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An initial scoping exercise for sustainable financing of MPAs in the Sulu-Sulawesi Seas Marine Eco-region

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Mazars Starling Resources

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Acronyms

ADB	Asian Development Bank
BFAR	Bureau of Fisheries and Aquatic Resources
CO2	Carbon dioxide
CSR	Corporate Social Responsibility
CT6	Six Coral Triangle nations: Indonesia, the Philippines, Malaysia, Papua New Guinea, the Solomon Islands and Timor Leste
CTI	Coral Triangle Initiative
DENR	Department of Environment & Natural Resources
DOT	Department of Tourism
GIZ	German International Cooperation or Gesellschaft für Internationale Zusammenarbeit
Ha	Hectare
JICA	Japan International Cooperation Agency
Km	Kilometer
LGU	Local Government Units
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NIPAS	National Integrated Protected Area System
PAWB	Protected Areas and Wildlife Bureau
SSME	Sulu-Sulawesi Seas Marine Eco-region
NIPAS	National Integrated Protected Areas System
PCSD	Palawan Council for Sustainable Development
IPAF	Integrated Protected Areas Fund
PNP	Philippine National Police
PCG	Philippine Coast Guard
SEPP Law	Strategic Environmental Plan for Palawan Law
TMO	Tubbataha Management Office
TPAMB	Tubbataha Protected Area Management
USAID	United States Agency for International Development

Executive Summary

The Sulu-Sulawesi Seas Marine Eco-region (SSME) is spread among the islands of the Philippines, Indonesia, and Malaysia and is a critical eco-region recognized as one of the CTI priority seascapes. WWF is working with the Coral Triangle Initiative (CTI) nations and their partners in the non-governmental, multi-lateral and private sector to assess the resource requirements for each country in the SSME necessary to maintain a national network of effective Marine Protected Areas (MPAs).

In late 2011 WWF retained Mazars Starling Resources to conduct *an initial scoping exercise for sustainable financing of MPAs in the Sulu-Sulawesi Seas Marine Eco-region.* This report represents a review of the current status of the MPAs in the Philippines portion of the SSME, as well as the policies and enabling conditions, current government budget allocations and potential financial flows from various government, market-driven and donor sources. It includes a review of the nature of the national protected area system in the Philippines generally and the status of five MPAs.

The Philippines has approximately 27,000 square kilometers of coral reefs and important coastal ecosystems. But only about 5 percent are still in excellent condition. There are numerous, connected reasons for the decline, and yet it appears that the importance of conserving and sustainably managing marine resources is well accepted across the country, and is reflected in the continued increase in number and size of MPAs, as well as improvement in the management of systems of MPAs. A recent survey indicates that there are up to 1,072 MPAs established in the Philippines[1]. Through research conducted by our study team, we are able to identify 579 MPAs within that portion of the SSME lying within the Philippines, of which 552 are managed locally by the local government unit (LGU) or specific community groups or civil society groups (NGOs) and are referred to as locally-managed MPAs. Only 27 are managed by the national government under various instruments.

One of the major challenges to effective management of MPAs, whether at the local or national level, is the lack of sustainable financing sources and mechanisms. Currently, the majority of funding for Philippine SSME MPAs comes from traditional sources, such as from various levels of government, NGOs, and multilateral development agencies.

For MPAs established through the NIPAS Law, revenues are deposited in the IPAF, a centralized Fund set up to fund NIPAS, or national level, parks. Since the fund was established in in 1996 it has collected approximately $3.7 million, or approximately $250,000 per year to be shared among the 27 national level parks and others which can access this fund. Put another way there is less than $10,000 available to each park from the IPAF. Not a sufficient amount to overcome the persistent gaps in financing.

The biggest supporters of many national MPAs and most local managed MPAs which receive outside funds (not from the government unit revenues itself) are the World Bank-GEF, the European Union, the

[1] UPMSI Database, 2009 unpublished.

United States Agency for International Development (USAID), the Asian Development Bank (ADB), and the Japan International Cooperation Agency (JICA). Also important are investments from the business/private sector are often seen in the areas of conservation/protection of MPAs, ecotourism, mariculture, processing plants, enforcement assistance and community relations, and corporate social responsibility (CSR) - which include poverty alleviation initiatives.

However, these sources of funding - IPAF, donor and private sector investments - do not currently suffice. There remains a disconnect between available funds and required funds to ensure effective and sustainable achievement of MPA objectives. There is a lack of data and information on specific funding requirements for MPAs.[2] While there have been numerous studies focusing on general economic valuation of various coastal and marine resources in the Philippines, few actually calculate the financial requirements of operationally managing MPAs. In addition, there is a need to estimate of the recurrent costs of MPA management as a basis for estimating the total requirements for all MPAs.

This study utilized the Conservation and Community Investment Forum (CCIF) Protected Area Financial Model (Model) to conduct a financial assessment of each MPA, capturing cost data related to budget categories and functions. The Model also documents the secured and potential cash sources utilized to cover the MPA costs. The exercise of thinking through the current and potential cash sources assists in the long-term planning of the MPA, and helps practitioners understand how they might bridge the gap between need (as defined by the cost inputs) and current available financial resources.

In order to project costs we first selected specific sites as representative of the system of Philippine SSME MPAs. (Unlike with the financial scoping studies for Malaysia and Indonesia, which included all existing MPAs within those eco-regions, for the Philippines section of the SSME we necessarily engaged in a "representation approach" for the study given the sheer numbers and classifications of MPAs as discussed above). In other words, archetypes must be selected in order to gain an appreciation for the range of MPAs and be able to project the scale of financing required for the entire system. Selecting archetypes requires considering a range of factors as discussed in this report.

Working with WWF and the Government of the Philippines, the Mazars Starling Resources team short-listed five MPAs out of approximately 579 in the Philippine SSME. Of these five, two are nature/marine reserves, one is a landscape/seascape, and two are LGU-managed.

Table i. List of Target MPAs for Financial Analysis

MPA Name	Type	Location
Apo Reef Natural Park	Nature / Marine Reserve	Mindoro, Luzon group of islands
Tubbataha Reef National Marine Park	Nature / Marine Reserve	Palawan, Luzon group of islands
Apo Island Protected Landscape and Seascape	Landscape/Seascape	Negros Oriental, Visayas island

[2] Maria Zita Butardo-Toribio, et al. June 2009. Cost-Benefit Study of MPAs: Implications on Financing and Institutional Needs. Ecogov 2 Project-USAID.

Gilotongan Marine Reserve	LGU-Managed	Cordova, Cebu, Visayas group of islands
Hinobaan MPA	LGU-Managed	Negros Occidental, Visayas group of islands

The data collection and analysis phase involved capturing all of the relevant cost and revenue information for the target MPAs, as well as details regarding the underlying policies and regulations supporting or constraining financing of these MPAs. In order to populate the Model, Mazars Starling Resources collected relevant work plans, budgets and other reports, and also engaged in meetings with relevant stakeholders.

While there data exists at varying levels of availability and quality for each of the 5 MPAs, our team was able to secure data from stakeholders and official documents to project the necessary costs for each for the next 10 years. This data is presented in the MPA specific chapters. Our team also presents a set of recommendations for future sources of MPA financing for each MPA.

Using the data from the 5 selected MPAs as representative we then projected the estimated costs for the entire SSME eco-region located within the Philippines. Two archetypes were defined:

- NIPAS or national MPAs which fall under the management of the DENR-PAWB, and
- Locally managed MPAs that are managed by the local government unit or a local organization.

As noted earlier, and based on several sources, there are currently 579 MPAs in the Philippines SSME, 552 LGU (locally-managed) MPAs and 27 NIPAS MPAs. The 27 NIPAS MPAs within the SSME occupy a total of 1,220,775.59 hectares. Utilizing our 3 NIPAS MPA archetypes, Apo Reef Natural Park, Apo Island Protected Landscape and Seascape and Tubbataha Reef National Park, the average cost per hectare is $10.36 for archetype >7,500 ha and $126.94 for archetype <7,500 ha. For the entire SSME, the projected costs for all NIPAS MPAs total $16,299,285 annually.

Locally managed MPAs are plentiful, and for the purpose of this study, we only used those with recorded size measurements. This leads to an exclusion of three areas. Our archetypes for the LGU-managed MPAs are Gilotongan Island Marine Sanctuary and Palm Reef Reserve and Sanctuary from the municality of Hinobaan in Negros Oriental. The average cost per MPA is $28,483 per year. Multiplying it with number of locally-managed MPAs occupy within the SSME, we arrive at the figure of $15,722,694 per year to protect and manage these local MPAs.

The combined total areas of NIPAS MPAs and locally managed MPAs amount to 1,297,396.79 hectares. The cost to manage the whole eco-region annually is $32,021,979. There are opportunities to potentially reduce this yearly cost. For example, locally-managed MPAs are urged to form networks as experts have found that it is more cost efficient to operate collectively. A study comparing coastal law enforcement costs by individual LGUs versus inter-LGU alliance per square kilometer per year shows a

reduction of cost per unit of up to 40-90% from the original scenario cost when the MPA waters are managed by a single LGU on its own.[3]

Finally, our team developed a series of recommendations for increasing revenues and allocations to MPAs in the Philippines SSME. These are listed at the end of each MPA chapter. In addition, as chapter 10 consists of an overview and assessment of the potential to strengthen existing sources of financing for MPAs in the SSME in general. It covers government, donor, and market sources.

[3] *Ecogov Project 2011*. Lessons from the Philippines: Achieving Synergies through Marine Protected Area Networks. Philippine Environmental Governance Project (Ecogov), Pasig City, Philippines

1. Introduction

Sections
- Background
- Objectives

Summary
- The Sulu-Sulawesi Seas Marine Eco-region (SSME) is a critical eco-region recognized as one of the Coral Triangle Initiative (CTI) priority seascapes.
- During The 4th Tri-Com meeting in 2009, the three governments committed to develop the financial sustainability of SSME.
- WWF, along with their CTI partners, have committed to review the resource requirements necessary to maintain effective MPAs in each country and to develop a three-country *Seascape Sustainable Financing Strategy*.
- The main objectives of this report are to assess functional costs and the financing gaps of five MPAs within the Philippines section of the SSME and to identify and review sustainable financing mechanisms and their enabling conditions.
- This financial feasibility assessment should be viewed as a first step in the larger process of developing a three-country SSME *Seascape Sustainable Financing Strategy.*

Background

The Coral Triangle Initiative (CTI) focuses on sustainable management of marine and coastal resources of the six Coral Triangle nations (CT6)[4] based on the *Regional Plan of Action*, covering: seascapes, ecosystem approach to fisheries, marine protected areas (MPAs), climate adaptation, and threatened species.

Within the Coral Triangle, the Sulu-Sulawesi Seas Marine Eco-region (SSME) is spread among the islands of the Philippines, Indonesia, and Malaysia[5] and is a critical eco-region recognized as one of the CTI priority seascapes. The SSME is known to contain more than 2,000 species of marine fish, at least 400 known species of marine algae, 16 species of sea grass, 33 species of mangroves, with over 450 species of scleractinian corals[6], five of the world's seven species of sea turtles, and at least 22 species of marine mammals, including the endangered Dugong and the rare Irrawaddy dolphin[7].

The CT6 have agreed to *establish a comprehensive, ecologically representative and well-managed region-wide Coral Triangle MPA System (CTMPAS) composed of prioritized individual MPAs and networks of MPAs that are connected, resilient, and sustainably financed.* Specifically, the CTI nations and their

[4] Indonesia, the Philippines, Malaysia, Papua New Guinea, the Solomon Islands and Timor Leste.
[5] The SSME specifically consists of consisting of the Sulu Sea, the Sulawesi Sea, and the Philippine inland seas (Visayan Sea, Bohol Sea, and Mindanao Sea).
[6] Veron, JEN (1995). Corals in space and time: the biogeography and evolution of the Scleractinia. University of New South Wales Press, Australia.
[7] http://assets.panda.org/downloads/sulusulawesi.pdf.

partners in the non-governmental, multi-lateral and private sectors have committed to assess the resource (financial and otherwise) requirements for each country in the SSME necessary to maintain a national network of effective Marine Protected Areas (MPAs). Ultimately, the countries would like to develop, jointly, a comprehensive SSME *Sustainable Financing Strategy* with an overall scheme for sourcing and managing specific investments across the 10-year CTI *Regional Plan of Action*.

> *Protected Area Financial Sustainability may be defined as: "the ability to secure stable and sufficient long-term financial resources and to allocate them in a timely manner and appropriate form, to cover the full costs of protected areas (direct and indirect) and to ensure that PAs are managed effectively and efficiently." (CBD)*

Objectives

WWF retained Mazars Starling Resources to conduct *an initial scoping exercise for sustainable financing of MPAs in the Sulu-Sulawesi Seas Marine Eco-region.* This report represents a review of the current status of the MPAs in the Philippines portion of the SSME, as well as the policies and enabling conditions, current government budget allocations and potential financial flows from various government, market-driven and donor sources.

The purpose of this initial financial feasibility assessment report is to review the current status of the MPAs in the Philippines portion of the SSME, as well as the policies and enabling conditions, current government budget allocations and potential financial flows from various government, market-driven and donor sources. The specific objectives of this scoping exercise include the following. (See Appendix 1 for a detailed term of reference.)

1. Gain an understanding of the status of specific enabling conditions (policy and institutional) related to the design and implementation of sustainable financing for MPAs in the Philippines.
2. Gain an understanding of the current financial flows directed toward MPAs in the Philippines.
3. Determine the cost requirements and financing capacity needs of five target MPAs in the SSME in the Philippines.
4. Determine the funding gap based on the results of costing requirements and the available funds of these five MPAs.
5. Review and summary of national policies and options for improving the management and financing of MPAs in the Philippines at the appropriate level.
6. Recommend options and opportunities for new and innovative sustainable financing schemes and produce a short list of possible sustainable financing mechanisms (SFM) suitable to meet the financing gaps of these target MPAs and within MPAs in the Philippines more generally.

This document provides an overview of the findings from this assignment, including a review of the nature of the national protected area system in the Philippines generally and the status of five MPAs.

The contents of this document are based on research, workshops and structured meetings and interviews, as well as financial and cost analysis of the five MPAs conducted from September through December 2011.

2. Marine Protected Areas in the Philippines

Sections	Summary
• Overview • Protected Area Legal & Institutional Framework • Protected Area Financing	• There are 579 MPAs within the SSME, of which 552 are LGU (locally-managed MPAs) and 27 are NIPAS. • MPAs are managed, primarily, by local government units. Several national parks are co-managed with the central government's Department of Environment and Natural Resources / Protected Areas Wildlife Bureaus. • Several MPAs receive significant financial support from the annual budget allocation of local and provincial government units. • National parks rely on earnings from tourism revenues and contributions from the local or provincial governments in which they exist, and receive little support from the central government.

Overview

The Philippines, composed of 7,107 islands, has a total coastline of 36,289 kilometers (km). In terms of coral reefs, the Philippines is endowed with approximately 27,000 square kilometers of coral reefs but only about 5 percent are still in excellent condition.[8] There are numerous, connected reasons for the decline, including: various kinds of pollution and loss of coastal habitats stemming from upland and coastal development, illegal and destructive fishing practices, over-fishing due to an open-access fishery regime throughout the country, increasing poverty among coastal dwellers, a rapidly growing population, and variable political will to squarely address the problems. An important driver of this decline is a lack of economic alternatives that would make coastal dwellers less dependent on their natural resource base.[9]

Despite this decline, it can be argued that the importance of conserving and sustainably managing marine resources is well accepted across the country, and is reflected in the continued increase in number and size of MPAs, as well as improvement in the management of MPAs. A recent survey indicated that there are approximately 1,072 MPAs established in the Philippines[10]: about 1,044 are declared by municipal and city governments through co-management arrangement with the community, and; about 27 were proclaimed under the National Integrated Protected Area System (NIPAS). According to another study in 2006, there are about 343 established MPAs (along with 5 proposed MPAs) located within the Philippine jurisdiction of the SSME.[11] According to our research, there are 579 MPAs within the SSME, of which 552 are LGU (locally-managed MPAs) and 27 are NIPAS.

[8] Gomez et al. 1994.

