfm?PubID=3764)]
- World Resources 2002-2004: *Decisions for the Earth: Balance, voice, and power*. United Nations Development Programme, United Nations Environment Programme, World Bank, World Resources Institute.

#### Municipal Ordinances/Resolutions

- Ordinance No. 01-01 of the SB of Dauin. A comprehensive ordinance providing for the sustainable management, development and conservation of the municipal waters

- and its fisheries resources, harmonizing and integrating all ordinances pertinent thereto and for other purposes.
- Ordinance No. 2, series of 2000 of the SB of Dauin. An ordinance declaring a portion of municipal waters east of barangay Maayong Tubig Dauin, Negros Oriental consisting of an area of 70,129 sq. m as marine reserve area and regulating activities in the said marine reserve and for other purposes.
- Ordinance No. 01-01 of the SB of Dauin. An ordinance declaring a portion of the municipal waters fronting District I municipality of Dauin Province of Negros Oriental as a marine reserve area to be managed by two fisher folks organization.
- Ordinance No. 02-01 of the SB of Dauin. An ordinance supplementing Sec. 3(Definition of Terms) and Sec. 4 (Prohibition) of Ordinance No. 97-02 declaring a portion of the municipal waters located east of Masaplod Norte, Dauin, Negros Oriental as marine reserve for the protection, conservation, regeneration and rehabilitation of the fishery & aquatic resources of this municipality and amending Sec. 5 (Fees) & Sec. 6 (Allocation of Shares) PAR. “a”, “b” & “c”.
- Ordinance No. 2-99 of the SB of Dauin. An ordinance the use of compressors and SCUBA tanks in fishing within the municipal waters of the municipality of Dauin and imposing penalties for violations thereof.
- Ordinance No. II s. 1997 of the SB of Dauin. An ordinance controlling and regulating the activities of visitors, scuba divers. Tourists, snorkelers, pumpboats and other visitors.
- Ordinance No. 97-02 of the SB of Dauin. An ordinance declaring a portion of the municipal waters located east of Masaplod Norte, Dauin, Negros Oriental as marine reserve area Ordinance No. 96-01 of the SB of Dauin. An ordinance declaring a portion of the public domain situated in the barangays of Bulak and Lipayo, municipality of Dauin, as an integrated coastal zone/municipal public beach resort and withdrawing it from alienation and disposition under Chapter IX of Public Land Law.
- Ordinance No. 95-019 of the SB of Dauin. An ordinance granting exclusive fishery privileges to fishermen’s association that established artificial reefs in the municipality.
- Ordinance No. 96-046 of the SB Dauin. Declaring valid Res. No. 96-046 adopting ordinance No. 96-03 which prohibit the operation of fishing vessels of more than three tons gross within the municipal waters.
- Ordinance No. 8-88 of the SB Dauin. Ordinance declaring the coral reef of Apo I. as marine reserve.Municipal Ordinance No. 11, s. 2002 of the SB of Moalboal, Cebu. “Ban on the taking or catching o, selling, possessing and transporting turtles and reef sharks”.
- Municipal Ordinance No. 10, s. 2001 of the SB of Moalboal, Cebu. “An ordinance imposing regulatory measures for the protection of the fish sanctuary at Barangays Basdiot and Saavedra, Moalboal, Cebu, and to provide penalties for its violations.” Amendment to Ordinance No. 9-A s. 1988.
- Municipal Ordinance No. 01, s. 2000 of the SB of Moalboal, Cebu. “Banning the operation of kobkob (Ring net operation), trawl fishing, spearfishing and all other methods/forms of fishing using compressor, catching tropical fish for aquarium

- purposes, netfishing and capturing immature species in the municipal waters of Moalboal, Cebu, and to impose penalties for violation hereof”.
- Municipal Ordinance No. 115, Series of 1999 of the SB of Moalboal, Cebu. “An ordinance adopting the comprehensive zoning ordinance for the Municipality of Moalboal and providing for the administration, enforcement, and amendment thereof, and for the repeal of all ordinances in conflict therewith”.
- Municipal Ordinance No. 104 of the SB of Moalboal, Cebu. “An ordinance prohibiting the opening of new dive shops in Panagsama, Basdiot, Moalboal, Cebu, for the next five years effective this year, 1997”.
- Municipal Ordinance No. 118 of the SB of Moalboal, Cebu. “An ordinance repealing ordinance No. 104 s. 1997 and the amending ordinance No. 114 s. 1999”.
- Municipal Ordinance No. 98, s. 2002 of the SB of Moalboal, Cebu. “Mayor’s Permit of five hundred pesos (P500.00) per fishing for transient fishermen fishing in the municipal waters within the jurisdiction of Moalboal, Cebu”.
- Municipal Ordinance No. 99 of the SB of Moalboal, Cebu. “Prohibiting operators of pumpboat for hire, diveshop operators and any other similar sea transport to allow any person to carry or transport speargun used for scuba spearfishing in Pescador Island and other areas declared as fish sanctuary such as Tongo, Basdiot and Bangag, Saavedra, Moalboal”.
- Municipal Ordinance No. 110 of the SB of Moalboal, Cebu. “An ordinance declaring Busay water source and its surroundings as watershed area”.
- Municipal Ordinance No. 111 of the SB of Moalboal, Cebu. “An ordinance prohibiting/banning persons from other towns to put-up/install fish pens like “dumpil or bunsod” within the municipal waters of Moalboal, Cebu, and to impose penalties for violation thereof ”.
- Municipal Ordinance No. 112 of the SB of Moalboal, Cebu. “An ordinance amending ordinance No. 4 s. 1981: Prohibiting anybody to take or get sands from all beaches, seashore and seabed located within the municipality of Moalboal, Cebu”.
- Municipal Ordinance No. 113 of the SB of Moalboal, Cebu. “Banning the operation of kobkob (Ring net operation), trawl fishing, spearfishing and all other methods/forms of fishing using compressor, catching tropical fish for aquarium purposes, netfishing and capturing immature species in the municipal waters of Moalboal, Cebu, and to impose penalties for violation hereof”.
- Municipal Ordinance No. 64, s. 1994 of the SB of Moalboal, Cebu. “An ordinance prohibiting fishpond operators/caretakers to drain water containing poisonous substance before the duration of seven (7) days and also prohibiting the gathering or selling of poisoned fish by any person and to provide penalty thereof”.
- Municipal Ordinance No. 69 of the SB of Moalboal, Cebu. “An ordinance demolishing the illegally constructed dikes along the shore of Panagsam Beach, Basdiot, Moalboal, Cebu ”.
- Municipal Ordinance No. 73 of the SB of Moalboal, Cebu. “Requiring all households and establishments to have garbage receptacle in their respective places or area”.
- Municipal Ordinance No. 74 of the SB of Moalboal, Cebu. “Locational clearance”. Sec. 1. All persons, company and corporations who will construct buildings and similar structures within a distance of 100 meters from the shoreline will be required to get Locational Clearance in the local government of Moalboal, Cebu.

- Municipal Ordinance No. 79 of the SB of Moalboal, Cebu. “Locational clearance”. Sec. 1. All persons, company and corporations who will construct buildings and similar structures within a distance of 100 meters from the shoreline will be required to get Locational Clearance in the local government of Moalboal, Cebu. Resolution No. 1077 “A resolution enacting an ordinance in order to declare and establish Pescador Island as municipal marine park with a marine sanctuary”.
- Municipal Ordinance No. 76 of the SB of Moalboal, Cebu. “An ordinance imposing regulatory measures in the area declared as municipal marine park with a marine sanctuary at Pescador Island, Moalboal, Cebu”.
- Municipal Ordinance No. 78 of the SB of Moalboal, Cebu. “An ordinance requiring any foreigner who wish to construct buildings residential or commercial and/or cottages and /or set up any business establishments to pay a regulatory fee of ten thousand pesos (P10,000) and to pay penalties for violation thereof”.
- Municipal Ordinance No. 81 of the SB of Moalboal, Cebu. “Requiring all business establishments in Piangsam and Basdako to register at Moalboal Tourism Council”.
- Municipal Ordinance No. 83 of the SB of Moalboal, Cebu. “Declaring the entire jurisdiction of the municipality of Moalboal as bird sanctuary”.
- Municipal Ordinance No. 87 of the SB of Moalboal, Cebu. “An ordinance imposing annual municipal license for professional dive center, dive instructor and dive master within the jurisdiction of Moalboal, Cebu”.
- Municipal Ordinance No. 88 of the SB of Moalboal, Cebu. “Mandatory registration of tourist coming in the town of Moalboal, Cebu”.
- Municipal Ordinance No. 89 of the SB of Moalboal, Cebu. “An ordinance prohibiting the throwing of all garbage within a distance of fifty (50) meters along the side of a barangay, municipal and provincial road in the municipality of Moalboal, Cebu, and to provide penalties for violation”. Municipal Ordinance No. 5, Series of 1986 of the SB of Panglao. An ordinance declaring fish sanctuaries in the municipal seawaters of Panglao, Panglao, Bohol.
- Municipal Ordinance No. 13, Series of 1993 of the SB of Panglao. An ordinance regulating the business of operation of resorts, firm entities and establishments that cater to tourists.
- Municipal Ordinance No. 3, Series of 1995 of the SB of Panglao. An ordinance imposing an additional one percent (1%) municipal tax on the amount paid by dive shops and other similar establishments by SCUBA diving customers.
- Municipal Ordinance No. 4, Series of 1995 of the SB of Panglao. An ordinance regulating garbage collection and disposal in the municipality of Panglao and imposing fees thereof.
- Municipal Ordinance No. 6, Series of 1995 of the SB of Panglao. An ordinance separating and regulating the fishing method using drive-in-net which is locally known as “sagiwsiw” from the municipal fishery ordinance No. 1, series of 1988.
- Municipal Ordinance No. 04, Series of 1999 of the SB of Panglao. An ordinance banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao, Bohol.

- Municipal Ordinance No. 3, Series of 1996 of the SB of Panglao. An ordinance creating the Bantay Panglao, defining its powers and functions, providing funds therefore and for other purposes.
- Municipal Ordinance No. 6, Series of 1998 of the SB of Panglao. An ordinance prohibiting all owners of any sea crafts to moor or anchor by tying across the shoreline within the developed beaches of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 8, Series of 1998 of the SB of Panglao. An ordinance declaring the whole island around Balicasag as Marine Park with the southwest portion as fish sanctuary.
- Municipal Ordinance No. 02, Series of 1999 of the SB of Panglao. An ordinance imposing mooring fee to all transient boats operating diving and cruising activities within the municipal seawaters of Panglao, Bohol.
- Municipal Ordinance No. 04, Series of 1999 of the SB of Panglao. An ordinance banning superlightboats and regulating the use of lightboats within the municipal seawater of Panglao, Bohol.
- Municipal Ordinance No. 05, Series of 1999 of the SB of Panglao. An ordinance regulating the operations of jet skis, speed boats and the like, within the municipal seawater of Panglao, Bohol.
- Municipal Ordinance No. 01, Series of 2000 of the SB of Panglao. Comprehensive solid waste management ordinance of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 6, Series of 2002 of the SB of Panglao. An ordinance creating the Municipal Fisheries and Aquatic Resource Management Council (MFARMC) of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 3, Series of 2003 of the SB of Panglao. An ordinance creating the barangay Fisheries and Aquatic Resource Council (BFARMC) of the municipality of Panglao, Bohol.
- Municipal Ordinance No. 5, Series of 2003 of the SB of Panglao. An ordinance delineating the boundaries of the municipal waters of the municipality of Panglao, Province of Bohol.
- Municipal Ordinance No. 11, Series of 2003 of the SB of Panglao. An ordinance amending Municipal Ordinance No. 5, Series of 2003, entitled, "An ordinance delineating the boundaries of the municipal waters of the municipality of Panglao, Province of Bohol" by addition.
- Ordinance No. 01, s. 1996 of the SB of Sibulan. Amending Sec. 2 and to insert Sec. 2A of Ordinance No. 8, s. 1992, "Adopting and ordaining the regulation of sagiwsiw fishing in the municipality of Sibulan.
- Ordinance No. 22, s. 1996 of the SB of Sibulan. Prohibiting the use of compressors and scuba tanks affecting fishing and fisheries within one kilometer from coastline of Sibulan and imposing penalties for violation thereof and for other purposes.
- Ordinance No. 07, s. 1993 of the SB of Sibulan. Prohibiting the reclamation of seawaters and the construction of structures on foreshores, shallow sea water areas, rivers and river banks within the municipality without the necessary permits from the appropriate government agencies.
- Ordinance No. 04, s. 1993 of the SB of Sibulan. Making available for reclamation the fresh and shallow seawater area fronting Barangay Agan-an, Maslog and a portion

- of Cangmating this municipality, under the build-operate transfer schemes pursuant to Section 10 of R.A. 6957.
- Ordinance No. 08, s. 1992 of the SB of Sibulan. Adopting and ordaining the regulation of sagiwsiw fishing in the municipality of Sibulan, Negros Oriental.
- Ordinance No. 05-A, s. 1989. An ordinance appropriating the amount of the thousand & 00/100 (P10,000.00) pesos to defray one-half (1/2) of the estimated coast of relocation survey of the foreshore lands from Sibulan airport (boundary) to Poblacion, Sibulan to be taken from the 20% development fund.
- Res. No. 74, 1988. ...to set aside in this area of the shoreline of Agan-an, this municipality, measuring 100 x 50 m up to a maximum of 100 x 100 meters as a fish sanctuary.
- Res. No. 74, 1988. ... to declare the foreshore or government lands in the coastal areas of this municipality tourism areas and for other purposes that this municipal government deemed it necessary.
- Res. No. 92, 1988. ...to declare a one hectare within the reserve area of municipality in the near shore of Lo-oc, Sibulan as a fish sanctuary.
- Res. No. 93-98A of the SB of Sibulan. That this municipal government will apply for leasehold on all foreshores within the territorial jurisdiction of this municipality, with the DENR.
- Ordinance No. 23, s. 1981 of the SB of Sibulan. An ordinance amending ordinance No. 31, s. 1980 which requires owners of parcels of seashore lands within territorial jurisdiction of the municipality to provide access to the sea and providing penalties in violation thereof.

ATTACHMENT A

Republic of the Philippines  
Province of \_\_\_\_\_  
**MUNICIPALITY OF \_\_\_\_\_**

**OFFICE OF THE SANGGUNIANG BAYAN**

Excerpts from the Minutes of the Regular Meeting of the Sangguniang Bayan of \_\_\_\_\_, Province of \_\_\_\_\_ held on (Month) (Year) at the SB Session Hall.

Present: \_\_\_\_\_ - Vice-Mayor and Presiding Officer  
\_\_\_\_\_ - Kagawad, Sangguniang Bayan  
\_\_\_\_\_ - Kagawad, Sangguniang Bayan

Absent:

**Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_**

**Whereas**, the Philippine Constitution protects and advances the rights of the people to a balanced and healthy ecology in accord with the rhythm and harmony of nature;

**Whereas**, the Local Government Code of 1991 has devolved the management of the municipal waters and its coastal and fisheries resources to the municipal government;

**Whereas**, the Philippine Fisheries Code of 1998 mandates all coastal municipalities to enact ordinances that will address the sustainable management, utilization, development and conservation of the municipal waters and its coastal and fishery resources;

**Whereas**, this Sangguniang Bayan is convinced of the need to enact a basic municipal fisheries ordinance;

**Wherefore**, on the motion of SB Kagawad \_\_\_\_\_ and duly seconded by SB Kagawads \_\_\_\_\_ and \_\_\_\_\_ it was resolved, as it is hereby resolved to enact the following ordinance:

**ORDINANCE NO. \_\_\_\_\_ SERIES OF 2000**

**A Comprehensive Municipal Ordinance Providing for the Sustainable Governance, Management, Development, and Conservation of the Municipal Waters and its Coastal Resources, Harmonizing and Integrating All Ordinances Pertinent Thereto, and For Other Purposes.**

Be it enacted by the Sangguniang Bayan of the Municipality of \_\_\_\_\_, Province of \_\_\_\_\_ in its regular session assembled, That:

**Section 1. Title**

This ordinance shall be known as the “**LOCAL MARINE AND COASTAL ECOGOVERNANCE ORDINANCE OF \_\_\_\_\_ (YEAR)**”

**Article XX  
Declaration of Policy and Definition**

**Section XX. Declaration of Policy**

It is hereby declared the policy of the municipality to:

1. Promote the conservation and ensure sustainable and equitable utilization of its coastal areas and resources in conformity with the Philippine Fisheries Code of 1998.
2. Ensure, for the benefit and enjoyment of the people of \_\_\_\_\_, Province of \_\_\_\_\_, the judicious and wise utilization, protection, conservation and management on a sustainable basis of its coastal and fishery resources with the necessity of maintaining a sound ecological balance and protecting and enhancing the quality of the environment.
3. Protect the rights of the small and marginal fishers in the preferential use of communal coastal and fishery resources.
4. Allow people's full and active participation in the conservation and management of the coastal and fishery resources and shall promote awareness of sustainable fisheries through appropriate education and training.
5. Provide full support for sustainable fisheries in the municipal waters through appropriate technology and research, adequate financial, production, and marketing assistance, and other services.
6. Allow the private sector to utilize fishery resources under the basic concept that the grantee, licensee or permittee thereof shall not only be a privileged beneficiary of the municipality, but also an active participant and partner of the municipal government in the management, development, conservation and protection of the fisheries and coastal resources of the municipality.
7. Promote and adhere to the precautionary principle of conservation, management and exploitation of living coastal and fishery resources in order to assure the sustainable development of the coastal environment. The absence of adequate scientific and technical information should not be used as a reason for postponing or failing to take conservation and management measures.
8. Implement guidelines and promote human-centered development and encourage the people of the municipality towards the creation of coastal cooperatives addressing both communal economic objectives and the conservation of natural resources. The cooperatives, via a system of incentives and disincentives, will endeavor to create ecologically-sound means of utilizing the coastal resources of the community, as well as seek or create more or other avenues for non-fishing employment and other types of shifter investments based on marketing opportunities.