[9] White, Salamanca, Courtney. *Experience with Coastal and Marine Protected Area Planning and Management in the Philippines.*

[10] UPMSI Database, 2009 unpublished.

[11] Abesamis and Alino. 2006 Marine Protected Areas in the Sulu-Sulawesi Marine Ecoregion: A Review of their Status, and Priorities and Strategies for their Networking, UP MSI for the WWF-SSME Program.

Table 2.1 Philippines Marine Protected Areas – Basic Statistics

Level	Total Established Across the Philippines *2006 Abesamis and Alino*	Total Established Across the Philippines *2011 Marine Support Network unpublished list*	Total Established within the SSME *Mazars Starling Resources Count 2011*[12]
All LGU MPAs	870 +125 proposed	1,044 (including NIPAS)	552
All NIPAS MPAs	27	28 (from CI)	27
Total within SSME	*343*	*Not determined*	*579*

*TNC (The Nature Conservancy), WWF (World Wildlife Fund), CI (Conservation International) and WCS (Wildlife Conservation Society) 2008. Marine protected area networks in the Coral Triangle: development and lessons. TNC, WWF, CI, WCS and the United States Agency for International Development, Cebu City, Philippines. 106 p, MEAT Ecogov, CCEF online MPA database.

Protected Area Legal & Institutional Framework

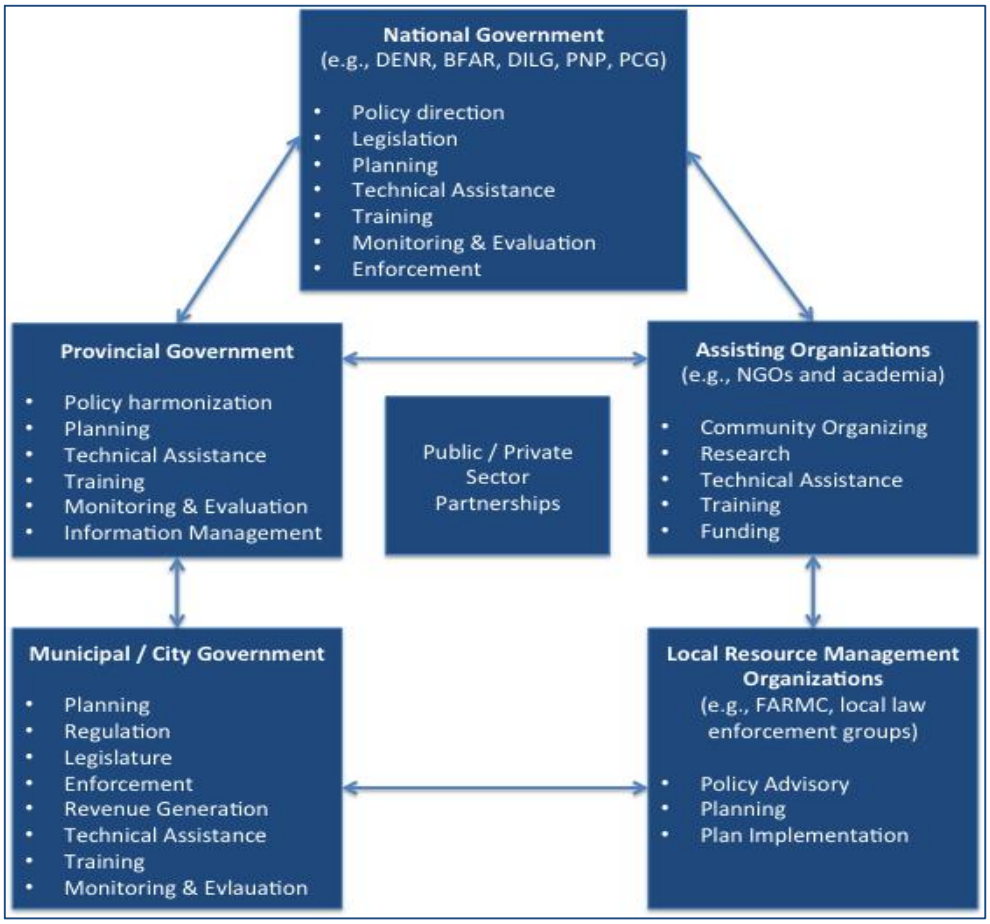
While there are more than 1,000 legally established MPAs, "there is inconsistency in terminology among the various enabling regulations that provide the legal basis for establishing a protected site in the Philippines."[13] Legislation mentioned in the table below utilize different terms and definitions for MPAs.

The establishment and management of MPAs are primarily shared among three institutions: the Department of Environment & Natural Resources (DENR) through the Protected Areas and Wildlife Bureau (PAWB) for implementation of the NIPAS Act, the Bureau of Fisheries and Aquatic Resources (BFAR) for implementation of the Fisheries Code, and the Local Government Units (LGU) for implementation of the Local Government Code. In some areas, such as Palawan, the whole province is declared a protected area through the Strategic Environment Plan for Palawan by the regional autonomous government called the Palawan Council for Sustainable Development (PCSD). A graphical representation of the key institutional roles and responsibilities for coastal management in the Philippines is included in Figure 2.1. Support roles, especially in monitoring, enforcement and patrolling are shared by government agencies such as the Philippine National Police, Coast Guard and Navy.

[12] Various sources. TNC (The Nature Conservancy), WWF (World Wildlife Fund), CI (Conservation International) and WCS (Wildlife Conservation Society) 2008. Marine protected area networks in the Coral Triangle: development and lessons. TNC, WWF, CI, WCS and the United States Agency for International Development, Cebu City, Philippines. 106 p, MEAT Ecogov, CCEF online MPA database.

[13] White, Alino and Meneses. (2006) *Managing and Creating MPAs: A Handbook.* UP Marine Science Institute.

Figure 2.1 Key institutional roles and responsibilities for coastal management in the Philippines[14]



Although the DENR implements the NIPAS Act through establishment and management of MPAs, the LGUs play the most crucial role in MPA management and effectiveness. The combined mandate afforded to LGUs from the Local Government Code of 1991, such as political autonomy and the capacity for resource mobilization through taxes and fees, along with provisions from the Fisheries Code, enable LGUs to set conditions for marine resource use through local ordinances which are oftentimes stronger than the measures set by the national government agencies.

[14] White, Salamanca, Courtney. *Experience with Coastal and Marine Protected Area Planning and Management in the Philippines.*

Table 2.1 Legislations and MPA terms

MPA types	Legal basis of declaration and designating authority	Management Approach
• Strict Nature Reserve • Natural Park • Natural Monument • Wildlife Sanctuary • Protected Landscapes and Seascapes • Resource Reserve • Natural Biotic Area	National Integrated Protected Areas System Act of 1992 (RA 7586) – Department of Environment and Natural Resources (DENR)/Protected Areas Wildlife Bureau (PAWB)	• Protected Area Management Board (PAMB) with varying compositions of chairmanships: co-chair DENR-LGU; DENR-PCSD, etc.
• Fish sanctuaries • Marine reserves • Municipal Waters	Philippine Government Code – Local Government Unit (LGU)	• LGU or inter LGUs • Barangay Council • FARMC • Fish Sanctuary Management Committee • Bantay Dagat • Peoples' Orgs • Grassroots organizations with supervision by MENRO and CENRO • Tribal council
	Fisheries Code (RA 8550)--Bureau of Fisheries and Aquatic Resources (BFAR)	
Several classifications under SEP Law (PCSD)	Regional Platforms, such as Palawan Council for Sustainable Development (PCSD) and Autonomous Region of Muslim Mindanao (ARMM)	
• Ancestral Waters • Ancestral Land	Indigenous People's Rights Act (IPRA)—National Commission of Indigenous Peoples (NCIP)	
• Marine reserve • Marine park • Marine sanctuary	Proposed MPA bill (Marine and Coastal Resources Protection Act of 2009)	• LGU • Civil Society • Bureau of Fisheries and Aquatic Resources • DENR • FARMCs • Private sector

Examples of differing national and local categories for protected areas:

- The Fisheries Code defines fishery refuge and sanctuary as "a designated area where fishing or other forms of activities which may damage the ecosystem of the area are prohibited and human access may be restricted."[15]
- The NIPAS defines a resource reserve as "an extensive and relatively isolated and uninhabited area normally with difficult access designated as such to protect natural resources of the area for future use and prevent or contain development activities that could prevent or contain

[15] Fisheries Code RA 8550.

development activities that could affect the resource pending the establishment of objectives which are based upon appropriate knowledge and planning."[16]

- A municipal ordinance in Cordova, Cebu defines its fish sanctuary as " a protected area where fish are able to spawn, feed and grow undisturbed and where fishing and other activities are absolutely prohibited."[17]

Protected Areas Financing

One of the major challenges to effective management of MPAS is the lack of sustainable financing sources and mechanisms. Currently, the majority of funding for Philippine SSME MPAs comes from traditional sources, such as from various levels of government, civil society groups (NGOs), and multilateral development agencies. The biggest supporters of MPA management in the Philippines are the World Bank-GEF, the European Union, the United States Agency for International Development (USAID), the Asian Development Bank (ADB), and the Japan International Cooperation Agency (JICA).

Investments from the business/private sector are often seen in the areas of conservation/protection of MPAs, ecotourism, mariculture, processing plants and marketing (for integrated coastal resource management programs), information campaigns, enforcement assistance and community relations, and corporate social responsibility (CSR) which include poverty alleviation initiatives.[18]

Civil society groups normally support the following MPA activities:

- Training and capacity-building of communities and marginalized groups;
- Livelihood assistance and diversification;
- Equipment purchases for capital assets such as patrol boats and radios; and
- Technical assistance to local governments.[19]

The national government, through the agencies mentioned in Figure 2.1, also support activities, such as:

- Organizational strengthening to perform basic core functions;
- Protection and management of declared protected areas;
- Policy and enforcement support; and
- Data collection and analysis.

[16] NIPAS Act of 1992.

[17] Barangay Resolution No. 0023, Series of 1991.

[18] Miclat, R.I., ROM Gonzales and PM Alino. 2008. Proceedings of the Coastal Zone Philippines 2: Sustainable Financing and Marine Protected Areas Congress. MPA Support Network, Marine Environment and Resources Foundation, Inc., and the Marine Science Institute, University of the Philippines, Diliman, Quezon City, Philippines.

[19] In particular, note the case of Shell Philippines in MPAs in Palawan.

Integrated Protected Areas Fund

For MPAs established through the NIPAS Law, revenues are deposited in the IPAF, a centralized Fund supporting 238 PAs under the system. It is a GoP trust set up under the provisions of the 1992 NIPAS Act (Sect. 16) to receive donations and revenues generated within the PAs and to disburse the same to finance the operations of the NIPAS.

The IPAF consists of a Central Fund and a Sub-Fund. The Central Fund retains 75 percent of the collection and is intended to finance the operations of the protected area that generated the monies. The remaining 25 percent is remitted to the Sub-Fund, which is set aside to finance the activities of other protected areas that do not receive sufficient funds to sustain its operations. Disbursements from the Funds are made solely for the protection, maintenance, administration, and management of the NIPAS, as well as duly approved projects endorsed by the Protected Area Management Board.[20]

An IPAF Governing Board administers the Fund and decides on fund allocation among the protected areas. The Board is chaired by the Secretary of the Department of Environment and Natural Resources (DENR) and is composed of two representatives from other concerned government agencies, two from duly accredited NGOs with a proven track record in conservation and, two from indigenous communities. Since 1996 when it was first implemented, the total IPAF collection has amounted to PhP165,821,352 (approximately US$3,768,667), which was generated from a total of 100 protected areas, "with the top 15 PAs contributing as much as 89% of this amount."[21]

Issues

The traditional sources of funding, including the IPAF, do not suffice. There remains a disconnect between available funds and required funds to ensure effective and sustainable achievement of MPA objectives.

One of the biggest challenges to achieving financial sustainability is the lack of data and information on specific funding requirements for MPAs.[22] There have been numerous studies completed that deal with the valuation of various coastal and marine resources in the Philippines but fewer studies touching on the financial requirements of managing MPAs in the country.[23] Moreover, our literature review indicated that there are no studies that show the implications of management type, institutional systems and governance structures to costs of effective MPA management. In addition, "there is a need to set realistic estimates of the recurrent costs of PA management as a basis for estimating the total requirements for all PAs, as new ones are added to the system. This information would be important not

[20] Bacudo et al 2000.

[21] Project Document, UNDP-PAWB Project on Expanding Terrestrial Protected Areas, 2010.

[22] Maria Zita Butardo-Toribio, et al. June 2009. Cost-Benefit Study of MPAs: Implications on Financing and Institutional Needs. Ecogov 2 Project-USAID.

[23] Ibid.

only to guide the development of realistic estimates of the total funding gap, but more so, as a basis for determining whether individual PAs have sufficient resources to manage their areas effectively."[24]

[24] Project document, Expanding and Diversifying the National System of Terrestrial Protected Areas in the Philippines (Section on PA Financing), UNDP. January 2011.

3. Modeling Financial Requirements of MPAs

Sections
- Overview
- Approach
- Assumptions
- Process

Summary
- The Conservation and Community Investment Forum (CCIF) Protected Area Financial Model (Model) was utilized for this project. CCIF has worked for a number of years with leading practitioners, scientists, policy makers, funders and investors to design comprehensive, bottom-up budgeting and cost forecasting models for individual MPAs as well as networks of MPAs, and the financing strategies to support them.
- The Model has been utilized, and further refined, through work in several MPAs and PAs within Indonesia, Cambodia, Fiji, the Philippines, Papua New Guinea (PNG) and Thailand.
- The Model provides a framework to captures costs and the current and potential revenue and funding sources to cover these costs. It provides clear analysis and guidance to assist in the development and implementation of successful MPAs and associated management and financial plans. It was designed to maximize both simplicity and ease of use while documenting MPA activities in a comprehensive manner.
- Working with WWF and the Philippines government, Mazars Starling Resources has selected five representative MPAs out of 579 in the Philippine SSME for the modelling exercise. Of these five, two are nature/marine reserves, one is a landscape/seascape, and two are LGU-managed.

Overview

The Conservation and Community Investment Forum (CCIF) Protected Area Financial Model (Model) was utilized for the financial assessment component of this project. CCIF has worked for a number of years with leading practitioners, scientists, policy makers, funders and investors to design comprehensive, bottom-up budgeting and cost forecasting models for individual MPAs as well as networks of MPAs, and the financing strategies to support them. The Model has been utilized, and further refined, through work in several MPAs and PAs within Indonesia, Cambodia, Fiji, the Philippines, Papua New Guinea (PNG) and Thailand.

Approach

Designing MPAs requires an understanding of three important parameters:

1. The science required for proper zoning, delineation, and resources management,
2. The necessary cultural and political support required to effectively implement the MPA, and
3. The operational and financial requirements essential to realize the required level of actual protection and management.

The former parameters are increasingly well understood. The latter parameter generally remains difficult to assess and pursue in an optimal way. This difficulty stems from the fact that operating an MPA resembles running a complex, logistically intensive business – a business with objectives that revolve around, and that seeks to deliver on, three equally significant and interrelated outcomes:

- Conserving critically important biodiversity (species, habitats, etc.),
- Protecting ecosystems and seascapes and the service they afford to local, national, and international communities, and
- Assisting communities in meeting their needs in an effective, efficient, democratic and sustainable manner including but not limited to: food security, natural resources utilization, cultural, recreational and spiritual.

In order to ensure that these objectives are met, it is important to design complete and factual management plans and parallel financial plans that effectively define and address the complexity inherent in running a fully functional and sustainable MPA. The necessary detailed and systematic financial forecasting for MPAs requires a rigorous approach to understanding all aspects of MPA management in detail, and is thus an excellent guiding "operational framework" for MPA planning and management as well.

The Model was designed to maximize both simplicity and ease of use while also documenting MPA activities in a comprehensive manner. The Model is a generic template flexible enough to accommodate for differences in MPAs around the world, yet detailed enough to reflect the most developed MPA that provides a high level of service. The Model is built on a framework of common MPA functions and budget categories that are representative of the operational components of a typical MPA (note that the functions are fully adjustable based on agreement of stakeholders). The Model allows users to design and project MPA management costs and financing needs in an integrated way, defining costs at two levels: functional components and budget categories. During the input of cost data, users are able to think about how to optimally design and maintain the MPA and its functions so that objectives can be realized over time. Cost information is captured across the categories listed in Table 3.2.