**Section XX. Application of Its Provisions**

The provisions of this ordinance shall be enforced in

1. all the municipal waters, as defined in this ordinance;
2. all fisheries resources in the municipal waters;
3. all fisheries activities or businesses relating to the use, development, conservation and management of the municipal waters and its coastal and fisheries resources; and
4. all people, entities or corporations that use and/or intend to use the coastal and fishery resources of the municipality.

**Section XX. Definition of Terms**

As used in this ordinance, the following terms and phrases shall mean as follows:

1. **Aquaculture** - fishery operations involving all forms of raising and culturing fish and fishery species in freshwater water, brackish and marine water areas.
2. **Aquatic/Coastal Pollution** - the introduction of substances by human or machine, directly or indirectly, to the coastal environment which result or likely to result in such deleterious effects as to harm living and non-living fishery and coastal resources; pose potential and/or real hazard to human health; hindrance to coastal activities such as fishing and navigation, including dumping/disposal of waste and other marine litter; discharge of petroleum or residual products of petroleum, and other radioactive, noxious or harmful liquid, gaseous or solid substances, from any water, land or other human-made structures. Deforestation, unsound agricultural practices such as the use of banned chemicals and excessive use of chemicals, intensive use of artificial fish feed, and wetland conversion, which cause similar hazards and deleterious effects shall also constitute aquatic or coastal pollution.
3. **Closed Season** - the period during which the taking of specified fishery species by a specified fishing gear is prohibited in a specified area or areas in the municipal waters.
4. **Coastal Area/Zone** - is a band of dry land and adjacent ocean space (water and submerged land) in which terrestrial processes and uses directly affect oceanic processes and uses, and vice-versa; its geographic extent may include areas within a landmark limit of one (1) kilometer from the shoreline at high tide to include mangrove swamps, brackish water ponds, nipa swamps, estuarine rivers, sandy beaches and other areas within seaward limit of 200 meters isobath to include coral reefs, algal flats, seagrass beds and other soft bottom areas
5. **Commercial Fishing** - the taking of fishery species by passive or active gear for trade, business or profit beyond subsistence or sports fishing, to be further classified as:

*Small-scale commercial fishing* - fishing with passive or active gear utilizing fishing vessels of 3.1 gross tons (GT) up to 20 GT,

*Medium-scale commercial fishing* – fishing with passive or active gear utilizing fishing vessels of 20.1 gross tons (GT) 150 GT; and

*Large-scale commercial fishing* - fishing with passive or active gear utilizing fishing vessels of more than 150) GT.

6. **Coral** - marine animals, anthozoan and cnidarian coelenterates, consisting of polyps and the rigid skeletal structure they produce. The living animal with its skeleton and the skeleton alone are both referred to as coral. Included are members of the genus *Corallium*, characterized by a rigid axis of compact calcareous or horny spicules and represented by red, pink and white corals which are considered precious corals; the *Antipatharians*, characterized by a thorny, horny axis and represented by the black coral which are considered semi-precious corals, and ordinary corals which are neither precious nor semi-precious and usually characterized by calcareous skeleton.
7. **Coral Reef** - geological features built by natural calcification and other deposits from corals and calcareous algae.
8. **Department** - shall mean Department of Agriculture.
9. **FARMC** - shall mean Fisheries and Aquatic Resources Management Council.
10. **Fine-Meshed Nets** - all net-webbing whether made of natural fibers, synthetic or any other materials used in fishing, with a mesh size of less than three (3) centimeters measured.
11. **Fish Cage** - any method of culturing fin fish in a fish enclosure which is either stationary or floating made up of nettings or screen sewn or fastened together and installed in the water with opening at the surface and held in place by wooden posts or various anchors and floats.
12. **Fish Corral** - a stationary weir or trap devised to intercept and capture fish consisting of rows of bamboo stakes, plastic nets and other materials fenced with split bamboo mattings or wire mattings with one or more enclosures, usually with easy entrance but difficult exit, and with and without leaders to direct the fish to the catching chambers, purse or bags.
13. **Fisheries** - refers to all activities relating to the act or business of fishing, culturing, preserving, processing, marketing, developing, conserving and managing fishery resources.
14. **Fishery License** - a document that qualify a person/cooperative/partnership/corporation to engage in any fishery activities in the municipal waters.
15. **Fishers** - people directly, or personally, and physically engaged in taking and/or culturing and pressing fishery/coastal/marine resources.
16. **Fishers Organization** - an accredited organized group, association, federation, alliance or institution of fishers which has at least 15 members, a set of officers, a constitution and by-laws, and having an organizational structure and programs of action.
17. **Fishery and Marine Resources** - include not only fin fish but also mollusks, crustaceans, echinoderms, marine mammals, and all other products derived from aquatic resources in any form.
18. **Fishing** - the taking of fishery species from the wild state or habitat, with or without the use of fishing vessels.

19. **Fishing Gear** - any instrument or device and its accessories utilized in taking fish and other fishery species. It can be either of the following:

*Active Fishing Gear* - fishing gear characterized by active movement and/or pursuit of the target species by towing, lifting, and pushing the gears surrounding, covering, dredging, pumping and scaring the target species to impoundment or encirclements, such as but not limited, to trawl, purse seines, Danish seines, bagnets, pushnets, castnets, harvesting machines, beach seines, *pa-aling*, drift gill net, and tuna longline.

*Passive Fishing Gear* - is characterized by the absence of gear movement and/or the pursuit of the target species such as, but not limited to, hook and line, fishpots, traps and gill nets across the path of the fish

20. **Fishing Vessel** - any vessel, boat, ship or other watercraft equipped to be used for taking of fishery species or aiding or assisting one or more vessels at sea in the performance of any activity relating to fishing, including but not limited to the preservation, supply, storage, refrigeration, transportation and processing.
21. **Gratuitous Permit** – a permit issued to marginal and subsistence municipal fishers free of any charges.
22. **Mangroves** - a community of intertidal plant, including all species of trees, shrubs, vines, and herbs on coasts, swamps, or border of swamps.
23. **Monitoring** - for monitoring fisheries, this may include long-term observation of 1) fishing effort which can be expressed by the number of days or hours of fishing, number of fishing gears and number of fishers; 2) characteristics of fishery resources; and 3) resource yields or catch.
24. **Municipal Fishers** - persons who are engaged in municipal fishing and are/or fishing within the municipal waters.
25. **Municipal Fishing** - refers to fishing using fishing vessels of three (3) gross tons or less or fishing not requiring the use of fishing vessels within the fifteen (15) kilometers distance from the shoreline.
26. **Municipal Government** - refers to the municipal government of \_\_\_\_\_.
27. **Municipal Waters** - include not only streams, lakes, inland bodies of water and tidal waters within the municipality which are not the subject of private ownership and not included within the national parks, brackish water fishponds leased by the government, and national fishery reserves, refuge and sanctuaries but also marine waters included between two lines drawn perpendicular to the general coastline from points where the boundary lines of the municipality touch the sea at low tide and a third line parallel with the general coastline including off-shore islands and 15 kilometers from such coastline. Where two municipalities are so situated on opposite shores such that there is less than thirty (30) kilometers of marine waters between them, the third line shall be a line equidistant from the opposite shores of the respective municipalities.
28. **Non-Government Organization (NGO)** - refers to an agency, institution, a foundation or a group of persons whose purpose is to assist peoples' organizations/associations in various ways including, but not limited to, organizing, education, training, research and/or resource accessing.

- 29. **Overfished Area** - an area within the municipal waters which cannot sustain the fisheries. It can be due to any of the following types of overfishing: (i) too much harvesting in such a way that the mean size of Irish captured is suboptimal for providing effective yields from a fishery; (ii) intense fishing pressure by which the process of fishery restocking through reproduction and resettlement is impaired; (iii) shift in community structure from a fishery dominated by valuable species to one dominated by species of less economic value or utility; and (iv) when resource users faced with declining catches and lacking any other alternative, initiate wholesale resource destruction in their effort to maintain their incomes.
- 30. **People’s Organization** - a bonafide and duly accredited association of citizens with demonstrated capacity to promote the public interest and with identifiable leadership, membership and structure. Its members belong to a sector/s in the community who voluntarily band themselves together to work for their own upliftment, development and greater good.
- 31. **Permit** - a document issued to license holders before engaging in fishing using particular gear and/or boat or engage in any fisheries activities within the municipality.
- 32. **Persons** - natural or juridical entities such as individuals, associations, partnership, cooperatives or corporations.
- 33. **RA 8550** - Republic Act no. 8550, otherwise known as the Philippine Fisheries Code of 1998. It is the national law that governs the management and conservation of the fisheries resources of the country.
- 34. **Sanctuary** - a designated area within the municipal waters where fishing and other human activities are prohibited.

**Article XX.  
Municipal Waters**

**Section XX. Territorial Boundary**

Pursuant to the Local Government of Code of 1991, the Philippine Fisheries Code of 1998 and as defined in this ordinance, the municipal waters of this municipality shall be within the following geographic coordinates:

- From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 5 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 6 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 7 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 8 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 9 XX°X'XX"N latitude, XX°XX'XX"E longitude
- to Pt. 10 XX°X'XX"N latitude, XX°XX'XX"E longitude

**Section XX. Jurisdiction of the Municipal Government**

The municipal government shall have jurisdiction over the municipal waters. The municipal government shall be responsible for the management, conservation, development, protection, utilization and disposition of all coastal and fishery resources within the municipal waters. The municipal government, in consultation with the FARMC, shall enact corresponding ordinances and issue executive orders thereon: *Provided*, That all ordinances enacted and executive orders issued by the municipal government shall conform with the existing national and local laws and policies and shall not endanger the sustainability of the coastal and fishery resources or destroy the ecological balance: *Provided, however*, That the municipal government, in coordination with the FARIVIC and other concerned agencies and institutions, shall also enforce all fishery and environmental laws, rules and regulations as well as coastal and fishery resources-related ordinances enacted by the Sangguniang Bayan.

**Section XX. Zonation of the Municipal Waters**

The municipal waters shall be designated into the following zones: *(See attached zoning map)*

- Zone 1 or \_\_\_\_\_ Zone
- Zone 2 or \_\_\_\_\_ Zone
- Zone 3 or \_\_\_\_\_ Zone
- Zone 4 or \_\_\_\_\_ Zone
- Zone 5 or \_\_\_\_\_ Zone
- Zone 6 or \_\_\_\_\_ Zone
- Zone 7 or \_\_\_\_\_ Zone
- Zone 8 or \_\_\_\_\_ Zone

**Section XX. Use of the Municipal Waters**

The municipal waters shall be reserved for municipal fisheries: *Provided*, That other activities, such as but not limited to, research and monitoring activities may be allowed under appropriate regulations, for purely research, scientific, technological and educational purposes.

**Section XX. Users of the Municipal Waters**

All fisheries and coastal related activities in the municipal waters, subject to existing laws and regulations, shall be utilized by the registered municipal fishers and their organizations and cooperatives duly accredited by the Sangguniang Bayan: *Provided*, That no commercial fishing vessel is allowed to operate within the municipal waters.

**Section XX. Municipal Fishers from Adjacent Municipalities**

Municipal fishers from other municipalities may be allowed to use the municipal waters: *Provided*, That they should be a registered municipal fishers in their respective municipalities and shall secure the necessary fishery license from the Municipal Government: *Provided, However*, That they shall pay double of the amount of the prescribed fees for the use of the municipal waters and its coastal resources: *Provided, Further*, That the number of municipal fishers from the adjacent municipalities shall not be more than ten (10) percent of the total number of registered resident municipal fishers from the municipality of \_\_\_\_\_: *Provided, Furthermore*, That the license issued to the municipal fishers from adjacent municipalities shall be legal and binding for only one (1) year and may be renewed subject to existing rules and

regulations: *Provided, Finally*, That the municipal fishers from the adjacent municipalities shall abide with all ordinances and executive orders pertaining to the use and management of the municipal waters and it's coastal resources.

#### **Section XX. Registry of Municipal Fishers**

The Municipal Government, shall maintain a registry of municipal fishers for the purpose of determining priorities among them, of regulating and limiting entry into the municipal waters, and of monitoring fishing activities and/or other related purposes: *Provided*, That such list or registry shall be updated annually or as often as may be necessary, and shall be posted in barangay halls or other strategic locations where it shall be open to the public, for the purpose of validating the correctness and completeness of the list: *Provided, however*, The municipal government, in consultation with the FARMC, shall formulate the necessary mechanisms for inclusion or exclusion procedures that shall be most beneficial to the resident municipal fishers. The FARMC may likewise recommend such mechanisms: *Provided, further*, That the Municipal Government shall also maintain a registry of municipal fishing vessels, type of gears and other boat and fishing particulars.

### **Article XX Utilization and Exploitation of Fishery Resources**

#### **Section XX. Preferential Treatment to Municipal Fishers and Their Organization in the Grant of Exclusive Fishery Privileges**

The duly registered and accredited organizations; cooperatives of municipal fishers; peoples' organizations which have municipal fishers comprising the majority of members shall have preference in the grant of exclusive fishery privilege by the Sangguniang Bayan, pursuant to Section 149 of the Local Government Code of 1991: *Provided*, That the Sangguniang Bayan shall be guided by the following procedures:

- a. The Sangguniang Bayan shall post in the municipal hall and in at least two (2) other strategic places a notice to fishers organizations or cooperatives to apply for the exclusive fishery privileges. The notice shall also be posted in at least two (2) conspicuous places in every fishing barangay and announced once a week for four (4) consecutive weeks. The same notice shall indicate the amount of the exclusive fishery privilege.
- b. Interested parties shall have a period of 45 days from the posting of the notice to signify their intention to the Sangguniang Bayan to avail of the exclusive fishery privilege.
- c. Should two (2) or more groups signify their intent to avail of the exclusive the fishery privilege, the Sangguniang Bayan shall accommodate them, if possible. If this should not be possible, the Sangguniang Bayan, in consultation with the FARMC, shall draw up guidelines to resolve the matter.
- d. Only when no organization has signified their intent to avail of the privilege or the failure of the grant of the exclusive fishery privilege to the organization shall other parties be invited to participate in a public bidding. *Provided, however*, That interested bidders should have fishery license issued by the municipal government.
- e. The Sangguniang Bayan through a resolution shall award the exclusive fishery privilege.

- f. The organizations or cooperatives or the winner in the public bidding shall pay the amount of the exclusive fishery privilege to the municipal government, through the Office of the Municipal Treasurer.

**Section XX. Limitation on the Grant of Exclusive Fishery Privilege**

The following limitations shall be strictly followed:

- 1. The exclusive fishery privilege shall be binding and legal for \_\_\_\_ year(s).
- 2. The exclusive fishery privilege shall not be sub-contracted or sub-leased, in whole or in part.
- 3. The member fisherfolk organizations or cooperatives whose households are already in possession of any Exclusive Fishery Privilege, other than for fish capture, cannot enjoy the Exclusive Fishery Privilege granted to the organization or cooperative.

**Section XX Grounds for the Cancellation of the Exclusive Fishery Privilege**

The following are the grounds for the cancellation of the exclusive fishery privilege:

- 1. Construction and operation of fish corral and/or gathering of bangus fry outside of the designated area in the municipal waters;
- 2. Violation of any fisheries and environment-related ordinances;
- 3. Use of dummies;
- 4. Failure to comply with national laws, rules and regulations; and
- 5. When public welfare so requires as deemed by the municipal government, in consultation with the FARMC

*Provided,* That a voluntary written request to forego the exclusive fishery privilege by the holder is a sufficient ground for the cancellation of the privilege.

**Article XX**

**Management, Development, and Conservation of Coastal and Fisheries Resources**

**Section XX. Designation of Closed Season in the Catching and Gathering of Siganid, locally known as Danggit**

The municipal government shall designate closed season in the catching and gathering of siganid species locally known as Danggit during the period \_\_\_\_\_.

**Section XX. Limited Entry Into Overfished Areas**

Whenever in a particular area in the municipal waters is being overfished or in danger of being overfished, based on available data or information, the Sangguniang Bayan, in consultation with the FARMC, shall enact an ordinance prohibiting or limiting fisheries activities in the said waters.

**Section XX. Management of Marine Sanctuary**

The Municipal Government, in coordination with the Barangays, FARMC and concerned organization shall manage the marine sanctuaries within the following geographic coordinates:

<b>Fish Sanctuary</b>			
From	Pt. 1	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 2	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 3	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 4	XX°X'XX"N latitude,	XX°XX'XX"E longitude

<b>Fish Sanctuary</b>			
From	Pt. 1	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 2	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 3	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 4	XX°X'XX"N latitude,	XX°XX'XX"E longitude

<b>Fish Sanctuary</b>			
From	Pt. 1	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 2	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 3	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 4	XX°X'XX"N latitude,	XX°XX'XX"E longitude

<b>Fish Sanctuary</b>			
From	Pt. 1	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 2	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 3	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 4	XX°X'XX"N latitude,	XX°XX'XX"E longitude

<b>Fish Sanctuary</b>			
From	Pt. 1	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 2	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 3	XX°X'XX"N latitude,	XX°XX'XX"E longitude
to	Pt. 4	XX°X'XX"N latitude,	XX°XX'XX"E longitude

*Provided*, That fishing and other human activities are prohibited in the marine sanctuary: *Provided, however*, That scientific and educational activities shall be allowed inside the marine sanctuary for monitoring and other related purposes, only if written permission was obtained from the municipal government: *Provided, further*, That the municipal government, in consultation with the FARMC and other concerned organizations, shall formulate management plans in the operation of the marine sanctuaries.