Table 3.2 CCIF Model Budget Categories

Budget Category	Overview
Personnel	Personnel are the individuals that are actively involved in one or more functions within the MPA.
Contractors	External contractors and consultants that are hired to fulfill specific functions for a finite amount of time.
Capital Assets	Assets with useful lives greater than one year.
Asset Maintenance	Yearly maintenance cost associated with maintaining capital assets over time. The maintenance cost is captured as a percentage of the original value of the asset (e.g., if an asset was purchased for $1,000 and you forecast the yearly maintenance expense to be $50, then the maintenance cost is 5%) or as an actual amount (e.g., if you know exactly how much the yearly maintenance cost is).
Fuel	The cost of the fuel necessary to run the fuel-burning assets (e.g., boats, vehicles).
Occupancy	Costs associated with occupying certain buildings and spaces. It also includes the costs involved in the activities that go inside of these spaces. For example: rent, utility costs, internet/email costs.
Travel	Travel for MPA-specific activities.
Supplies & Materials	Consumable and expendable supplies and materials. Example: pens, batteries, paper, other office supplies.
Miscellaneous	Costs that cannot be defined as one of the other budget categories.

The model assumes and allocates costs across the MPA functions as described below.

Table 3.2 CCIF Model Functions

Functions	Overview
Policy & Planning	*Policy* refers to the efforts related to securing support from the local, regional, and national governments. Policy work is generally centered on relationship building with government authorities, advocating certain policies, and generally supporting the creation and implementation of PA law. *Planning* refers to the decision-making processes that set the strategic vision and translate the vision into day-to-day activities of the PA. It is the development and periodic review of the actual management and financial plan through systematic monitoring and evaluation of a PA's indicators of success in achieving its objectives.
Design & Zoning	*Zones* are delineated areas where selected areas can take place. Zoning provides the basis for management and enforcement of the MPA.
Enforcement	The *enforcement* team, which should have sufficient training, resources, and supplies, enforces the MPA and ensures that MPA laws are upheld.
Science & Monitoring	*Science and monitoring* refers to the collection and analysis of social, economic, ecological, and biophysical data. This information should be used to identify ecosystem and community dynamics and to prescribe priorities for conservation activities. This data collection is ideally linked to the MPA program monitoring and evaluation component to help quantify the realization of MPA objectives and goals.
Education, Communication & Community Engagement	*Education and Communication* is the dissemination of information and the creation and operation of awareness-building activities that communicate critical messages to the MPA's stakeholders, including local communities and governmental organizations, as well as national and International communities. *Community engagement* includes working with communities to improve overall community welfare.
Economic Development	*Economic Development* refers to developing conservation-enabling livelihoods that are financially feasible and whose viability is assured by the sustained use of natural resources. This involved identifying, developing, and supporting current and additional community-driven livelihood activities. Community engagement and livelihoods may also involve the development of incentive agreement structures.
Tourism Management	*Tourism management* refers to activities that enable the MPA to generate revenues from tourism, such as developing marketing materials or advertising campaigns to attract visitors, constructing facilities to be used by tourists (e.g. visitor/educational centers, trails, restrooms, picnic tables, etc.), and encouraging environmentally-friendly business practices among tourism businesses.
Administration & Financial Management	*Administration and financial management* is responsible for budgets, operations, logistics, and general administrative functions, including human resource functions.

In addition to capturing cost data related to budget categories and functions, the Model documents the secured and potential cash sources utilized to cover the MPA costs. The exercise of thinking through the current and potential cash sources assists in the long-term planning of the MPA, and helps practitioners

understand how they might bridge the gap between need (as defined by the cost inputs) and current available financial resources.

In order to populate the Model, Mazars Starling Resources collected relevant work plans, budgets and other reports, and also engaged in meetings with relevant stakeholders. (A full list of references and meeting details can be found in the Appendix 2.)

Assumptions

In order to make the projections over a ten-year period (2012-2021), the following financial and economic assumptions were made:

Table 3.3 Financial & Economic Assumptions

	Assumption	Explanation
Inflation Rate (PHP)	4.00%	International Monetary Fund, Inflation Data
Inflation Rate (US$)	2.04%	International Monetary Fund, Inflation Data
Annual salary raise	4.00%	Pegged the same as the inflation rate, Philippine Peso
Exchange rate (PHP/USD)	43.15 PHP=$1	Oanda rate (Average from Jan 1, 2011 to Oct 31, 2011)

Process

In order to project costs you first need to engage in site selection. The financial scoping exercises for Malaysia and Indonesia (two MPAs) included all existing MPAs within the eco-region, with no need for site selection. The Philippines section of the SSME is faced with a "representation approach" for the study given the numbers and classifications of MPAs as discussed above. In other words, archetypes must be selected in order to gain an appreciation for the range of MPAs and be able to project the scale of financing required for the entire system.

Selecting archetypes requires considering a range of factors:

- Legal basis
- Management types
- MPA size
- Social factors
- Ecological aspects
- Years of existence and level of performance
- Revenue (existing and potential)
- Logistically feasible to study (availability of information, accessible and secure)
- Willingness of governance board to work with the study

Taking into account of the above factors, Mazars Starling Resources has short-listed five MPAs out of 579 in the Philippine SSME. Of these five, two are nature/marine reserves, one is a landscape/seascape, and two are LGU-managed.

Table 3.4 List of Target MPAs for Financial Analysis

MPA Name	Type	Location
Apo Reef Natural Park	Nature / Marine Reserve	Mindoro, Luzon group of islands
Tubbataha Reef National Marine Park	Nature / Marine Reserve	Palawan, Luzon group of islands
Apo Island Protected Landscape and Seascape	Landscape/Seascape	Negros Oriental, Visayas island
Gilotongan Marine Reserve	LGU-Managed	Cordova, Cebu, Visayas group of islands
Hinobaan MPA	LGU-Managed	Negros Occidental, Visayas group of islands

The data collection and analysis phase involved capturing all of the relevant cost and revenue information for the target MPAs, as well as details regarding the underlying policies and regulations supporting or constraining financing of these MPAs.

Each of these MPAs is reviewed in further detail in the following chapters.

4. Apo Reef Natural Park

Sections
- Overview
- Legal & Institutional
- Financial Assessment
- Key Issues & Recommendations

Summary
- Apo Reef Natural Park is a 27,469 hectare
- Utilizing current cost structures as well as estimates of future plans, the cost to manage Apo Reef is $188,705 in 2012, averaging $185,978/year over projection period of 2012-2021.
- Personnel costs account for approximately 41% of total costs over the projection period.
- Enforcement represents the largest expense across all functions, representing 50% of the total costs over the projection period.
- Existing funding and revenue sources include tourism-related fees, direct government allocations, and a joint WWF-Cebu Pacific donor-driven effort.
- The projected funding and revenue sources are likely to attract approximately $134,000 to $160,000 per year.
- The average net funding required between 2012 and 2021 is approximately $28,000, ranging from $24,600 (2013) to $54,316 (2012).
- In order to ensure the financial sustainability of the ARNP, it is recommended that government-driven efforts focus on securing financial support from the Department of Tourism; donor-driven efforts focus on securing financing from traditional donor options, such as private foundations and multilateral development banks; market-based efforts focus on increasing the tourism-related fees that flow to the ARNP either through increased fees or by capturing a larger percentage of these revenues.

Overview

The Apo Reef Natural Park (ARNP) is located in Mindoro within the Luzon group of islands. Apo Reef is the second largest contiguous coral reef in the world and the largest one in the Philippines. The ARNP and its peripheral buffer zone covers an area of 15,792 ha and 11,677 ha respectively, totaling 27,469 ha.

The ARNP hosts threatened and near-threatened species of wildlife such as the green sea turtle, coconut crab, giant clams, long-snouted bottlenose dolphin, reef shark, etc. It also hosts 47 species of migratory and resident breeders birds and 190 species of hard and 7 species of soft corals, among many other flora and fauna.

In 2006, the Protected Areas and Wildlife Bureau of the DENR submitted the reef to the UNESCO World Heritage Centre for consideration as a World Heritage Site. Its designation is still pending. As of 2007, fishing within the reef has been banned.

Legal & Institutional

The ARNP was proclaimed a Natural Park and its surrounding waters as buffer zone under Presidential Proclamation No. 868 on September 1996. The reef lies in waters within the jurisdiction of the province of Occidental Mindoro and is directly administered by the local government of the municipality of Sablayan.

A marine law enforcement team, composed of DENR Rangers, Philippine National Police and Army, and LGU for Apo Reef and municipal waters of Sablayan was established in 2004. It is known as Task Force Marlen. A list of personnel is included in Table 4.1.

Table 4.1 Apo Reef Natural Park Personnel

Organization	Personnel Details
DENR	1 PASU (part-time PENRO)
	1 Assistant PASU
	2 Collecting Officers
IPAF Collections	4 Park Rangers
	1 Boat Swain
LGU Personnel Support	1 LGU Administrator
	5 Park Rangers
	4 Boat Operators
	2 Fee Collectors
Task Force Marlen (Composite Team)	2 regular shifts by the Philippine National Police
	2 regular shifts by the Philippine Army
	WWF Representative

Financial Assessment

A financial assessment was conducted to understand the costs to achieve a basic level of conservation objectives. A review of secured resources, including funding and revenue, were also documented to calculate the net funding required (e.g., the gap between the costs and resources). The data regarding costs and resources was captured through a review of available budgets and plans, as well as structured interviews. A full list of the interviews conducted is included in Appendix 2.

Costs

Utilizing current cost structures as well as estimates of future plans, the cost to manage Apo Reef is $188,705 in 2012, averaging $185,978/year over projection period of 2012-2021, taking into account inflation and a 4% annual salary increase.

Table 4.2 ARNP Costs by Budget Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$188,705	**$161,718**	**$166,569**	**$176,287**	**$178,885**	**$190,412**	**$192,620**	**$199,500**	**$201,052**	**$204,036**
Personnel	$64,038	$66,599	$69,263	$72,034	$74,915	$77,912	$81,028	$84,269	$87,640	$91,146
Contractors	$35,469	$36,193	$36,931	$37,685	$38,454	$39,238	$40,038	$40,855	$41,689	$42,539
Capital Assets	$33,814	-	-	$3,768	$1,282	$7,717	$6,673	$8,171	$4,169	$1,418
Asset Maintenance	$5,983	$6,105	$6,229	$6,356	$6,486	$6,618	$4,751	$4,848	$4,947	$5,048
Occupancy	$596	$608	$620	$633	$646	$659	$673	$686	$700	$715
Supplies & Material	$11,019	$11,244	$11,473	$11,593	$11,830	$12,071	$12,317	$12,568	$12,825	$13,086
Fuel	$35,627	$36,354	$37,096	$37,665	$38,434	$39,218	$40,018	$40,834	$41,667	$42,517
Travel	$2,158	$2,202	$2,247	$2,281	$2,328	$2,375	$2,424	$2,473	$2,524	$2,575
Miscellaneous	-	$2,413	$2,708	$4,271	$4,512	$4,604	$4,698	$4,794	$4,891	$4,991

Figure 4.1 ARNP Costs by Budget Category (2012-2021)

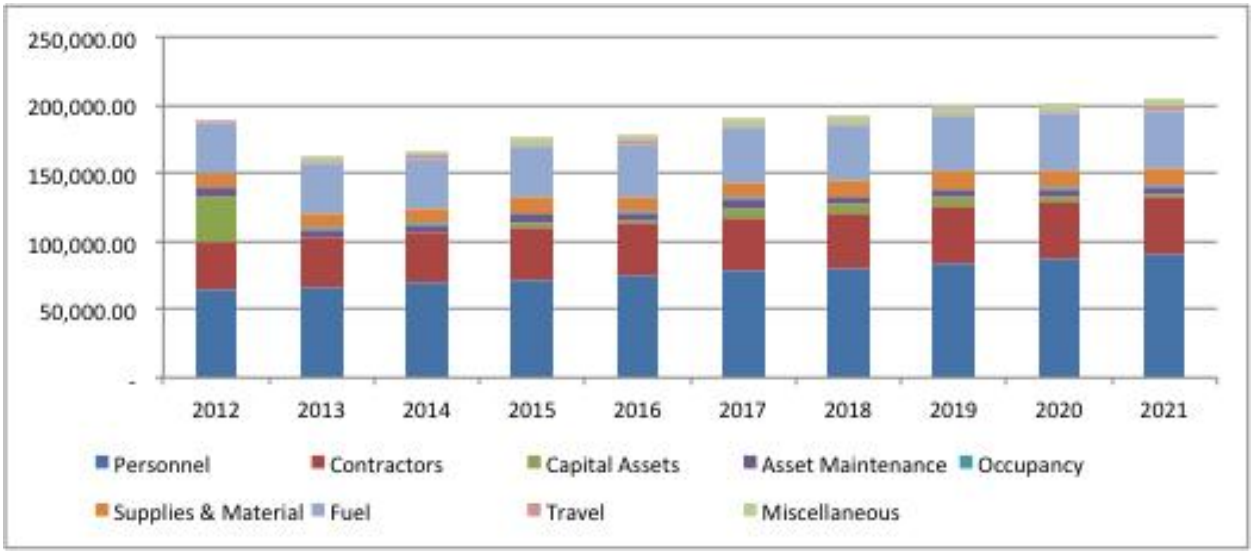


Table 4.3 ARNP Costs by Function (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$188,705	**$161,718**	**$166,569**	**$176,287**	**$178,885**	**$190,412**	**$192,620**	**$199,500**	**$201,052**	**$204,036**
Policy & Planning	$10,073	$10,413	$10,766	$11,131	$11,574	$11,902	$12,208	$12,628	$13,063	$13,584
Design & Zoning	-	-	-	-	-	-	-	-	-	-
Enforcement	$109,535	$84,801	$87,292	$93,632	$93,352	$100,441	$103,466	$107,864	$106,858	$106,706
Science & Monitoring	$35,216	$35,098	$35,874	$36,355	$37,289	$38,953	$38,630	$39,490	$40,371	$41,414
IEC & Community Engagement	$9,963	$9,869	$10,137	$10,414	$10,762	$11,515	$11,194	$11,504	$11,823	$12,223
Economic Development	$987	$1,025	$1,064	$2,613	$2,840	$2,918	$2,999	$3,083	$3,169	$3,258
Tourism Management	$10,000	$7,521	$8,016	$8,278	$8,614	$9,355	$9,023	$9,323	$9,634	$10,026
Administration & Financial Management	$12,930	$12,990	$13,420	$13,866	$14,455	$15,328	$15,099	$15,608	$16,135	$16,823

Key Cost Drivers

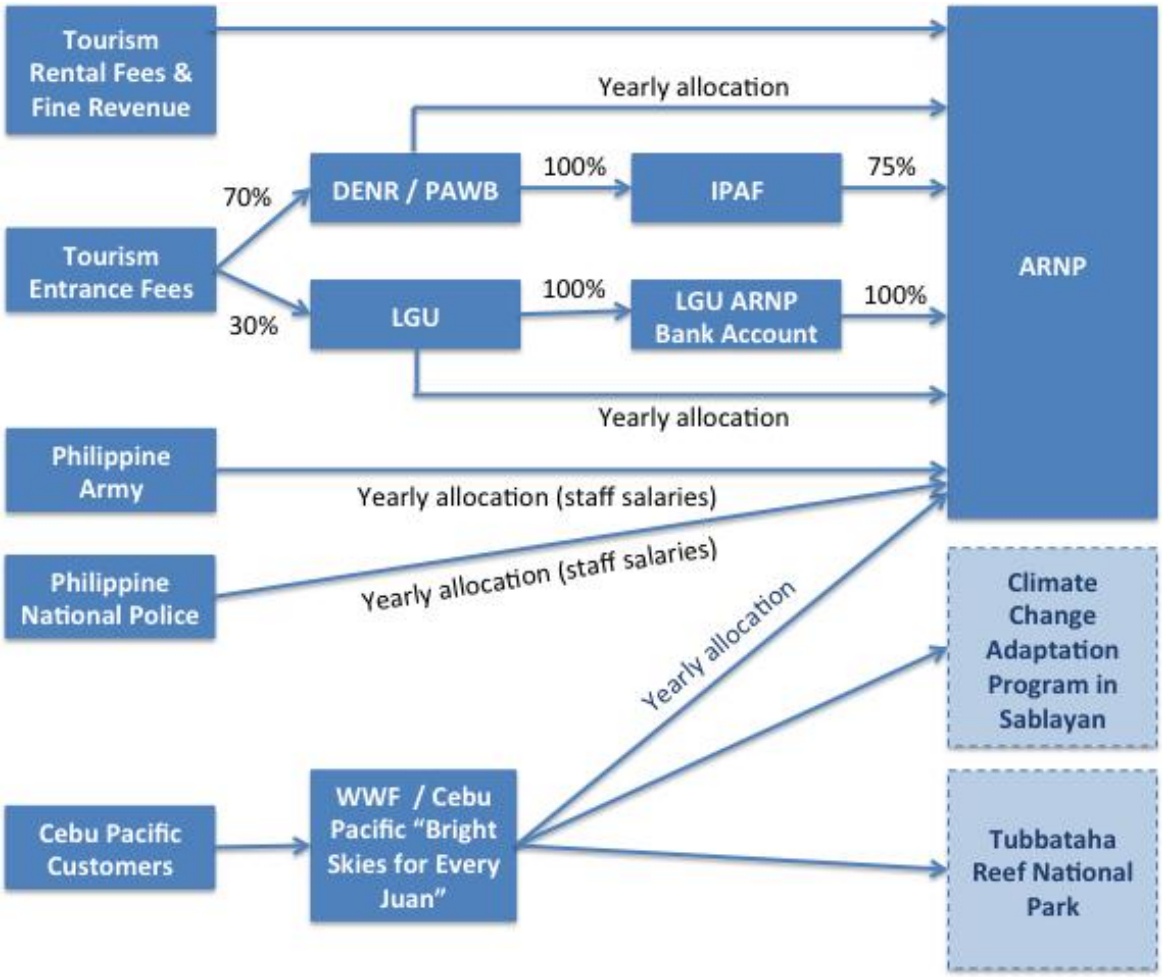
Key cost drivers for the ARNP include the following:

- Personnel costs account for approximately 40% of total costs over the projection period.
- Enforcement represents the largest expense across all functions, forming nearly 55% of the costs over the projection period.
- Planned asset purchases in 2012, including three new boats and four kayaks.
- Activity costs are driven mainly by fuel and other supply needs for patrolling.