**Section XX. Mangrove Protection and Conservation**

The municipal government, in coordination with the Department of Environment and Natural Resources, the FARMCs and other concerned organization, shall initiate proper management of mangrove areas: *Provided*, That the municipal government, in coordination with the Department of Environment and Natural Resources shall develop programs that promote and ensure community participation in the rehabilitation and management of existing mangrove areas.

**Section XX. Regulation on Construction and Operation of Fish Corrals**

The municipal government, in consultation with the FARMC, shall regulate the construction and operation of fish corrals in the municipal waters: *Provided*, That no fish corral shall be established and operated outside of the designated areas for the establishment and operation of fish corral: *Provided, however*, That no fish corral shall constructed within two hundred (200) meters of another fish corral: *Provided, Further*, That the tail of the fish corral shall not be more than 100 meters: *Provided, Furthermore*, That the mesh size of the net of the fish corral shall not be less than 3 centimeters and shall be entirely lifted during the designated dosed season of gathering of danggit to enable a considerable number of spawner/breeder to reach their spawning grounds: *Provided, Finally*, That ownership of fish corral is limited to only one per permittee.

**Section XX. Protection of Other Marine Habitats**

The municipal government, in coordination with the FARMC and other concerned organizations, shall ensure the protection and conservation of other marine habitats in the municipal waters: *Provided*, That the municipal government, in consultation with the FARMC, shall, regulate the use of fishing gears and other human activities that may adversely affect the marine habitat.

**Section XX. Coastal and Aquatic Pollution**

All activities in the grounds or waters, directly or indirectly, which result or likely to result in such deleterious effect which harm living and non-living aquatic resources, hazards to human health, hindrance to coastal or fishery activities such as fishing and navigation, including dumping/disposal of waste and other marine litter shall be prohibited: *Provided*, That it shall be the responsibility of the polluter to contain, remove and clear-up pollutants at his/her own expense: *Provided, however*, That in case of failure to do so, the municipal government in coordination with other concerned agencies and institutions, shall undertake containment, removal and clean-up operations and the expenses incurred in said operation shall be charged against the person and/or entities responsible for such pollution.

**Section XX. Maintenance of Water Quality and Cleanliness**

The municipal government shall monitor the quality of the water at the optimal level relative to natural productivity and the cleanliness of the areas devoted for aquaculture development.

The operators and owners of aquaculture facilities shall develop a mechanism of proper waste disposal. Violation of this section may be a ground for the cancellation of the permit to operate aquaculture activities.

**Section XX. Use of Payao**

The municipal government shall regulate the use of existing payao and other fish aggregating devices in the municipal waters: *Provided*, That no more payao or any other fish aggregating devices shall be deployed in the municipal waters: *Provided, however*, That only registered municipal fishers shall utilize the existing payao in the municipal waters.

**Section XX. Navigational Route**

The municipal government, in consultation the FARMC, shall designate the navigational routes of ferries and other fishing crafts and shall disallow any activity that shall obstruct the designated navigational route: *Provided*, That nothing in the foregoing section shall be construed as permitting the leasee, licensee or permittee to undertake any construction which may obstruct free navigation and impede water circulation such as the flow of tide to and from the area.

**Article XX  
Mariculture Development**

**Section XX. Promotion of Mariculture**

The municipality shall consider coastal aquaculture as a means to promote diversification of income and preservation and conservation of coastal and fisheries resources: *Provided*, That the municipality shall ensure that resources are used responsibly and adverse impacts on the environment and on local communities are minimized: *Provided, however*, That coastal aquaculture development shall consider the genetic diversity and ecosystem integrity of the municipal waters: *Provided, further*, That the municipal government shall ensure that the livelihood of the people and their access to fishing grounds are not adversely affected: *Provided, furthermore*, That the municipal government shall establish effective procedures to undertake appropriate environmental assessment, monitoring and mitigation with the aim of minimizing adverse ecological changes and related economic and social consequences resulting from water extraction, discharge of effluents, use of chemicals, and other aquaculture activities.

**Section XX. Designated Areas for Fish cages**

The municipal government shall designate the following as areas for the establishment and operation of fish cages in the municipal waters:

The municipal waters within the coordinates of  
From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude

The municipal waters within the coordinates of  
From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude

The municipal waters within the coordinates of  
From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude

The municipal waters within the coordinates of  
From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude  
to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude

The municipal waters within the coordinates of

From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude

The municipal waters within the coordinates of

From Pt. 1 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 2 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 3 XX°X'XX"N latitude, XX°XX'XX"E longitude

to Pt. 4 XX°X'XX"N latitude, XX°XX'XX"E longitude

*Provided, However,* That no fish cage shall be constructed and operated outside of the designated area, except for scientific and education purposes.

**Section XX. Size and Distance Between Fish Cages**

The maximum size of fish cages shall be thirty-six (36) square meters per module. Fish cages can be clustered, but the distance between clusters should not be more that twenty (20) meters: *Provided,* That each cluster should not be more than eight (8) modules.

**Section XX. Distance From the Shoreline**

No fishcage shall be constructed within fifty (50) meters from the lowest tide mark: *Provided, however,* That no fishcage shall also be constructed in designated navigational route: *Provided, further,* That no fishcage shall also be constructed in front of any wharf.

**Section XX. Stocking Density**

An ecologically and economically optimum stocking density for fishcage operation should be observed.

**Section XX. Limitation of the Granting of License to Construct and Operate Fishcage**

The following limitations shall be strictly followed:

1. Ownership is limited to at most two (2) fishcage modules per licensee;
2. License to construct and operate a fishcage shall be binding and legal for 3 years and may be renewed for another three (3) years at the discretion of the municipal government;
3. The fishcage shall not be subleased, in whole or in part. Joint venture operation, partnership and/or management contract on a profit-sharing basis may be allowed only with prior consent from the municipal government;
4. The use of dummies shall be sufficient cause for the disqualification of an applicant from obtaining such permit.

**Section XX. Grounds for the Rejection of Applications for License to Construct and Operate Fish Cage**

The following are the grounds for rejection of an application for a permit to construct and operate fishcage:

1. Fraudulent, false and misleading statements in the application;
2. Failure to pay the prescribed fees and to fulfill other requirements; and
3. When public welfare so requires.

**Section XX. Grounds for Cancellation of License to Construct and Operate Fish Cage**

The following are the grounds for the cancellation of a permit to construct and operate fishcage:

1. Fraudulent, false and misleading statements in the application;
2. Failure to comply with the provisions of existing national laws and local ordinances;
3. Construction and operation of fish cage outside of the designated area;
4. Abandonment and non-operation of the area for 6 months and/or lack of interest of the permittee to continue;
5. Failure to pay the necessary fees and other surcharges relative thereto;
6. Non-construction of fishcage within 6 month from the date of issuance of the permit to construct and operate; and
7. When public welfare so requires as deemed by the municipal government.

A voluntary written request of the licensee is sufficient for the cancellation of a permit.

**Section XX. Registration of Fish Hatcheries and Private Fishponds**

All fish hatcheries, fish breeding facilities and private fish ponds must be registered with the municipal government which shall prescribe minimum standards for such facilities in consultation with the Department of Agriculture.

**Article XXX  
Fishery License**

**Section XX. Fishery License**

All individuals, cooperatives, partnerships, firms or corporations who are listed in the Registry of Municipal Fishers shall be issued Fishery License, upon payment of the prescribed fee: *Provided, however,* That the Fishery License is non-transferable: *Provided, further,* That the holders agree unconditionally to comply with all the laws, orders, policies, and rules and regulations governing fishing. The licensee shall also assume responsibility for any and all of his acts with his fishing operation.

**Section XX. Renewal of Fishery License**

The Fishery License shall be renewed annually. The holder shall have sixty (60) days prior to the expiration of the license to renew.

**Section XX. Licensing Procedures**

Applicants for Fishery License shall submit the following documents to the Municipal Agriculturist's Office Environment and Natural Resources Officer:

1. Duly Accomplished Application Form
2. Community Residence Certificate (for individual) or Certificate of Registration or Certificate of Accreditation (for organizations, cooperatives, partnership, firms of corporations)
3. Barangay Clearance
4. Certification as a Registered Municipal Fishers
5. Other pertinent documents

The Municipal Agriculturist's Office, in consultation with the FARMC shall recommend the issuance of the Fishery License to the Municipal Mayor upon payment of the necessary fee.