Financial Resources

The ARNP receives money via government allocations, market-based sources, and donor funding. A flow-chart highlighting the various sources is included in Figure 4.2.

Figure 4.2 ARNP Existing Funding and Revenue Sources



Tourism-related revenues include rental fees, fine revenues, and tourism entrance fees. The ARNP retains 75% of the rental feels and fines. The entrance fees flow to DENR/PAWB (70%) and LGU (30%). The 70% that flows to the DENR/PAWB is deposited in the IPAF. Since the IPAF states that 25% of total

collection per PA is retained at the central level, only 75% of DENR/PAWB entrance fee collection is channeled back to ARNP, primarily to pay for salaries of several personnel. It is believed that the DENR/PAWB also makes a yearly allocation to the ARNP. The 30% of the entrance fees that are channeled to the LGU are allocated for ARNP management costs, primarily to cover staff salaries. Both the Philippine Army and Philippine National Police provide staff salaries for support of the ARNP. In terms of donor-based funding, WWF and Cebu Pacific, through the "Bright Skies for Every Juan" program, allow Cebu Pacific Customers to help fund climate solutions during their online bookings (equivalent to the carbon dioxide emissions associated with their flight). These contributions flow to the ARNP, a Climate Change Adaptation Program in Sablayan, and (as of 2012) to Tubbataha Reef National Park.

Based on historical information as well as assumptions regarding growth rates, the following provides a projection of the 2012-2021 ARNP funding and revenue from market, donor, and government sources.

Table 4.5 ARNP Projected Funding & Revenue (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$134,388	**$137,121**	**$139,909**	**$142,755**	**$145,658**	**$148,620**	**$151,643**	**$154,728**	**$157,876**	**$161,087**
Market	$31,768	$32,407	$33,060	$33,725	$34,404	$35,097	$35,804	$36,526	$37,262	$38,014
Market - Tourism fee	*$31,270*	*$31,908*	*$32,559*	*$33,223*	*$33,901*	*$34,592*	*$35,298*	*$36,018*	*$36,753*	*$37,503*
Market - Others	*$498*	*$500*	*$501*	*$502*	*$504*	*$505*	*$507*	*$508*	*$510*	*$511*
Donor	$35,469	$36,193	$36,931	$37,685	$38,454	$39,238	$40,038	$40,855	$41,689	$42,539
Government	$67,150	$68,520	$69,918	$71,344	$72,800	$74,285	$75,800	$77,347	$78,925	$80,535

Net Funding Required

The average net funding required between 2012 and 2021 is approximately $28,000, ranging from $24,600 (2013) to $54,316 (2012).

Table 4.7 ARNP Net Funding Required (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cost	$188,705	$161,718	$166,569	$176,287	$178,885	$190,412	$192,620	$199,500	$201,052	$204,036
Total revenue/funding	$134,388	$137,121	$139,909	$142,755	$145,658	$148,620	$151,643	$154,728	$157,876	$161,087
Market - Tourism fee	*$31,270*	*$31,908*	*$32,559*	*$33,223*	*$33,901*	*$34,592*	*$35,298*	*$36,018*	*$36,753*	*$37,503*
Market - Others	*$498*	*$500*	*$501*	*$502*	*$504*	*$505*	*$507*	*$508*	*$510*	*$511*
Donor	*$35,469*	*$36,193*	*$36,931*	*$37,685*	*$38,454*	*$39,238*	*$40,038*	*$40,855*	*$41,689*	*$42,539*
Government	*$67,150*	*$68,520*	*$69,918*	*$71,344*	*$72,800*	*$74,285*	*$75,800*	*$77,347*	*$78,925*	*$80,535*
Total Gap	$54,316	$24,597	$26,659	$33,533	$33,228	$41,792	$40,977	$44,772	$43,177	$42,948

Key Issues & Recommendations

ARNP is a well-established MPA with a functional management board and clear legal infrastructure that includes various proclamations (Presidential Proclamation, Municipal Resolution, Conservation Priority Areas Project). It also possesses clear memorandum of understandings (MOUs) between the national and local governments over management of the park.

For sustained management, and to reach the optimum level of protection, it is necessary for the ARNP to pursue an increasingly diverse set of financing sources. Table 4.6 provides a review of new, potential sources as well as their feasibility (e.g., measure of likelihood of implementation), potential scale (e.g.,

measure of funding or revenue potential), sustainability (e.g., measure of long-term consistency of implementation).

Table 4.6 ARNP Sustainable Financing Options

Category	Focus	Feasibility	Potential Scale	Sustainability
Government	Department of Tourism	Moderate	Moderate	High
Donor	Traditional donor-funding sources (e.g. private foundations, multilaterals, etc.)	Moderate	High	Moderate
Market	(Increased) tourism revenue fees (via price increases or through capturing a larger share of fees)	Moderate	Moderate	High

It is recommended that the following be the focus of future sustainable financing efforts:

- Engagement with the Department of Tourism to secure capital investments and other financial commitments for the ARNP;
- Analysis of traditional donor-funding opportunities (e.g. private foundations, multilaterals, etc.) and development of proposals; and
- Review of the existing entrance fee system to determine if price increases are feasible. In addition to a potential price increase, analysis should be done regarding the feasibility of more tourism entrance fee revenue being directly allocated to the ARNP.

Government

Public funding beyond DENR and the LGU should be explored. For example, the Department of Tourism (DOT) is an active player and promoter of the attractions of the park, yet their current investments are not coordinated or well harmonized with the general management plan for the park. An example of this is the construction of a desalination plant within the MPA in order to produce fresh water for the staff and tourism personnel that unfortunately resulted in a non-functioning and highly expensive venture. The DOT has its own budget allocation and should commit to particular cost components of the ARNP as part of its specific development plans.

Donor

The current donor-based funds almost entirely originate from WWF and Cebu Pacific's "Bright Skies for Every Juan" program. This is likely to remain an important contributor to the ARNP overall financing. In addition to ensuring its ongoing success, it is recommended that additional efforts to secure traditional donor-based financing be considered. For example, given the importance of the ARNP, and the species it

provides habitat for, there are likely funding avenues from private foundations, multilateral development banks, and other donors that could complement the existing WWF/Cebu Pacific partnership. A review of the specific possibilities should be reviewed and, depending on feasibility, proposals should target a few of these opportunities.

Market

Resource user fees (tourism entrance fees) currently contribute approximately 1/3 of the total financing of the ARNP. Tourism numbers have been increasing in the ARNP and will likely continue to increase in the future. In fact, foreign visitors totaled 1,274 in 2003 and reached 2,098 in 2010 (nearly a 100% increase). It is advised that the ARNP explore ways in which to capture more revenue from tourism-related fees. This can be done through increased entrance fees, or by capturing a larger percentage of entrance fee revenue.

5. Tubbataha Reef Natural Park

Sections
- Overview
- Legal & Institutional
- Financial Assessment
- Key Issues & Recommendations

Summary
- The Tubbataha Reef National Park (TRNP) is the largest MPA in the country and lies in the middle of the Sulu Sea.
- In addition to the range of legal provisions that exist to ensure the protection and management of TRNP, President Gloria Macapagal-Arroyo passed the Congressional Bill for TRNP (also called the Tubbataha Reefs Natural Park Act of 2009). The law establishes a 10-mile buffer zone around the 97,030-hectare no-take marine reserve.
- The projected average cost per year is $514,000 over the projection period of 2012-2021. TRNP is assumed to be in a relatively steady-state. In other words, the current personnel and level of activities represents the level required into the indefinite future.
- Personnel costs account for approximately 40% of total costs over the projection period.
- Enforcement represents the highest cost function, requiring a minimum of 45% of the total budget per year.
- The TRNP receives funding and revenue from a range of sources, including government (e.g. Provincial government of Palawan and the Philippine Coast Guard), market (e.g. tourism fees), and donor (e.g. WWF and UNESCO).
- The projected funding and revenue sources are likely to attract approximately $300,000 to $350,000 per year.

Overview

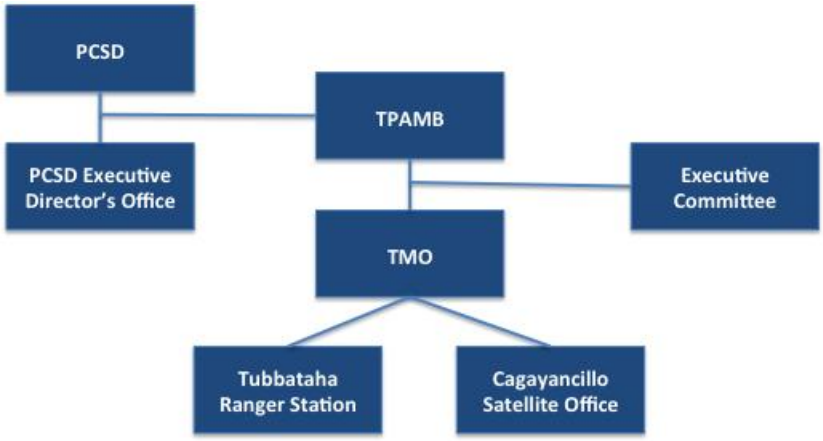
The Tubbataha Reef National Park (TRNP) is the largest MPA in the country and lies in the middle of the Sulu Sea. It is a globally important conservation area due to its diverse marine ecosystem, and is considered the second largest atoll in the world. The park is devoid of permanent inhabitants, and the residents within the municipality of Cagayancillo have agreed to forego rights for fishing access to Tubbataha. In return, the TRNP Management Plan stipulates that 10% of annual tourism revenues go to the municipality of Cagayancillo.

Legal & Institutional

The TRNP is a legally established area. In addition to the range of legal provisions that exist to ensure the protection and management of TRNP, President Gloria Macapagal-Arroyo passed the Congressional Bill for TRNP (also called the Tubbataha Reefs Natural Park Act of 2009). The law establishes a 10-mile buffer zone around the 97,030-hectare no-take marine reserve. This is a landmark law for protected areas in the sense that it diverges somewhat from the National Integrated Protected Areas System (NIPAS) Act; this law incorporates current lessons from the field of marine protected area management.

The Park is under the management of the Tubbataha Protected Area Management Board (TPAMB) that consists of a range of members from various government agencies, universities, and NGOs. The TPAMB is the policy-making body and the Tubbataha Management Office (TMO) implements the management plan. The TPAMB meets once every quarter to discuss policy issues while the Executive Committee meets on a monthly basis to address operational and administrative issues.

Figure 5.1. TRNP Organizational Structure



The TMO is based in Puerto Princessa city, the capital of the province of Palawan. A field station located in the North Atoll houses marine park rangers from the Philippine Navy, Philippine Coast Guard, Cagayancillo Municipality and TMO. This composite team of law enforcers is assigned in the Park on two-months rotations.

Financial Assessment

A financial assessment was conducted to understand the costs to achieve a basic level of conservation objectives. A review of secured resources, including funding and revenue, was also documented to calculate the net funding required (e.g., the gap between the costs and resources). The data regarding costs and resources was captured through a review of available budgets and plans, as well as structured interviews.

Costs

The projected average cost per year is $514,000 over the projection period of 2012-2021. TRNP is assumed to be in a relatively steady-state. In other words, the current personnel and level of activities represents the level required into the indefinite future. For this reason, most year-to-year cost increases are due solely to inflation. However, capital asset purchases occur over certain periods. For example, every 5 years there is a communication overhaul, and every 2 years, boat engine overhaul.

Table 5.1 TRNP Costs by Budget Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$481,384	**$459,947**	**$495,712**	**$477,424**	**$524,175**	**$493,320**	**$548,997**	**$523,585**	**$564,207**	**$577,265**
Personnel	$157,355	$163,650	$170,196	$177,003	$184,083	$191,447	$199,105	$207,069	$215,352	$223,966
Contractors	$7,449	$3,595	$3,669	$7,914	$3,820	$3,898	$8,408	$4,058	$4,141	$8,933
Capital Assets	$62,501	$33,439	$57,296	$39,239	$76,065	$32,460	$70,552	$37,883	$64,538	$58,474
Asset Maintenance	$18,312	$18,686	$19,067	$19,456	$19,853	$20,258	$20,671	$21,093	$21,523	$21,962
Occupancy	$9,459	$9,651	$9,848	$10,049	$10,254	$10,463	$10,677	$10,895	$11,117	$11,344
Supplies & Material	$32,883	$33,554	$34,238	$35,100	$35,920	$36,653	$37,401	$38,052	$38,829	$39,621
Fuel	$58,488	$59,681	$60,899	$61,990	$64,415	$65,729	$67,070	$67,205	$68,576	$69,975
Travel	$49,249	$50,254	$51,279	$52,741	$54,228	$55,334	$56,463	$57,178	$58,344	$59,534
Miscellaneous	$85,689	$87,437	$89,221	$73,932	$75,538	$77,079	$78,651	$80,152	$81,787	$83,456

Figure 5.1 TRNP Costs by Budget Category (2012-2021)

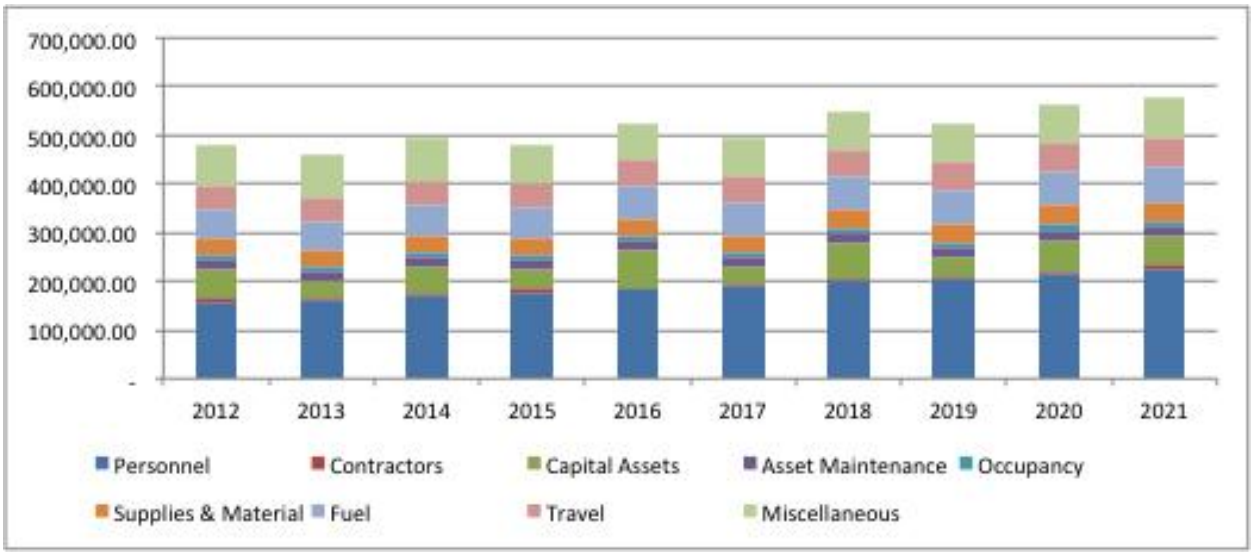


Table 5.2 TRNP Costs by Function (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$481,384	**$459,947**	**$495,712**	**$477,424**	**$524,175**	**$493,320**	**$548,997**	**$523,585**	**$564,207**	**$577,265**
Policy & Planning	$12,162	$12,597	$13,048	$13,515	$16,137	$14,504	$15,027	$15,569	$16,132	$19,080
Design & Zoning	-	-	-	-	-	-	-	-	-	-
Enforcement	$228,914	$210,851	$236,871	$226,253	$255,023	$236,010	$270,641	$248,820	$278,625	$269,452
Science & Monitoring	$134,194	$127,471	$133,525	$121,309	$126,962	$119,797	$136,730	$128,920	$135,531	$143,866
IEC & Community Engagement	$61,534	$62,999	$64,626	$67,069	$70,809	$70,320	$72,010	$73,880	$75,525	$79,716
Economic Development	-	-	-	-	-	-	-	-	-	-
Tourism Management	$11,651	$12,065	$12,495	$12,940	$15,539	$13,882	$14,380	$14,896	$15,432	$18,352
Administration & Financial Management	$32,929	$33,965	$35,148	$36,337	$39,705	$38,807	$40,209	$41,499	$42,962	$46,798

Key Cost Drivers

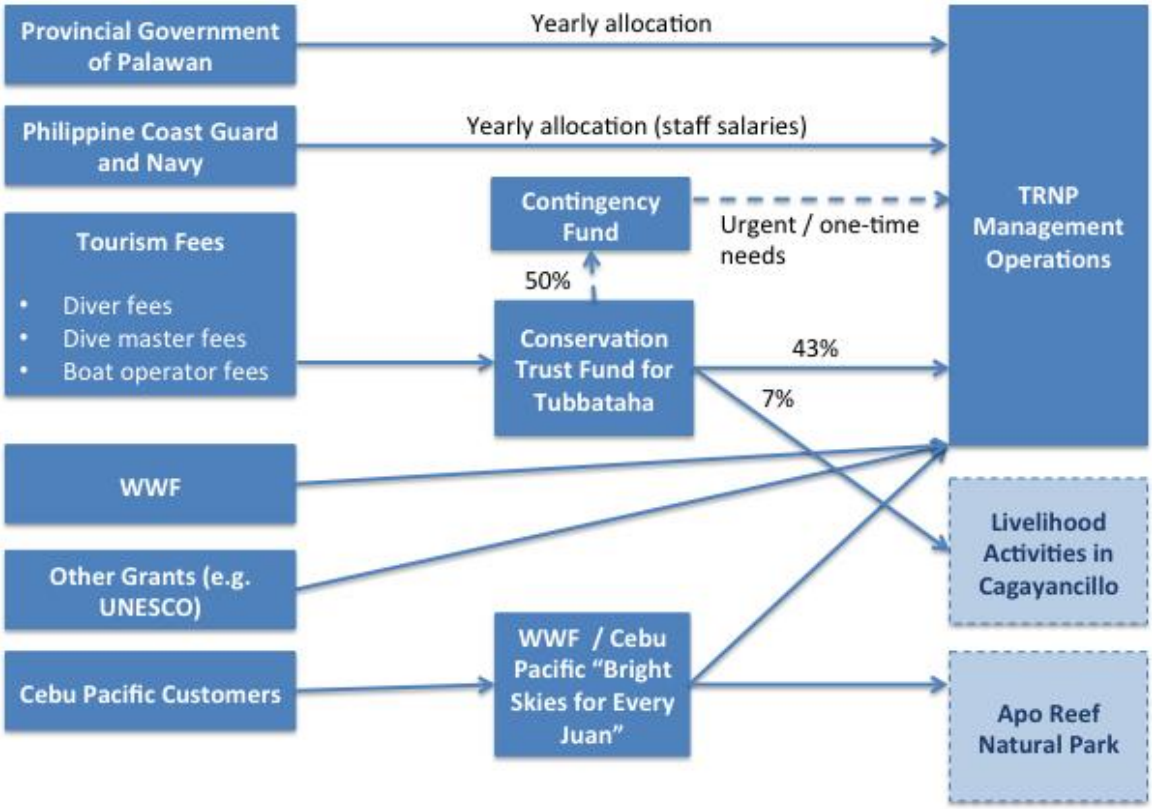
Key cost drivers for TRNP include the following:

- Personnel costs account for approximately 40% of total costs over the projection period.
- Enforcement represents the highest cost function, requiring a minimum of 45% of the total budget per year.

Financial Resources

The TRNP receives funding and revenue from a range of sources, including government (e.g. Provincial government of Palawan and the Philippine Coast Guard), market (e.g. tourism fees), and donor (e.g. WWF and UNESCO). A flow-chart highlighting the various sources is included in Figure 5.2.

Figure 5.2 TRNP Existing Funding & Revenue Sources



The government-sources include yearly allocations from the Provincial Government of Palawan and the Philippines Coast Guard and Navy. For the latter, the contributions are almost entirely to cover staff salaries. In terms of tourism fees, these include diver fees, dive master fees, and boat operator fees. These flow directly to the Conservation Trust Fund for Tubbataha. From here, 43% are allocated to the TRNP park management operations, 7% to livelihood activities in Cagayancillo, and 50% remains in the Contingency Fund. In the case of specific, urgent needs, it is possible for the TRNP to access funds from the Contingency Fund. The TPAMB is accountable for the management and disbursement of the fund and is subject to accounting and financial management procedures. The donor-related funds come via direct contributions by WWF, the WWF/Cebu Pacific "Bright Skies for Every Juan" program (as of 2012), and others (e.g. UNESCO, Global Giving).

Based on historical information as well as assumptions regarding growth rates, the following provides a projection of the 2012-2021 ARNP funding and revenue from market, donor, and government sources.

Table 5.3 TRNP Total Projected Funding & Revenue (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$289,581	**$295,489**	**$301,517**	**$307,668**	**$313,944**	**$320,348**	**$326,884**	**$333,552**	**$340,356**	**$347,300**
Market	$150,777	$153,853	$156,992	$160,194	$163,462	$166,797	$170,200	$173,672	$177,215	$180,830
Donor	$18,208	$18,579	$18,958	$19,345	$19,739	$20,142	$20,553	$20,972	$21,400	$21,837
Government	$120,596	$123,056	$125,567	$128,128	$130,742	$133,409	$136,131	$138,908	$141,742	$144,633

Net Funding Required

A fairly large net funding requirement is projected over the next ten years. A gap of $192,000 is currently projected for 2012. The average gap is projected to be $197,000 per year.

Table 5.4 TRNP Net Funding Required (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cost	$481,384	$459,947	$495,712	$477,424	$524,175	$493,320	$548,997	$523,585	$564,207	$577,265
Total revenue/funding	$289,581	$295,489	$301,517	$307,668	$313,944	$320,348	$326,884	$333,552	$340,356	$347,300
Market	*$150,777*	*$153,853*	*$156,992*	*$160,194*	*$163,462*	*$166,797*	*$170,200*	*$173,672*	*$177,215*	*$180,830*
Donor	*$18,208*	*$18,579*	*$18,958*	*$19,345*	*$19,739*	*$20,142*	*$20,553*	*$20,972*	*$21,400*	*$21,837*
Government	*$120,596*	*$123,056*	*$125,567*	*$128,128*	*$130,742*	*$133,409*	*$136,131*	*$138,908*	*$141,742*	*$144,633*
Total Gap	$191,803	$164,458	$194,195	$169,756	$210,231	$172,972	$222,113	$190,033	$223,851	$229,965

Key Issues & Recommendations

As noted earlier, the cost for TRNP averages $514,000 per year, with a funding gap of approximately $197,000. A variety of government, donor and market-driven sources will be required to fill this gap. The Tubbataha Business Plan (2008) identified the following sustainable financing options:

1. Increase revenues from tourism to cover up to 80% of the core costs of TRNP management.
2. Secure a PHP 10 million Contingency Fund by 2012.

According to key informants, these targets are still far from being achieved, and the Contingency Fund has been depleted several times. For sustained management, and to reach the optimum level of protection, it is necessary for the TRNP to pursue an increasingly diverse set of financing sources. Table 5.5 provides a review of new, potential sources as well as their feasibility (e.g., measure of likelihood of implementation), potential scale (e.g., measure of funding or revenue potential), sustainability (e.g., measure of long-term consistency of implementation).

Table 5.5 Tubbataha Sustainable Financing Options

Category	Focus	Feasibility	Potential Scale	Sustainability
Government	(Increased) Provincial government Allocation (based on a percentage of total management cost commitment)	Moderate	Moderate	High
	(Increased) financing from the Coast Guard and Navy to assist with basic scientific research and monitoring	Low	Moderate	Moderate
Donor	Capitalization of the Tubbataha	Low to Moderate	High	High

	Conservation Trust Fund (especially the Contingency Fund)			
Market	Review and potential revision of the Boat Operator Vessel Entry Fees	Moderate to High	Moderate	High

Government

Efforts should be made to secure commitment from the Provincial government for a yearly allocation pegged to a percentage of total operating costs. Currently, its contributions are not fixed. In 2010, it gave approximately $93,000 to the annual budget, but it was then slashed it in half for 2011, amounting to $41,860. The high degree of variance makes it very difficult to plan ahead and ensure that sufficient financial resources are in place for annual TRNP park management operations. Moving away from ad hoc allocations to a percentage-based approach, or possibly some other pre-determined formula/calculation, would ensure that the TRNP could plan accordingly.

The Coast Guard and Navy currently spend nearly $78,000 per year to cover the costs associated with staff personnel and, to some extent, operating costs. Given the amount of time that these groups spend in the area, it may make sense for them to be trained in basic scientific research and monitoring so that they can engage in these extra activities during their enforcement/patrolling efforts. This would reduce the need for other groups to spend time and fuel fulfilling these obligations, and would likely increase the capacity and understanding of the Coast Guard and Navy staff in terms of the importance of conserving TRNP. If possible, financing for this capacity building and ongoing implementation could come directly from the Coast Guard and Navy. If this turns out to be infeasible, a cost-benefit analysis should be conducted to determine whether training these individuals and providing the necessary supplies for implementation is cheaper than the current practices.

Donor

The Tubbataha Conservation Trust Fund plays an important role in capturing tourism fees. However, the Contingency Fund portion of it has managed to be depleted several times. In order to ensure that this mechanism provides adequate financing for TRNP management operations, it is advised that efforts be made to capitalize it with funds beyond tourism fees. Several private foundations and multilateral development banks currently provide financing for trust fund capitalization. A study should be conducted to assess the range of feasible options, and a fund business plan should be drafted to serve as a tool to facilitate discussions with potential donors. As a starting point, the following groups should be considered as potential donors:

- The Global Conservation Fund (GCF); and
- The Global Environment Facility (GEF).

Market

The existing tourism fees include those for divers, dive masters, and boat operators. The existing boat operator fees are structured as such:

- 100 gross tons or below PHP 3,000 (approximately $70)
- 101 to 200 gross tons PHP 4,500 (approximately $105)
- 201 gross tons and above PHP 6,000 (approximately $140)

Given that all tourism-related activities are on boats, and that any increase in tourism will come from either increased tourists per boat or new boats, revision of these fees should be considered to capture a higher amount per boat. The revised amount should reflect the cost of protecting the TRNP to ensure that tourism continues. In other words, because tourism relies upon the ongoing health of the biodiversity in the TRNP, it should be accountable for providing more financial resources to the protection of the area.

6. Apo Island Protected Landscape and Seascape

Sections
- Overview
- Legal & Institutional
- Financial Assessment
- Key Issues & Recommendations

Summary
- Apo Island Protected Landscape and Seascape (AIPLS) is situated in Sulu Sea about 7.5 kilometres off the south-eastern coast Negros Island under the jurisdiction of the municipality of Dauin, Negros Oriental.
- The projected cost per year averages $104,000 over the projection period of 2012-2021.
- Personnel occupy 53% of total costs over the projection period, while supplies and materials comprise roughly 24%.
- Projected increase in science and monitoring costs is almost triple its current cost, recurring every 3 years, making science and monitoring the projected highest expense starting 2012 every 3 years.
- The net funding requirement for AIPLS varies from $20,000 in the first year, $28,983 in year 5 and $34,000 in year 10. For each of the other years it is projected that there will be a surplus.
- A well-managed increase in tourism arrivals is likely going to be sufficient to help cover the ongoing costs associated with AIPLS. As such, we make no recommendations specifically for AIPLS.

Overview

Apo Island Protected Landscape and Seascape (AIPLS) is situated in Sulu Sea about 7.5 kilometers off the southeastern coast Negros Island under the jurisdiction of the municipality of Dauin, Negros Oriental. The AIPLS is a pioneering MPA established by the local community to encourage fish stock regeneration. Today, it is characterized with rich coastal and marine ecosystems.

Apo Island is a small island in the Sulu Sea located near Negros Island in the Visayan section of the Philippines. Apo Island is 74 ha in area and has about 700 residents. It is a volcanic island surrounded by coral reefs. The primary livelihoods are fishing and tourism.

Legal & Institutional

In 1979, Siliman University initiated an environmental conservation program in the island as part of its extension services. After learning of the importance of marine conservation for regenerating fish stocks, community members along with assistance from local government and the University declared a 500 meter stretch of coral reef as a marine sanctuary after Resolution no. 15 of the Sangguniang Bayan and Municipal Ordinance dated November 3, 1986 entitled “An Ordinance Protecting the Reserve Fish Sanctuary of Apo Island, Dauin, Negros Oriental.”