**Section XX. Schedule of License Fee**

License to exploit, occupy, produce, culture, capture, or gather fish of any species and other fisheries products in the municipal waters shall be granted by the Municipal Mayor upon payment of corresponding fees at the rate not exceeding those fixed hereunder: *Provided, however,* That registered fishers from other municipalities who will be permitted to use the municipal waters of this municipality shall pay double of the rate fixed hereunder:

For Individuals	-	P _____
For Fishers' Organization or Cooperatives	-	P _____
For Partnerships and Corporations	-	P _____
For using motorized boat		
a. below 1 gross ton	-	P _____
b. from 1.1. to 2 gross ton	-	P _____
c. from 2.1 to 3 gross ton	-	P _____
For the using and/or engaging in the following		
Pasol	-	P 25.00
Panglambay	-	P 200.00
Bungsod	-	P _____
Pangal	-	P 100.00 per 30 units
Timing	-	P 50.00 per 30 units
Pukot Palunod	-	P 150.00
Yab-yab	-	P 225.00
Bahan-bahan Pasol	-	P 200.00 per set
Newlook	-	P 600.00
Subid Pangnukos	-	P 25.00
Kitang	-	P 50.00
Pamana(manu-manu)	-	P 50.00
Panginhas	-	P 25.00
Seaweed Farming	-	P _____
Pukot Pagkuha sa Semily	-	P 100.00
Pamukot sa Aquarium Fish	-	P 100.00
Panguha sa Tuyom	-	P 25.00
Panguha sa Bat	-	P 25.00
Panguha sa Seahorse	-	P 25.00

Gulo-gulo (pang-alimango)	-	P _____
Bantat	-	P 25.00
Panulo sa Pagkuha sa Sapayan	-	P 50.00
Bubo-Pangisda	-	P 50.00
Lawag	-	P 2,000.00
Pamo	-	P 150.00
Pamawo	-	P 300.00
Newlook with light during night time	-	P _____
Pukot Lamba-lamba	-	P 100.00
Sudsod	-	P _____
For Construction and Operation of Fish Corrals		
a. below 3 meters	-	P 300.00
b. from 3 meters to 5 meters	-	P 600.00
c. from 5 meters and above	-	P 1, 000.00
For Construction and Operation of Seaweed Culture Farm	-	P _____ per square meter
For Construction and Operation of Oyster and Other Culture Beds	-	P _____ per square meter
For Construction and Operation of Fish Cage	-	P _____ per square meter

**Section XX. Coding of Motor Boats**

The municipality government shall designate \_\_\_\_\_ as color code for all motor boats that will be operated in the municipality: *Provided*, That the following letters shall be designated as letter code for each of the barangay:

- |           |            |
|-----------|------------|
| A - _____ | R - _____  |
| B - _____ | S - _____  |
| C - _____ | T - _____  |
| D - _____ | U - _____  |
| E - _____ | V - _____  |
| F - _____ | W - _____  |
| G - _____ | X - _____  |
| H - _____ | Y - _____  |
| I - _____ | Z - _____  |
| J - _____ | AZ - _____ |
| K - _____ | BY - _____ |
| L - _____ | CX - _____ |
| M - _____ | DW - _____ |
| N - _____ | EV - _____ |
| O - _____ | FU - _____ |
| P - _____ | GT - _____ |
| Q - _____ | HS - _____ |

**Section XX. Permit to Anchor and/or Engage in Business in the Municipality**

All sea crafts of more than three (3) registered gross tons that will anchor in the municipal waters and/or engage in any business in the municipality shall pay the following fee to the municipal government:

For sea craft of 3-10 GT	-	P _____
For sea craft of more than 10 GT	-	P _____

**Section XX. Gratuitous Permit**

The Municipal Government may issue gratuitous permits to municipal fishers to exploit, occupy, produce, culture, capture, or gather fish of any species and other fisheries products in the municipal waters: *Provided*, That government agency or institution of learning may also be given gratuitous permit to engage in any fishery activities in the municipal waters for scientific or educational purposes, subject to the terms and conditions as may be imposed.

**Section XX. Report of Transfer of Ownership of Boats, and Fishing Gears**

The owner/operator of registered boats and fishing gears shall notify the Municipal Government of the transfer of ownership of the boats and fishing gears within fifteen 15 days after its transfer.

**Section XX. Bond for Aquaculture Operation**

Those who wish to construct and operate any aquaculture facilities for commercial purposes shall deposit the following bond to the municipal government. The bond shall be thirty (30) percent of the amount of fees for the construction and operation of the aquaculture facility.

**Section XX. Duties of Licensee, Permit, and Exclusive Fishery Privileges Holders**

All licensees, permits, and exclusive 'fishery privilege holders shall', be governed by existing laws, orders, rules and regulations governing coastal and fisheries resources and shall:

1. Take precaution as may be necessary to prevent destruction to the coastal and fishery resources and habitat and the municipal waters, and to ensure environmental protection at all times;
2. Assume responsibility for the use of fishing boat and any or all acts of his/her agents. Employees or laborers, including those of contractors connected with his/her fishing operations, or in the establishment, management, or operation of the contract or during the fishing expedition, such as transport and or possession of dynamite, cyanide and other poisonous or noxious substances, as well as any fish caught through unlawful means;
3. Keep and submit all records and report-, of transaction in connection with the license, permit or lease in such format as required by the terms and conditions of the license and as may be required by law;
4. Allow or render assistance to any law enforcer for purpose of inspection, searching and examining any person, document, records and places of operations including storage areas, auxiliary boats or goods aboard the boat;
5. Vacate the area covered by the fishery privilege, upon expiration or as directed by authorized municipal officials, unless renewed or cancelled;

6. Clear, remove, destroy or demolish any debris, material, structure or gear, or the vacated area placed or constructed on the site of the fishery privilege upon expiration or cancellation of the privilege.
7. Abide all other related rules and regulations that will be legislated after the enactment of this ordinance.

**Section XX. Funds for Coastal Local Governance**

The municipal government shall allocate all revenues derived from the utilization and exploitation of the municipal waters to coastal local governance activities such as, but not limited, to law enforcement, livelihood program for fishers, research, training and education.

**Section XX. Share of Barangays on Revenues of the Municipal Government**

The municipal government shall appropriate ten (10) percent of all fees derived from the utilization and exploitation of the municipal waters to the barangays wherein such fees were collected: *Provided, however,* That the Municipal Government, within 60 days from the enactment of this code, shall formulate implementing rules and regulations of this section: *Provided, however,* That such share shall be remitted to the Barangays before the end of each quarter.

**Article XX**  
**Post-harvest Facilities, Activities, and Trades**

**Section XX. Establishment of Post-Harvest Facilities**

The municipal government shall coordinate with the private sector and other concerned agencies and FARMC in the establishment of post-harvest facilities such as, but not limited to, municipal fish landing sites, fish ports, ice plants and cold storage and other fish processing establishment to serve primarily the needs of the municipal fishers.

**Section XX. Municipal Fish Port Construction and Development**

Municipal fish port development should be sited and designed in a manner that will minimize changes to existing water and sediment quality parameters such as salinity and temperature, dissolved oxygen, nitrogen and sediment concentration; organic constituents; and transparency of waters: *Provided,* That municipal fish ports and harbors should be placed in areas with the highest available flushing rate, and access channels should be designed to minimize adverse water circulation changes and creation of stagnant water column: *Provided, however,* That municipal fish ports and harbors should incorporate facilities which allow for effective waste disposal and erosion control.

**Section XX. Exportation and Importation of Fish and Fishery Products**

Export of fish and fishery products shall be regulated whenever such exportation affects the food security and production: *Provided,* That exportation of live fish shall be prohibited except those which are hatched or propagated in accredited hatcheries and ponds: *Provided, however,* That to protect and maintain the local biodiversity or ensure the sufficiency of, supply, spawners, breeders, eggs and fry of bangus, prawn and other endemic species, as may be determined by the Department, shall not be exported or caused to be exported by any person: *Provided, further,*

That no person shall import fish and fish products of whatever size, stage or form, for any purpose without securing the necessary permit.

**Section XX. Auxiliary Invoice**

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.

**Section XX. Support to Municipal Fishers**

The municipal government, in coordination with other agencies and institutions concerned, shall provide support to municipal fishers and their organizations through appropriate technology and research, credit, production and marketing assistance and other services such as, but not limited to, training for additional or supplementary livelihood.

**Article XX**

**Creation of Coastal Local Governance Section under the Municipal Agricultural Office**

**Section XX. Creation of Coastal Local Governance Section under the Municipal Agricultural Office**

There is hereby created a Coastal Local Governance (CLG) Section under the Municipal Agricultural Office, solely for the purpose of the implementation of guidelines and measures for coastal resource regulations of the municipality. The CLG Section shall be headed by the Municipal Agricultural Officer to be assisted by the CLG Officer.

**Section XX. Functions, Duties and Powers of the Coastal Local Governance Section**

The CLG Section shall have the following functions, duties and responsibilities:

1. Formulate measures for the approval of the municipal mayor and the Sangguniang Bayan, as the case may be, to ensure the delivery of basic services and adequate facilities relative to environment and natural resources, particularly on coastal local governance, resources management, and fisheries services.
2. Develop implementing plans and strategies, upon the approval thereof by the municipal mayor and the Sangguniang Bayan, for coastal local governance, resources management, and fisheries programs and projects.
3. Ensure maximum assistance in the sustainable management and use of the environment and natural resources, particularly coastal and fisheries resources.
4. Enforce rules and regulations relating to environment and natural resources, particularly coastal resources and fisheries.

5. Coordinate with government agencies and non-governmental organizations which promote sound local governance and sustainable management of the environment and natural resources, particularly coastal and fisheries resources.
6. Recommend to the Sangguniang Bayan and advise the municipal mayor, as the case may be, on all other matters related to the environment and natural resources, particularly coastal and fisheries resources, which will improve the livelihood and living conditions of the inhabitants.
7. Exercise such other powers and performs such other duties and functions as may be prescribed by law or ordinance.

**Section XX. Qualifications of the CLG Officer**

No person shall be appointed as CLG Officer unless he/she is a citizen of the Philippines, a resident of the municipality, of good moral character, a holder of a college degree preferably in environment, fishery, forestry, agriculture, public administration or management, local governance, or any related course from a recognized college or university, and a first grade civil service eligible or its equivalent. He/She must have acquired experience in local governance, public administration or management, or coastal resource management of at least two years (2) years. The CLG Officer shall receive a salary equivalent to Salary Grade \_\_\_\_\_.

**Article XX  
Coastal Cooperatives**

**Section XX. Creation of Coastal Cooperatives**

The municipal government shall promote and encourage coastal communities, especially among municipal fishers, to create a cooperative model of coastal resource development designed to conserve and enhance natural resources, and to engender means of livelihood for members outside of fishing employment.

Pursuant to the directives under Section 108 of the Fisheries Code, the cooperative approach can be adopted in an institutionalized manner, guided by the establishment of "fisherfolk settlement areas," which are seen to be in the context of integrated, holistic, and self-reliant communities to include alternative sources of income.

**Section XX. Operation and Membership**

The coastal cooperatives operate under a community-and-culture-based management system, and entry to fishery in the municipality is primarily limited to members of local cooperatives, thus maintaining a stable number of participants which can be monitored by the CLG Officer.

The cooperatives act as single and exclusive grantee of the fishery rights over a designated area. The community cooperative acts to maintain the fishery in a state that provides optimum benefits to the coastal cooperative members or "shareholders." Cooperative shareholders may include fisherfolk, conservationists, processors, concerned citizens, or anyone else able to meet the criteria of cooperative membership. Depending upon the number of shares they hold, shareholders shall have proportional representation in decision-making processes, in voting, and in sharing the pure profit of the fishery.

Knowledge for decision-making remains local, respecting local conditions, customs, and values.

### **Section XX. Program for the Coastal Cooperatives**

These coastal cooperatives will implement a two-pronged program, the first leg of which is the development of ecologically sound means of exploiting coastal resources aided with proper training and knowledge input on marine resource biology, as provided for by the municipal coastal resource management.

The second leg of the program is the creation of more avenues for non-fishing employment based on marketing opportunities. New opportunities for earning a living must be devised by analyzing members' resources. A range of activities must be designed to enhance total income from such shifter investments and minimize risks.

Inputs on education and training, social organization, and producer-oriented marketing are necessary to ensure the success of the second leg of the program. Precise action plans must be developed by the cooperative members in association with professionals or experts.

### **Section XX. Incentives**

As a means to direct the management of coastal resources towards desired goals by the cooperative, the municipal CLG section may devise and implement a performance-driven incentive system. This approach will entail the setting-up of performance criteria and targets the accomplishments of which would ensure the sustainable use of coastal resources. A system of rewards can be put in place for those coastal localities that are able to meet the performance standards set. Rewards and incentives can be in the form of additional funds for environmentally-friendly livelihood projects, technical assistance, scholarship programs for dependents/children of fisherfolk, and others.

### **Section XX. Community Development Quotas**

To ensure sustainability of resources, coastal cooperatives are encouraged to implement the coastal resource management system known as the Community Development Quotas (CDQ) system, a variant of the Individual Transferable Quota (ITQ) system. Depending on expert and official annual assessment of fish stock levels, the maximum Total Allowable Catches (TAC) for controlled marine species is determined to deliver Maximum Sustainable Yield (MSY), as provided for by the Fisheries Code.

The TAC is divided among fishers/members of each municipal cooperative, with the shares being allocated on the basis of individual catches in recent years. Each fisher can fish up to the amount of the quota it holds, but the quotas can be sold or otherwise traded.

Community development quotas may be assigned to communities to be transferred freely within the cooperative but not to be traded outside of the community.

### **Section XX. Funding and Land Trusts**

The municipality must encourage coastal cooperatives to incorporate themselves into "conservation foundations," and encourage access to non-traditional sources of funds to support their activities, from such means as fundraising events, to be designed by members of the cooperatives themselves.

The municipality, through its CLG section, may provide training for members of the coastal cooperatives to equip them in the tasks involved in such operations.

The municipality may also encourage local cooperatives to organize themselves as “conservation foundations” which are eligible to receive tax-deductible contributions and donations from individuals and corporate entities.

Aside from raising funds for conservation programs for the local cooperatives, coastal communities may operate as “land trusts.” As such, they may own land by purchasing property adjacent to the coastal zone so that it is able to provide a buffer zone against real and potential over-exploitation of coastal resources and illegal practices in their extraction and utilization. For uninhabited coastal areas considered as part of the public domain, conservation foundations may lease them from the government with the main purpose of ecological conservation.

## Article XX Foreshore Management and Protection

**Section XX.** The Municipal Government, subject to the control and supervision of the Department of Environment and Natural Resources (DENR)<sup>1</sup>, shall adopt sufficient and effective measures to protect and manage the foreshore areas within its territory, including the resources found therein.<sup>2</sup> In this regard, the local government shall endeavor to enter into administrative arrangements<sup>3</sup> to have effective and efficient enforcement of environmental laws and regulations within the affected foreshore area. The local government shall exercise regulatory powers over these foreshore areas especially regarding local taxation, sanitation, pollution abatement and prevention, peace and order, law enforcement, community involvement, and ecosystems management.

**Section XX.** Pursuant to the general welfare clause<sup>4</sup> of the Local Government Code of 1991, as well as the mandate of local governments to provide basic services<sup>5</sup>, the Municipal Government, in coordination with the Department of Environment and Natural Resources (DENR)<sup>6</sup>, shall zonify all foreshore areas within its territory for the purpose of enhancing a balanced ecology, as well as

---

### LEGAL BASES:

<sup>1</sup> See DENR DAO 30-1992, Section 1 (1.1): *“The DENR shall remain as the primary government agency responsible for the conservation, management, protection, development and proper use of the country’s environment and natural resources and the promotion of sustainable development.”*

<sup>2</sup> See DENR DAO 30-1992, Section 4: *“Role of the LGUs --- In coordination with the DENR and subject to the provisions of this Order, the LGUs shall adopt adequate measures to protect the environment and conserve land, mineral, marine, forest and other resources within their territorial jurisdiction.”*

<sup>3</sup> See DENR DAO 30-1992, Section 1 (1.3): *“...Provided, that when necessary the concerned provinces, cities and municipalities shall enter into administrative arrangements to effectively and efficiently enforce the law, rules and regulations pertaining to the devolved functions;”*

<sup>4</sup> Section 16, RA 7160: *“...Within their respective territorial jurisdictions, local government units shall ensure and support...enhance the right of the people to a balanced ecology...”*

<sup>5</sup> Section 17 (a) (2) (ii), RA 7160: *“Pursuant to national policies and subject to supervision, control and review of the DENR...; establishment of tree parks, green belts and similar forest development projects.”*

<sup>6</sup> See also DENR DAO 30-1992, Section 4.3: *When ever necessary, call any DENR official assigned to them to make recommendation or advice on environmental and natural resources-related matters affecting them; Provided, That said DENR official shall not leave his station without giving prior written notice to the local executive concerned.”*

promote community well-being. Such zones may include tree parks<sup>7</sup>, public beaches and picnic spots, access lanes, parking areas for marginal fishing boats, docking areas for fishing boats, fisherfolk settlement areas, eco-tourism belts, environment-friendly promenades, coastal reforestation areas, biodiversity regions, species sanctuaries, viewing stands, among others. In this regard, the Municipal Government shall regulate all human activities in the affected foreshore areas; but in no case shall the Municipal Government lease, mortgage or alienate such foreshore, except as may be authorized or allowed by law, executive order, or by DENR administrative order.