On August 9, 1994, the island and its immediate marine environment was proclaimed as Apo Island Protected Landscape and Seascape (AIPLS) under the National Integrated Protected Areas System to

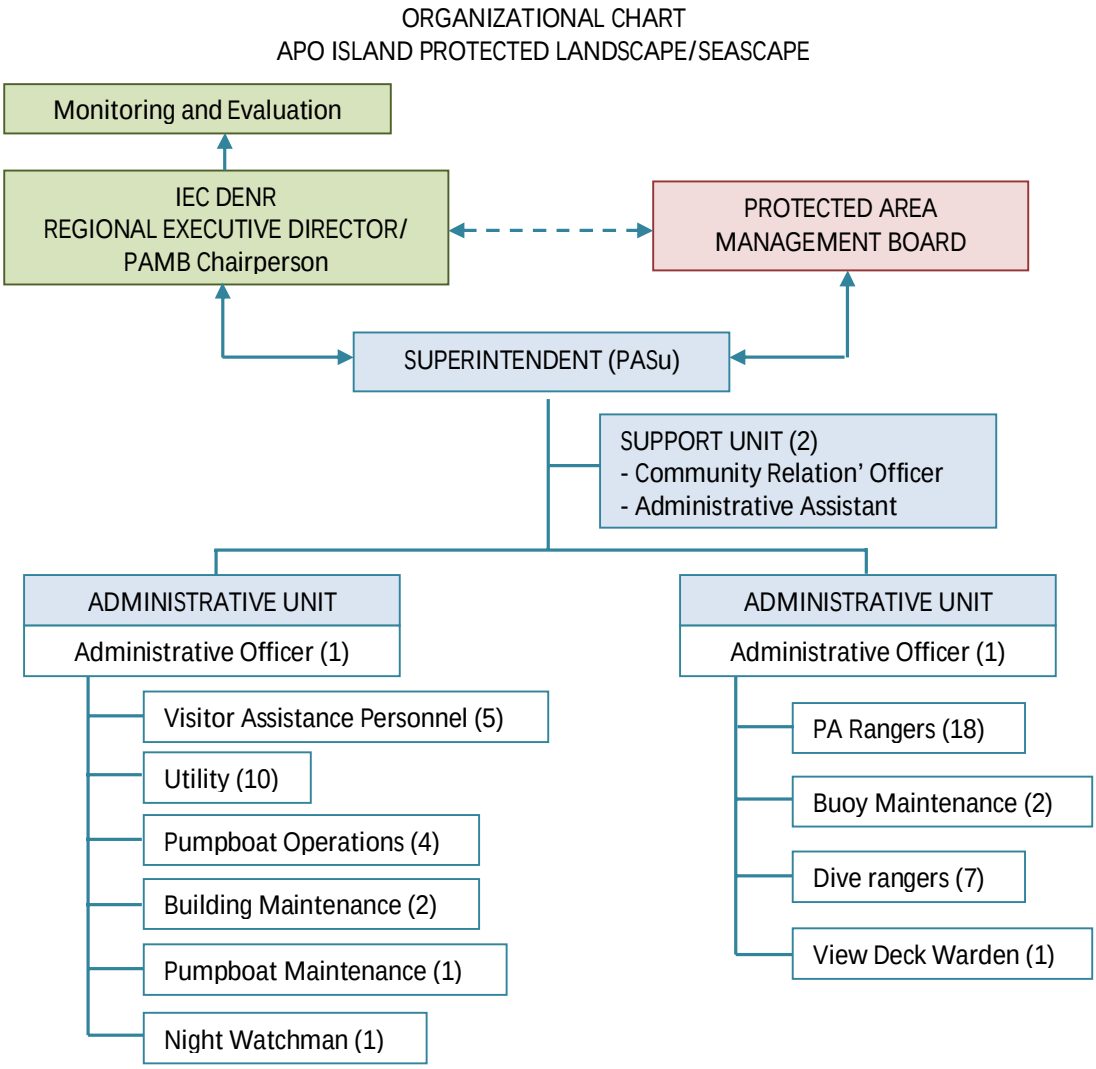
protect and conserve the ecological, scientific, educational, economic and recreational values of the islands. It also aims to pursue sustainable development of the area to address the social and economic needs of the local community without causing adverse impact on the environment. The Protected Area Management Board (PAMB) started to function in 1998 and the systematic collection of Protected Area User's Fee was implemented in December 1999.

The Park is under the management of the Protected Area Management Board composed of the following members:

- DENR-Ro7 Regional Executive Director
- Mayor, Dauin, Negros Oriental
- Provincial Planning Development Of Province of Negros Oriental
- Barangay Captain, Apo Island, Dauin, Negros Oriental
- Director, Silliman University Institute of Environment & Marine Science

The PAMB instructs the Management Office to implement management plans. The management structure is as below.

Figure 6.1 AIPLS Organizational Structure



The PAMB meets four times a year and occasionally for emergency meetings, such as when a dive boat sank. The PASU and the Support Unit form the secretariat of the PAMB.

Financial Assessment

A financial assessment was conducted to understand the costs to achieve a basic level of conservation objectives. A review of secured resources, including funding and revenue, were also documented to calculate the net funding required (e.g., the gap between the costs and resources). The data regarding costs and resources was captured through a review of available budgets and plans, as well as structured interviews.

Costs

The projected cost per year averages $104,000 over the projection period of 2012-2021.

Table 6.1 AIPLS Costs by Budget Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$116,527	**$78,371**	**$83,362**	**$84,338**	**$133,739**	**$92,756**	**$105,081**	**$95,520**	**$98,062**	**$151,632**
Personnel	$45,754	$47,584	$49,487	$51,467	$53,525	$55,666	$57,893	$60,209	$62,617	$65,122
Contractors	$1,750	$2,630	$1,822	$2,738	$1,282	$2,223	$1,335	$2,315	$1,390	$2,411
Capital Assets	$1,714	$1,206	$1,785	$1,934	$5,960	$5,232	$15,175	$681	$1,820	$5,955
Asset Maintenance	$3,390	$3,459	$3,529	$3,601	$3,675	$3,750	$3,826	$3,904	$3,984	$4,065
Occupancy	$1,407	$1,436	$1,465	$1,495	$1,525	$1,556	$1,588	$1,621	$1,654	$1,687
Supplies & Material	$39,015	$14,991	$17,328	$15,701	$42,297	$16,623	$17,127	$18,330	$18,125	$44,958
Fuel	$5,690	$2,774	$3,216	$2,913	$6,169	$3,033	$3,227	$3,396	$3,361	$6,435
Travel	$7,900	$2,963	$3,375	$3,106	$8,565	$3,234	$3,442	$3,567	$3,584	$9,116
Miscellaneous	$9,908	$1,327	$1,354	$1,382	$10,741	$1,439	$1,468	$1,498	$1,529	$11,883

Table 6.2 AIPLS Costs by Function Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$116,527	**$78,371**	**$83,362**	**$84,338**	**$133,739**	**$92,756**	**$105,081**	**$95,520**	**$98,062**	**$151,632**
Policy & Planning	$7,883	$8,247	$8,448	$8,868	$9,103	$10,030	$10,055	$10,054	$10,384	$10,938
Design & Zoning	$542	-	-	-	-	-	-	-	-	-
Enforcement	$25,845	$26,016	$27,855	$27,868	$29,689	$30,352	$34,598	$31,797	$34,043	$34,053
Science & Monitoring	$50,259	$13,068	$12,526	$14,141	$55,095	$14,446	$14,045	$14,550	$14,016	$62,472
IEC & Community Engagement	$8,492	$8,757	$9,504	$9,312	$9,564	$10,816	$11,784	$10,337	$11,271	$10,968
Economic Development	$7,811	$6,505	$8,402	$6,968	$8,826	$7,958	$8,360	$9,689	$8,096	$8,322
Tourism Management	$8,255	$8,377	$8,818	$9,099	$13,209	$10,134	$15,224	$10,142	$10,742	$15,143
Administration & Financial Management	$7,439	$7,401	$7,810	$8,080	$8,254	$9,020	$11,014	$8,951	$9,510	$9,735

Key Cost Drivers

- Personnel occupy 53% of total costs over the projection period, while supplies and materials comprise roughly 24%.
- Projected increase in science and monitoring costs is almost triple its current cost, recurring every 3 years, making science and monitoring the projected highest expense starting 2012 every 3 years.

Financial Resources

The AIPLS receives funding and revenue from local government budgets and tourism fees. Donor funding constitutes a small percentage of revenues (see Figure 6.3).

Table 6.3 AIPLS Total Funding & Revenue (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$97,213	**$100,041**	**$101,220**	**$104,164**	**$104,777**	**$107,830**	**$109,095**	**$112,274**	**$113,592**	**$116,902**
Market - Tourism	$84,823	$86,553	$88,319	$90,120	$91,959	$93,835	$95,749	$97,702	$99,695	$101,729
Donor	$568	$1,424	$591	$1,482	-	$916	-	$953	-	$993
Government	$11,823	$12,064	$12,310	$12,562	$12,818	$13,079	$13,346	$13,618	$13,896	$14,180

Net Funding Required

The net funding requirement for AIPLS varies from $20,000 in the first year, $28,983 in year 5 and $34,000 in year 10. For each of the other years it is projected that there will be a surplus. Our team believes that the total amount of potential revenues in coming years may be overestimated, however as it is no projected the AIPLS should be in fairly good shape.

Table 6.4 AIPLS Net Funding Required (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cost	$116,527	$78,371	$83,362	$84,338	$133,739	$92,756	$105,081	$95,520	$98,062	$151,632
Total revenue/funding	$97,213	$100,041	$101,220	$104,164	$104,777	$107,830	$109,095	$112,274	$113,592	$116,902
Market - Tourism	*$84,823*	*$86,553*	*$88,319*	*$90,120*	*$91,959*	*$93,835*	*$95,749*	*$97,702*	*$99,695*	*$101,729*
Donor	*$568*	*$1,424*	*$591*	*$1,482*	-	*$916*	-	*$953*	-	*$993*
Government	*$11,823*	*$12,064*	*$12,310*	*$12,562*	*$12,818*	*$13,079*	*$13,346*	*$13,618*	*$13,896*	*$14,180*
Total Gap	$19,314	($21,670)	($17,858)	($19,827)	$28,963	($15,073)	($4,014)	($16,754)	($15,530)	$34,730

Key Issues & Recommendations

As noted above, there is only a small funding gap projected for AIPLS. A well-managed increase in tourism arrivals is likely going to be sufficient to help cover the ongoing costs associated with AIPLS. As such, we make no recommendations specifically for AIPLS.

- That said, we do recommend a further cost analysis and management plan assessment be conducted to confirm the costs and future revenue potential of this MPA.
- Also, while most of NIPAS-declared MPAs have devolved governance and financing commitments to LGUs, Apo Island is solely managed by DENR (under the PAMB directives). It may be wise to consider opening channels between the LGU of Dauin and DENR through PENRO to co-manage the AIPLS for the long term.

7. Gilotongan Marine Reserve

Sections
- Overview
- Legal & Institutional
- Financial Assessment
- Key Issues & Recommendations

Summary
- Giltutongan Island Marine Sanctuary is located at the west coast of Gilutongan Island, Cordova, Cebu.
- The Gilutongan Marine Sanctuary is a legally declared Marine Protected Area (MPA) of the Municipality of Cordova, Cebu. It is the first MPA of Cordova, which was conceptualized in 1980s but only gained a legal personality in 1991 by virtue of Ordinance No. 008 Series of 1991.
- The average cost to manage GMS is $29,893 from the projection period 2012-2021.
- Personnel costs account for approximately 67% of total costs over the projection period.
- Activity costs are driven by economic development, protection of sanctuary, and fuel for patrolling.
- Based on the cost and revenue data collected for GMS there does not appear to be a funding gap. In fact there is a fairly large profit realized by the GMS operations and revenue collection.
- All revenue is received through tourism related fees and concessions. This atypical of MPAs and in fact the data provided to our team needs to be further reviewed and analysed for accuracy. These projections are most likely not fully and totally accurate. There is most likely a gap to be understood and filled.

Overview

Gilutongan is one of the thirteen barangays of the Municipality of Cordova, Cebu. It is the only island barangay located some three to four nautical miles from the mainland portion of the town, and can only be reached through a motorized outrigger boat.

The Gilutongan Marine Sanctuary (GMS) was established local leaders in 1999 over concerns regarding dwindling fish stocks. It was established with assistance from national government agencies such as the DENR through the CRMP, and the BFAR, as well as with support from NGOs. Dive shop owners and operators also provided assistance for its establishment.

Legal & Institutional

The GMS was formally established by virtue of Ordinance No. 008 Series of 1991, which has since been anchored on Republic Act 8550 or the Philippine Fisheries Code of 1998, Section 16, which states that the municipal/city government shall have jurisdiction over municipal waters. It also states that the municipality/city government, in coordination with Fisheries and Aquatic Resources Management Council (FARMC), shall enact appropriate ordinances for this purpose and in accordance with the National Fisheries Policy.

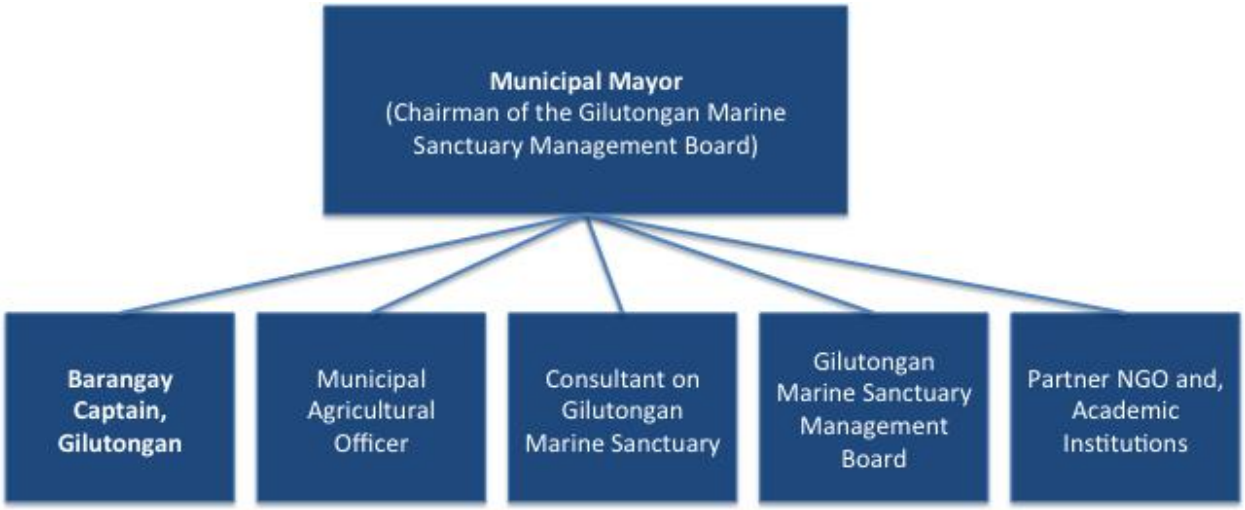
From 1991 up to the present, the Ordinance establishing the Gilutongan Marine Sanctuary has been amended twice: in 1999, by virtue of Local Ordinance which added the provision of the Environmental User's Fee (EUF) System and in 2007, by virtue of another Ordinance which increased the EUF rates.

This GMS Management Plan provides general directions and strategic plans for the Sanctuary, which is based on confronting issues and capitalizing on development opportunities. The plan is anchored on the principles of sustainable development and ensuring the conservation of coastal and marine resources for the future generations of Cordova's. It focuses on the importance of community participation in environmental awareness and inculcating a sense of ownership of the MPA. It also attempts to address the challenges faced by management such as illegal fishing practices, inadequate livelihood opportunities, and an influx of tourists (which threatens the sanctuary's carrying capacity).

In 2007, there was a proposal to collaborate with a private firm, the Hei Yang Sports Management Corporation, in the management of GMS. The potential collaboration focused on marketing and management of the 20-meter buffer zone. A Memorandum of Agreement (MOA) was executed between the Municipality of Cordova and the Hei Yang Sports Management Corporations. With that collaboration, the Municipality of Cordova was entitled to receive a gross amount of Six Million Pesos (PHP 6,000,000) annually or a total of 18 million Pesos (PHP 18,000,000) for three years.[25] The Agreement expired on June 3, 2011, and was later renewed on October 12, 2011. It remains in place today.

The Gilutongan Marine Sanctuary is governed by the Gilutongan Marine Sanctuary Management Board, with the Municipal Mayor as Chairman. The members include: Municipal Vice-Mayor, the Sangguniang Bayan Members, the Municipal Planning and Development Coordinator, the Municipal Agricultural Officer, the President of MFARM-C[26], the Barangay Captain of Gilutongan, and the Consultant of the Gilutongan Marine Sanctuary. The Sangguniang Bayan Secretary serves as the Secretariat.

Figure 7.1 GMS Organizational Structure



[25] Agreement was good for three (3) years unless sooner revoked by the Municipality of Cordova

[26] Municipal Fisheries and Aquatic Resource Management Council

Financial Assessment

A financial assessment was conducted to understand the costs to achieve a basic level of conservation objectives—which in the case of GMS is to encourage fish stocks. A review of secured resources, including funding and revenue, were also documented to calculate the net funding required (e.g. the gap between the costs and resources). The data regarding costs and resources was captured through a review of available budgets and plans, as well as interviews.

Costs

The projected cost per year averages $29,893 over the projection period of 2012-2021.

Table 7.1 GMS Costs by Budget Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$25,154	$26,226	$26,468	$28,894	$30,644	$29,638	$30,669	$31,517	$32,337	$37,384
Personnel	$16,658	$17,324	$18,017	$18,738	$19,487	$20,267	$21,077	$21,921	$22,797	$23,709
Contractors	-	-	-	-	-	-	-	-	-	-
Capital Assets	$520	$603	$146	$1,682	$2,509	$548	$587	$409	$165	$4,109
Asset Maintenance	$47	$48	$49	$50	$51	$52	$53	$54	$56	$57
Occupancy	$426	$434	$443	$452	$461	$471	$480	$490	$500	$510
Supplies & Material	$6,054	$6,222	$6,304	$6,433	$6,564	$6,698	$6,834	$6,974	$7,116	$7,261
Fuel	$1,449	$1,594	$1,509	$1,540	$1,571	$1,603	$1,636	$1,669	$1,703	$1,738
Travel	-	-	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-	-	-

Table 7.2 GMS Costs by Function Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$25,154	$26,226	$26,468	$28,894	$30,644	$29,638	$30,669	$31,517	$32,337	$37,384
Policy & Planning	$743	$773	$804	$836	$870	$904	$941	$978	$1,017	$1,058
Design & Zoning	$680	$707	$735	$764	$795	$827	$860	$894	$930	$967
Enforcement	$10,041	$10,832	$10,656	$11,765	$12,148	$12,249	$12,415	$13,094	$13,198	$15,159
Science & Monitoring	$2,397	$2,461	$2,536	$2,678	$2,824	$2,796	$2,910	$2,977	$3,085	$3,364
IEC & Community Engagement	$420	$440	$453	$470	$487	$506	$525	$545	$566	$587
Economic Development	$4,729	$4,826	$4,924	$5,025	$5,127	$5,232	$5,338	$5,447	$5,558	$5,672
Tourism Management	$6,144	$6,187	$6,360	$7,356	$8,392	$7,125	$7,679	$7,581	$7,983	$10,577
Administration & Financial Management	-	-	-	-	-	-	-	-	-	-

Activities

There are 5 main activities currently being implemented in GMS based on their annual and financial work plan for 2011. For 2012, the projected total cost of activities is $7,503, which is approximately 30% of the total cost in 2012.

Table 7.3 GMS Activities (2012)

Activity	Cost (US$)
Protection of the sanctuary / core zone – Regular Patrol	$1,087
Coral reef monitoring	$757
Coastal Clean-up	$81
Mooring Buoy Installation	$412

Economic Development Support	$4,651
Total	$6,988

Key Cost Drivers

- Personnel costs account for approximately 67% of total costs over the projection period.
- Activity costs are driven by economic development, protection of sanctuary, and fuel for patrolling.

Financial Resources

The GMS receives funding and revenue almost exclusively from tourism fees (see Figure 7.4).

Table 7.4 GMS Total Funding & Revenue (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$111,233	**$111,233**	**$111,233**	**$111,233**	**$111,233**	**$111,233**	**$111,233**	**$111,233**	**$111,233**	**$111,233**
Market - Concession fee	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233
Donor	-	-	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-

Net Funding Required

Based on the cost and revenue data collected for GMS there does not appear to be a funding gap. In fact there is a fairly large profit realized by the GMS operations and revenue collection. All revenue is received through tourism related fees and concessions. This atypical of MPAs and in fact the data provided to our team needs to be further reviewed and analyzed for accuracy. These projections are most likely not fully and totally accurate. There is most likely a gap to be understood and filled.

Table 7.5 GMS Net Funding Required (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cost	$25,154	$26,226	$26,468	$28,894	$30,644	$29,638	$30,669	$31,517	$32,337	$37,384
Total revenue/funding	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233
Market - Concession fee	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233	$111,233
Donor	-	-	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-
Total Gap	($86,079)	($85,007)	($84,765)	($82,339)	($80,589)	($81,595)	($80,565)	($79,717)	($78,896)	($73,849)

Key Issues & Recommendations

As noted above, there is essentially no funding gap of concern for GMS. As such, we make no recommendations specifically for this MPA.

- We do recommend a further cost analysis and management plan assessment be conducted to confirm the costs and future revenue potential of this MPA.

8. Hinobaan MPA

Sections
- Overview
- Legal & Institutional
- Financial Assessment
- Key Issues & Recommendations

Summary
- The Palm Reef Marine Reserve and Sanctuary (Hinobaan MPA) in Hinobaan Negros Oriental is located in Barangay Pook, a small offshore reef about 1 km from the mainland.
- It was declared a marine reserve and sanctuary through Municipal Ordinance No. 2003-06.
- The projected cost per year averages $36,381 over the projection period of 2012-2021.
- Personnel costs account for more than 50% of total costs over the projection period. Capital costs significantly increase in 2019 and 2021 to repurchase assets. Enforcement comprises more than 43% of total costs over the projection period.
- In 2012 a gap of $24,115 is currently projected. The average gap is $31,712 per year. All projected revenues are from donors.

Overview

The Palm Reef Marine Reserve and Sanctuary (Hinobaan MPA) in Hinobaan Negros Oriental is located in Barangay Pook, a small offshore reef about 1 km from the mainland. There have been numerous problems encountered since its establishment in 2003, including the persistent negative reaction of municipal fishermen and community members, the initial lack of interest of local officials, under-functioning Management Board, suspicions raised over the presence of westerners, and insufficient support overall.

Local government units such the Municipal Agriculture Office, the Municipal Planning Department Office, the Rural Health Unit, and the Municipal Social Work Division have worked to address these challenges through the introduction of various educational and awareness campaigns regarding the importance of MPA establishment, the benefits of the marine reserve and sanctuary to the lives of community members.

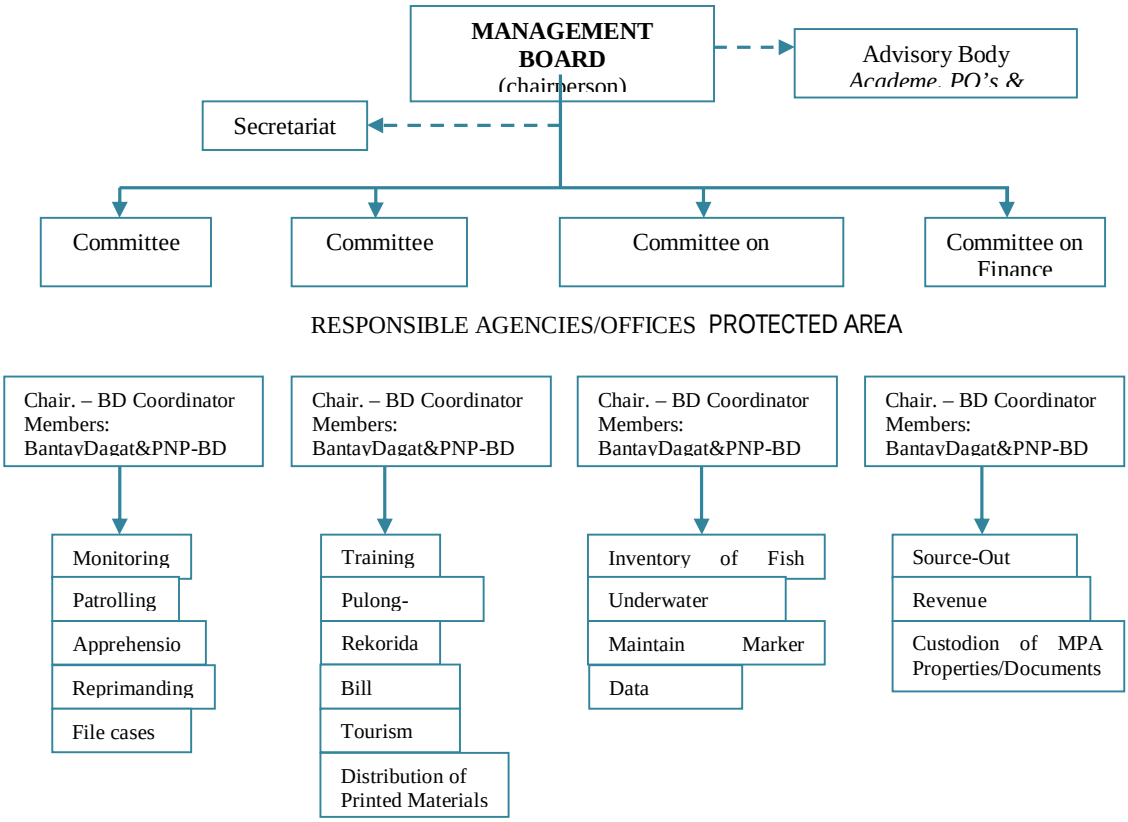
With support from the provincial government and national offices like the DENR and the Department of Education, the Department of Agriculture as well as GTZ, technical trainings were conducted to build capacity of a skilled team, paving the way for the creation of a "Fishery Technical" staff.

Legal & Institutional

It was declared a marine reserve and sanctuary through Municipal Ordinance No. 2003-06, which is "an ordinance naming and declaring Palm Reef located at the western side of Barangay Pook, Municipality of Hinoba-an, Negros Occidental as Marine Reserve and Sanctuary, regulating the activities therein and for other purposes."

The organizational structure below shows the various roles and responsibilities of the members of the Management Board.

PROPOSED ORGANIZATIONAL STRUCTURE
Palm Reef Marine Reserve and Sunctuary, *Brgy.PookHinoba-an, Negros Occidental*



Financial Assessment

Costs

The projected cost per year averages $36,381 over the projection period of 2012-2021.

Table 8.1 Hinobaan Costs by Budget Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$28,371	**$26,816**	**$32,134**	**$29,929**	**$31,687**	**$32,332**	**$31,329**	**$67,783**	**$33,903**	**$49,527**
Personnel	$14,228	$14,797	$15,389	$16,005	$16,645	$17,311	$18,003	$18,723	$19,472	$20,251
Contractors	$4,256	$4,343	$4,432	$4,522	$4,614	$4,709	$4,805	$4,903	$5,003	$5,105
Capital Assets	$2,365	-	$4,481	-	$833	$523	-	$35,462	$556	$15,101
Asset Maintenance	$3,039	$3,101	$3,164	$3,228	$3,294	$3,361	$3,430	$3,500	$3,571	$3,644
Occupancy	$312	$318	$325	$332	$338	$345	$352	$360	$367	$374
Supplies & Material	$1,577	$1,609	$1,642	$2,168	$2,212	$2,257	$1,811	$1,848	$1,886	$1,940
Fuel	$2,594	$2,647	$2,701	$3,675	$3,750	$3,826	$2,928	$2,988	$3,049	$3,111
Travel	-	-	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-	-	-

Table 8.2 Hinobaan Costs by Function Category (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$28,371	**$26,816**	**$32,134**	**$29,929**	**$31,687**	**$32,332**	**$31,329**	**$67,783**	**$33,903**	**$49,527**
Policy & Planning	$3,829	$3,970	$4,116	$4,268	$4,426	$4,590	$4,760	$4,937	$5,121	$5,311
Design & Zoning	$877	$904	$932	$960	$990	$1,021	$1,052	$1,085	$1,119	$1,154
Enforcement	$11,892	$10,543	$12,731	$12,090	$12,780	$13,338	$12,235	$40,771	$13,549	$15,746
Science & Monitoring	$5,030	$4,691	$6,404	$5,360	$5,765	$5,675	$5,427	$10,274	$5,756	$18,117
IEC & Community Engagement	$4,840	$4,750	$5,936	$5,162	$5,576	$5,497	$5,563	$8,358	$5,929	$6,682
Economic Development	$323	$330	$338	$351	$359	$367	$380	$389	$398	$412
Tourism Management	$287	$293	$299	$310	$316	$323	$334	$341	$348	$361
Administration & Financial Management	$1,292	$1,334	$1,378	$1,427	$1,474	$1,522	$1,577	$1,629	$1,683	$1,744

Key Cost Drivers

- Personnel costs account for more than 50% of total costs over the projection period.
- Capital costs significantly increase in 2019 and 2021 to repurchase assets.
- Enforcement comprises more than 43% of total costs over the projection period.

Financial Resources

There are only two primary sources of revenues: government allocation and donor funding from German International Cooperation / Gesellschaft für Internationale Zusammenarbeit (GIZ).

Government

The LGU's contribution to MPA management was $8,308 in 2011 to cover all budget categories except salaries of personnel. This amount is roughly calculated from the manner in which the budget for MPA is management is currently allocated by the LGU: From the 20% Development Fund, the amount of PHP 300,000 ($6,976) is allocated for coastal resource management. From the latter, PHP 200,000 ($4,651) goes to the Coastal and Fishery Resource Management which includes MPA management. And 100,000 PHP ($2,325) is for annual contribution to the Southern Negros Coastal Development Management Council (an alliance in which the MPA is a member). Furthermore, the LGU allocates PHP 100,000 per year (US$2,325) for agriculture, and the MPA gets a small portion from the agriculture budget especially once the budget from the CFRM for MPA runs out.

Including the salaries of staff fully employed by the LGU and contributing part-time work to MPA management, this cost model calculates that the LGU contribution amounts to $22,535 per year. The amount corresponds to 4.5% of its Development Fund.

In terms of donors, the GIZ will provide capital assets such as guardhouse, pumpboat, buoys, computers, printers and other equipment, as well as built capacity of managers through MPA Board strengthening, amounting to $4,256, on average, until 2021.

The MPA has not yet collected resource user fees. The management has prepared a proposal for mangrove tourism with the hope of securing funding for initial investments, specifically, the construction of a footbridge over the mangroves, from targeted donors such as small grants within GIZ.

Table 8.3 Hinobaan Total Funding & Revenue (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	$4,256	$4,343	$4,432	$4,522	$4,614	$4,709	$4,805	$4,903	$5,003	$5,105
Market	-	-	-	-	-	-	-	-	-	-
Donor	$4,256	$4,343	$4,432	$4,522	$4,614	$4,709	$4,805	$4,903	$5,003	$5,105
Government	-	-	-	-	-	-	-	-	-	-

Net Funding Required

In 2012 a gap of $24,115 is currently projected. The average gap is $31,712 per year. All projected revenues are from donors.

Table 8.4 Hinobaan Net Funding Required (2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cost	$28,371	$26,816	$32,134	$29,929	$31,687	$32,332	$31,329	$67,783	$33,903	$49,527
Total revenue/funding	$4,256	$4,343	$4,432	$4,522	$4,614	$4,709	$4,805	$4,903	$5,003	$5,105
Market	-	-	-	-	-	-	-	-	-	-
Donor	*$4,256*	*$4,343*	*$4,432*	*$4,522*	*$4,614*	*$4,709*	*$4,805*	*$4,903*	*$5,003*	*$5,105*
Government	-	-	-	-	-	-	-	-	-	-
Total Gap	$24,115	$22,473	$27,702	$25,407	$27,072	$27,624	$26,525	$62,881	$28,901	$44,422

Key Issues & Recommendations

With a funding gap of approximately $25,000 per year it will be important to secure new sources of revenue from both government allocations and market-based fees (tourism).

- The legal and institutional framework for the future establishment and full-functionality of this MPA is in place. However, provisions for collection of fees, fines and other sources of income need to be enacted once the Management Board has approved such policies.

Table 8.5 Hinobaan MPA Sustainable Financing Options

Category	Source	Feasibility	Potential Scale	Sustainability
Government	IRA and Development Fund	High (supporting 80% of cost of running the MPA)	Moderate	Moderate
Donor	GIZ	Moderate	Low	Low
Market	Tourism user fees Possibility to concession out the buffer zone?	Moderate	Moderate	Moderate

Government

Local government

To ensure sustainable financial support for the MPA, there should be a municipal ordinance stating that a fixed percentage of the Development Fund will be allocated to the MPA.

National government

National government agencies have several budget lines that could be pursued. The Department of Science and Technology can be called upon for fisheries management in its buffer zones. BFAR also trains and deputizes Bantay Dagat for MPA protection, and could be utilized for technical assistance and training. In addition, DENR-PAWB assists with zoning and other technical expertise such as biodiversity monitoring and assessment. The DOT should be called upon to help with tourism development. Coordinating with the Philippine National Police to conduct enforcement activities should also be considered.

Donor

The primary existing donor, GIZ, should train MPA appropriate LGU-MPA managers on how to develop proposals. Targets could include the small-grants program of the UNDP World Bank.