All fees collected from the regulation of the foreshore areas shall be deposited in a restricted fund to be drawn solely for coastal and environmental protection and conservation purposes.

**Section XX.** Unless otherwise, permitted or tolerated, the following activities are prohibited within the foreshore areas of the local government that have been identified for environmental protection and conservation: squatting<sup>8</sup>; excavation of beach sand; quarrying, construction of permanent structures; fencing or 'rip-rapping'; treasure hunting; dumping of garbage, release of sewage, hunting or collecting of wildlife, animal foraging, and other activities that pose serious threats to the bio-physical condition of the foreshore areas in due time.

**Section XX.** The local government shall organize all inhabitants in the foreshore areas, and enjoin them to be partners and collaborators in the maintenance of clean and vibrant foreshore areas, in collaboration with the local government, as well as with other non-government organizations. As such they shall be encouraged to be organized as coastal cooperatives as provided for in Article \_\_\_ above.

**Section XX.** The Municipal Government shall, in coordination with the Department of Agriculture and other concerned agencies and instrumentalities of the Government, seek for the designation a portion of foreshore area in its territory as Fisherfolk Settlement Area (FSA)<sup>9</sup> for qualified municipal homeless fisherfolks and their families, which portion is herein below described:

- Point 1 to Point 2 \_\_\_\_\_
- Point 2 to Point 3 \_\_\_\_\_
- Point 3 to Point 4 \_\_\_\_\_
- Point 4 to Point 1 \_\_\_\_\_

**Section XX.** The local government shall exert efforts so that the FSA in its territory will be efficient, peaceful and environment-compliant. Towards this end, the local government shall closely coordinate with the Department of Agriculture (DA), Department of Environment and Natural Resources (DENR), Department of Public Works and Highways (DPWH), Department of Interior and Local Government (DILG), National Housing Authority (NHA), the FARMC and other related agencies.

<sup>7</sup> See DENR DAO 30-1992, Section 3.2 (a): “ *Establishment, protection and maintenance of tree parks, greenbelts and other tourist attractions in areas identified and delineated by the DENR, except those covered by the Integrated Protected Areas System, as defined by law, and the collection of fees for their services and the use of the facilities established therein.*”

<sup>8</sup> See DENR DAO 30-1992, Section 3.3 (c): “ *Abatement of noise and other forms of nuisance as defined by law;*”

<sup>9</sup> See Section 108, Fisheries Code of 1998: “ *Fisherfolk Settlement Areas. – The Department shall establish and create fisherfolk settlement areas in coordination with concerned agencies of the government, wherein certain areas of the public domain, specifically near the fishing grounds, shall be reserved for the settlement of the municipal fisherfolk. Nothing in this section shall be construed to vest ownership of any resettlement area to a municipal fisherfolk for whom said areas have been reserved for or had been actually granted to.*”

**Section XX.** The local government shall strongly recommend to the DA and other concerned agencies, that in order for fisherfolks to qualify to settle in the FSA, the following criteria should be complied with: (a.) the fisherfolk and his family must be inhabitants or residents in the local government unit for at least one (1) year prior to application; (b.) Filipinos; (c.) registered fisherfolk in the locality; (d.) members of a recognized fisherfolk organization; and (e.) homeless.

**Section XX.** The local government shall, in coordination with the DA and other concerned offices or government agencies, see to it that within the designated FSA, qualified inhabitants shall enjoy security of tenure; *Provided*, that said inhabitants continue to engage in fishing as a livelihood; *Provided further*, that an inhabitant's right to occupy in the FSA is non-transferable either by succession, lease or conveyance; *Provided finally*, that the FSA shall be considered beyond the commerce of men, subject to the laws regarding disposition of property of public dominion.

**Article XXI**  
**Fisheries and Aquatic Resources Management Council (FARMC)**

**Section XX. Creation of Municipal FARMC**

Pursuant to Section 69 of the Philippine Fisheries Code of 1998, municipal FARMC shall be established in this municipality. The municipal government shall provide assistance to the Municipal FARMC.

**Section XX. Composition of Municipal FARMC**

The regular members of the Municipal FARMC shall be composed of the following:

- a. Municipal Planning and Development Officer;
- b. Chairperson of the Sangguniang Bayan Committee on Agriculture/Fisheries;
- c. Representative of the Municipal Development Council;
- d. Municipal Environment and Natural Resources Management Officer;
- e. Representative from the accredited non-governmental organizations;
- f. Representative from the private sector;
- g. Representative from the Department of Agriculture; and
- h. At least eleven (11) fishers representatives [seven (7) municipal fishers, one (1) fishworker and three (3) commercial fishers in each municipality which include representative from youth and women sector.

The FARMC shall adopt rules and regulations necessary to govern its proceedings and election.

**Section XX. Powers and Functions of the Municipal FARMC**

The Municipal FARMC shall have the following powers and functions:

1. To assist the municipal government in the implementation of programs and projects on coastal and fisheries resources management;
2. To assist the municipal government in the monitoring and evaluation coastal and fisheries resources -management programs;
3. To advise the municipal government in the arbitration of disputes over fishery rights and sharing contracts;

4. To assist the municipal government in the conduct of public hearings and community consultations, in aid of the formulation of plans, policies and proposed ordinances and regulations;
5. To coordinate with law enforcement agencies in the enforcement of fishery and environmental laws, ordinances, rules and regulations;
6. To assist the municipal government in the promotion of comprehensive rehabilitation and conservation of municipal fishing grounds and coastal and fishery resources;
7. To assist the municipal government in the promotion of ancillary economic activities, including cooperative marketing and socio-economic services;
8. To maintain an updated registry of municipal fishers; and
9. To perform such other functions the Municipal Mayor, the Municipal Development Council and the Sangguniang Bayan may delegate, as provided by ordinance or resolution.

**Article XXII  
Prohibited Activities and Penalties**

**Section XX. Compliance with National Laws**

All relevant national laws, orders, rules and regulations shall be implemented in this municipality.

**Section XX. Other Prohibitions**

It shall be unlawful for any person, entities, organizations or corporations to engage in the following activities:

1. Use of Compressor in fishing
2. Use of Nukos Ambak-ambak in fishing
3. Use of Sudsod in fishing
4. Use of Liba-liba in fishing, regardless of mesh size
5. Use of Baling
6. (LIST OTHER FISHING GEARS AND ACTIVITIES THAT WILL NOT BE ALLOWED IN THE MUNICIPAL WATERS - Use local terms, as much as possible)

*Provided,* That violators shall be punished with a fine of Two Thousand Five Hundred Pesos (PhP 2,500.00) or an imprisonment of six (6) months, or both at the discretion of the court.

**Article XXIII  
General Provisions**

**Section XX. Person and Deputies Authorized to Enforce this Ordinance**

The Municipal Mayor, Municipal Agriculturist, \_\_\_\_\_ Officer, Municipal Planning and Development Coordinator, Municipal Agriculturist, Municipal Treasurer, Municipal Local Government Operations Officer, Philippine National Police, Municipal FARMC, Barangay Officials and Deputize fish wardens shall take lead in the implementation of this ordinance.

**Section XX. Mandatory Review**

The Sangguniang Bayan shall undertake the mandatory review of this ordinance at least once every 3 years and as often as it may deem necessary, to ensure that coastal and fisheries policies and guidelines remain responsive to the changing circumstances.

**Article XXIV  
Final Provisions**

**Section XX. Appropriation**

The sum necessary to effectively carry out the provisions of this ordinance during the first year of its implementation shall be allocated from the budget of the \_\_\_\_\_. The budget for subsequent years shall not be less than the amount of the preceding year's appropriation.

**Section XX. Repealing Clause**

All previous ordinance, executive orders, rules and regulations or parts thereof which are inconsistent with this ordinance are hereby repealed and modified accordingly.

**Section XX. Separability Clause**

If, for any reason or reasons, any part or provision of this ordinance shall be held unconstitutional or invalid, other parts or provisions hereof which are not affected thereby shall continue to be in full force and in effect.

**Section XX. Effectivity Clause**

This ordinance shall take effect ten (10) days after a copy of the thereof is posted in a bulletin board at the entrance and in at least two (2) other conspicuous places of the municipal building and the ordinance has been published once in a local newspaper of general circulation in the municipality.

**SO ENACTED....**

Enacted and Approved this \_\_\_\_\_, (YEAR) at \_\_\_\_\_, Province of \_\_\_\_\_.

I HEREBY CERTIFY the correctness of the foregoing resolution and ordinance.

\_\_\_\_\_  
**Secretary to the Sangguniang Bayan**

**ATTESTED:**

\_\_\_\_\_  
**Vice-Mayor  
Presiding Officer, Sangguniang Sayan**

APPROVED:

\_\_\_\_\_  
**Mayor**

Date of Approval: \_\_\_\_\_