Market

The identified tourism investment is the development of a mangrove tourism walkway. A business plan should be made with potential revenues with the corresponding cost of investments. The local government is convinced that there is a potential for tourism product and activities promotion with revenues collected by the LGU. The question remains how and whether a legal basis for developing such a fee exists.

9. SSME Philippines System Projections

Sections
- Overview
- NIPAS MPAs
- Locally-managed MPAs
- Discussion

Summary
- In order to project the cost for the entire eco-region, two archetypes were defined:
  1. NIPAS or national MPAs which fall under the management of the DENR-PAWB, and
  2. Locally managed MPAs that are managed by the local government unit or a local organization.
- Based on several sources, there are currently 579 MPAs in the Philippines SSME, 552 LGU (locally-managed) MPAs and 27 NIPAS MPAs.
- The 27 NIPAS MPAs within the SSME occupy a total of 1,220,775.59 hectares. Utilizing our 3 NIPAS MPA archetypes, Apo Reef Natural Park, Apo Island Protected Landscape and Seascape and Tubbataha Reef National Park, the average cost per hectare is $10.36 for archetype >7,500 ha and $126.94 for archetype <7,500 ha. For the entire SSME, the projected costs for all NIPAS MPAs total $16,299,285 annually.
- Locally managed MPAs are plentiful, and for the purpose of this study, we only used those with recorded size measurements. This leads to an exclusion of three areas. Our archetypes for the LGU-managed MPAs are Gilotongan Island Marine Sanctuary and Palm Reef Reserve and Sanctuary from the municality of Hinobaan in Negros Oriental. The average cost per MPA is $28,483 per year. Multiplying it with number of locally-managed MPAs occupy within the SSME, we arrive at the figure of $15,722,694 per year to protect and manage these MPAs.

Overview

In order to project the cost for the entire eco-region, two archetypes were defined:

3. NIPAS or national MPAs which fall under the management of the DENR-PAWB, and
4. Locally managed MPAs that are managed by the local government unit or a local organization.

Based on several sources,[27] there are currently 644 MPAs in the Philippines, 579 of which are in the SSME. Of these, 27 are NIPAS MPAs and 552 are locally managed MPAs.

[27] References include: 1. Silliman University Angelo King - Center for Research and Environmental Management 2010 MPA list, unpublished. 2. MEAT-Ecogov unpublished list. And 3) CCEF online MPA Database.

Table 9.1 MPAs in the Philippine

Level	Total Established Across the Philippines *2006 Abesamis and Alino*	Total Established Across the Philippines *2011 Marine Support Network unpublished list*	Total Established within the SSME *Mazar Starling Resources Count 2011*[28]
All LGU MPAs	870 +125 proposed	1,044 (including NIPAS)	552
All NIPAS MPAs	27	28 (from CI)	27
Total within SSME	*343*	*Not determined*	*579*

*Collated from Suakcrem[29], MEAT Ecogov, CCEF online MPA database.

NIPAS MPAs

The 27 NIPAS MPAs within the SSME occupy a total of 1,220,775.59 hectares. Utilizing our 3 NIPAS MPA archetypes, Apo Reef Natural Park, Apo Island Protected Landscape and Seascape and Tubbataha Reef National Park, the average cost per hectare is $10.36 for archetype >7,500 ha and $126.94 for archetype <7,500 ha. For the entire SSME, the projected costs for all NIPAS MPAs total $16,299,285 annually.

Table 9.2 Cost Projection for SSME—NIPAS MPAs

Archetype (>7,500 ha)	*Size (ha)*
Apo Reef Marine Reserve	27,469.00
Tubbataha Reef National Marine Park	33,200.00
Average	**30,334.50**
Average cost per hectare	**$10.36**

Archetype (<7,500 ha)	
Apo Island Protected Landscape and Seascape	691.45
Average cost per hectare	**$126.94**

MPA	Number	Total Size (ha)	Total Cost
> 7,500 ha	13	1,189,463.00	$12,324,617.58
< 7,500 ha	14	31,312.59	$3,974,667.42
Total	27	1,220,775.59	**$16,299,285.00**

[28] Various sources. TNC (The Nature Conservancy), WWF (World Wildlife Fund), CI (Conservation International) and WCS (Wildlife Conservation Society) 2008. Marine protected area networks in the Coral Triangle: development and lessons. TNC, WWF, CI, WCS and the United States Agency for International Development, Cebu City, Philippines. 106 p, MEAT Ecogov, CCEF online MPA database.

[29] Silliman University Angelo King - Center for Research and Environmental Management 2010 MPA list.

Locally-managed MPAs

Locally managed MPAs are plentiful, and for the purpose of this study, we only used those with recorded size measurements. This leads to an exclusion of three areas. Our archetypes for the LGU-managed MPAs are Gilotongan Island Marine Sanctuary and Palm Reef Reserve and Sanctuary from the municality of Hinobaan in Negros Oriental. The average cost per MPA is $28,483 per year. Multiplying it with number of locally-managed MPAs occupy within the SSME, we arrive at the figure of $15,722,694 per year to protect and manage these MPAs.

Table 9.3 Cost Projections for SSME –Locally Managed MPAs

Archetype	*Size (ha)*	*Cost per site*	
Gilutongan Island Marine Sanctuary	14.89	$24,837.75	
Hinobaan	24.50	$30,698.64	
	Average cost per site	**28,483.14**	
	Number of site	Total Size (ha)	Total Cost
Locally managed MPA	552	76,621.20	**$15,722,693.70**

Discussion

The combined total areas of NIPAS MPAs and locally managed MPAs amount to 1,297,396.79 hectares. The cost to manage the whole eco-region annually is $32,021,979.

There are opportunities to potentially reduce this yearly cost. For example, locally-managed MPAs are urged to form networks as experts have found that it is more cost efficient to operate collectively. A study comparing coastal law enforcement costs by individual LGUs vs. inter-LGU alliance per square kilometer per year shows a reduction of cost per unit of up to 40-90% from the original scenario cost when the MPA waters are managed by a single LGU on its own.[30]

[30] *Ecogov Project 2011*. Lessons from the Philippines: Achieving Synergies through Marine Protected Area Networks. Philippine Environmental Governance Project (Ecogov), Pasig City, Philippines

10. Summary of Sustainable Financing Options and Other Conclusions

This section consists of an overview and assessment of the potential to strengthen existing sources of financing for MPAs in the SSME in general. It covers government, donor, and market sources.

Government

Integrated Protected Areas Fund

The implementation of the IPAF has proven problematic, mainly with the disbursement of funds back to the MPAs experiencing delays, among other limitations. At the national level, the IPAF faces a restriction set by the Department of Budget and Management. For 2011, there is a limit of P20 million (US$454,000) assigned to the protected areas system. Due to these limitations, several PAMBs have decided to "have donations given directly or in kind to the PA, rather than remitted through the IPAF."[31] The Mazars Starling team has learned that while there is no penalty indicated for not doing so, the PAMBs will then be regarded as violating DBM and COA rules and regulations considering that the LAW and the GAA specify that the revenues should be deposited to the IPAF through the account of the BTR subject for Special Budget Request.

There are two bills filed in Congress regarding the amendment the NIPAS section on IPAF, specifically by allowing the retention of 25% of the proceeds at the PAMB level for direct utilization. These bills should be supported.

LGU Allocation

The LGU budget allocation is one of the most common sources of MPA funding. In 2007, the Coastal Zone Philippines 2 MPA Congress adopted a resolution to lobby for the mandatory allocation of at least 5% of the 20% Development Fund of LGUs for ICM/CRM. This has not been followed up for action by MSN members, however. The pending MPA Bill in congress also stipulates that 10% of LGU budget be allocated for MPA management, but this has yet to be approved by Philippine Congress.

Moreover, pooled resources through the establishment of LGU-networked MPAs are proving to be more cost efficient as shown with comparisons of coastal law enforcement costs by individual LGU vs. inter-LGU alliance per square kilometer per year.[32] Costs in law enforcement significantly go down if MPA waters are networked into another by as much as 90%.

Local government units also have an opportunity to explore ways to increase MPA budget allocations from LGU Development Funds. This should be encouraged.

[31] Project Document, UNDP-PAWB Project on Expanding Terrestrial Areas, 2010.

[32] Ecogov Project 2011. Lessons from the Philippines: Achieving Synergies through Marine Protected Area Networks. Philippine Environmental Governance Project (Ecogov), Pasig City, Philippines

Harmonization of other public agencies' budget into Work and Financial Plans

Involvement of other government agencies apart from DENR and regional statutory bodies like the PCSD is not uncommon. Popular MPAs such as Apo Reef, Apo Island and many MPAs in the Visayan region are given attention/resources by other agencies such as the Department of Tourism, and the Philippine Tourism Agency.

Some MPAs with promising research opportunities in fisheries, research and technology have been given support by the Department of Science and Technology (DOST), through several of their funding programs, such as the *Grants In Aid Program*. The Guimaras Solar Oil Spill project benefited from such. The DOST has encouraged MPAs to take the opportunity to avail of its various funding windows such as the PCAMRD (Phil Center for Aquatic and Marine Resource Development) for marine and aquatic research and technology projects.

Donor

Private Partnerships

The private sector already plays a role in the financing of certain MPA related activities in some LGU-managed MPAs (Mabini, Batangas, Gilutungan in the Visayas). Encouraging such partnerships and expanding private sector involvement should be encouraged.

Market

Increasing use of Entry Fees/Activity-Specific User Fees

There are several examples of programs which have worked successfully. Most notably, Tubbataha, St Paul's River and numerous LGU-managed MPAs. These MPAs have implemented successfully managed entrance and user fee programs that both raise substantial revenue and direct it to conservation efforts within the boundaries of the MPA.[33] Evidence suggests that most MPAs that are actively collecting entrance fees are charging below the average visitor's willingness to pay.[34] In some instances (Mabini, Batangas, the Philippines) a review and adjustment of entry fees has resulted in an increase in the amount of revenue available to finance MPA costs.

Efforts to optimize fees include:

1. Establishing a willingness-to-pay figure relevant to the visitor profiles;
2. Establishing an appropriate entrance fee schedule which accommodates such a willingness-to-pay figure, and yields meaningful revenues when multiplied across total annual visitors;
3. Investing necessary authority in the appropriate body to manage entrance fee collection; and
4. Determining the allocation of entrance fee revenue among the relevant agencies who will be contributing to MPA management (i.e. local, regional and national governments).

[33] *Developing a Diversified Portfolio of Sustainable Financing Options for Bunaken National Park.* M.V. Erdmann, et al.
[34] *Recreation Values for Tourists for Bunaken National Marine Park*.J. Weber.

LGU MPAs should focus also on establishing the proper local level ordinances necessary to operationalize the fee collecting system.

Commercial Fisheries revenues to MPAs

Increasingly, managers of natural resources are realizing that "user pays" policies are an important method of securing funds to pay for conservation. The exact amount of money directly received by national and regional governments in the Philippines from commercial fisheries revenues is as of yet unclear. However, it is very clear that large revenue streams from fisheries are re-directed back to government coffers, rather than contributing to resource conservation in a meaningful way. These financial resources should be used to finance appropriate conservation of the resources which generated them in the first place. MPAs are an ideal place to start. Currently, there are certain MPAs (Apo Reef Natural Park) which collects fines from apprehended fishing vessels, in accordance with either the Fisheries Code or the Municipal Fisheries Ordinance, and the amount deposited into the IPAF. The contribution of these fines to the general cost of running the MPAs are yet to be determined.

Oil and gas and spillage fees

Several economic instruments that have the potential to generate resource use fees, fines and rents within the Marine Biodiversity Conservation Corridors of the Sulu Sulawesi Seascape (the Verde Island Passage, the Balabac Strait, and the Cagayan Ridge) which can likewise contribute to costs of MPA management were suggested in a study commissioned by Conservation International (2006).

The economic instruments mentioned by CI are meant to serve as financial incentives or disincentives for natural resource managers and stakeholders. Examples not already mentioned in the above discussion, include fines for ship grounding; tradable wastewater discharge permits; and engaging the oil and gas industry for conservation. Fines for ship grounding is especially applicable in the case of Tubbataha Reef NP after economic valuation of coral reef damage caused by actual ship grounding has been determined. Partnerships with various oil and gas industries lined up within the corridors of the SSME, not far from several MPAs are also suggested, and can be a good direction for seeking financial support for MPA costs.

Appendix

1. Terms of Reference
2. Meeting Details
3. References
4. Overview of Key Laws and Regulations

Terms of Reference

Initial Sustainable Financing Scoping Exercise for MPAs in the SSME Philippines

CONTEXT

The Coral Triangle Initiative focuses on sustainable management of marine and coastal resources of the six Coral Triangle nations who formally adopted a Regional Plan of Action, covering: seascapes, ecosystem approach to fisheries, marine protected areas (MPAs), climate adaptation, and threatened species. Throughout the Regional Plan of Action, including in the section containing the MPA goals, *the governments made strong commitments to sustainable financing*.

The Philippines' national agencies and local government units are responsible for more than 500 MPAs in the Philippines - a large number of these are in the SSME.*This assignment will focus on an initial sustainable financing and capacity scoping of 3 MPAs in the SSME in the Philippines, and a projection of the estimated costs and funding gaps across the full Philippines SSME as a result.*

OBJECTIVES OF THIS ASSIGNMENT

1. Gain an understanding of the status of specific enabling conditions (policy and institutional) related to the design and implementation of sustainable financing for MPAs in the Philippines
2. Gain an understanding of the current financial flows directed toward MPAs in the Philippines
3. Determine the cost requirements and financing capacity needs of three (3) target MPAs in the SSME in the Philippines
4. Determine the funding gap based on the results of costing requirements and the available /secured funds of these 3 MPAs
5. Review and summary of national policies and options for improving the management and financing of MPAs in the Philippines at a high level
6. Recommend options and opportunities for new and innovative sustainable financing schemes and/ or for improving existing financing schemes such as the IPAF for national MPAs and user fee system for locally managed MPAs. Specifically produce a short list of possible sustainable financing mechanisms (SFM) suitable to meet the financing gaps of these target MPAs and within MPAs in the Philippines more generally.

METHODOLOGY

There are four phases for this assignment:

1. Preparation Phase
2. Data Collection & Analysis Phase
3. Reporting Phase
4. Consolidation Phase

Each phase of the assignment is summarized below along with primary activities and deliverables.

<u>1. Preparatory Phase</u>

Approach

The preparatory phase is important to develop the full project work plan, set stakeholder expectations, and select target sites.

Primary Activities

1. Draft work plan for full assignment.
2. Select initial list of target MPAs and criteria for analysis and review (i.e., archetypes, budget categories, functions). (Note: The selection of target MPAs will cover both the NIPAS proclaimed MPAs (i.e., Apo Reef Natural Park), locally-managed MPAs, and National MPAs (Tubbataha National Park)).
3. Lead a kickoff meeting in Manila between all key stakeholders involved. This will likely include WWF Philippines and government officials. During this meeting, agree to:
    - MPA Archetypes,
    - Criteria for analysis and review of target MPAs,
    - Select 3 target MPAs (one of each archetype, to include Tubbataha National Park),
    - Proposed costing method (i.e., hectares, etc.) for each archetype, and
4. Finalize work plan.

Deliverables

- Archetype definitions and criteria
- List of target MPAs and criteria for analysis and review
- Work plan

2. Data Collection & Analysis Phase

Approach

The data collection & analysis phase will involve capturing all of the relevant cost and revenue information for the target MPAs, as well as details regarding the underlying policies and regulations supporting or constraining financing of MPAs. It will also involve refining an Excel-based model (similar to that used in Indonesia SSME) to capture and analyze the cost and revenue details for the target MPAs and larger system.

Primary Activities

1. Use existing documents to assess key regulations, policies, and institutional capacities related to financing marine protected areas in the Philippines at a high level.
2. Develop SSME cost and financing model to be used to project the costs and revenues of target MPAs and the full system (using target MPAs as archetypes) and prepare a basic guide manual for its use.
3. Through focused interviews with relevant stakeholders, collect data for the 3 target MPAs and conduct basic cost modeling against existing management plans and a gap analysis within target MPAs. This will likely include a site visit to 2 target MPAs (Tubbataha National Park will not require a visit as cost to do so are too high and data exists).
4. Through focused interviews and surveys, review existing and potential financial flows (i.e., revenues) within target MPAs and network capabilities to absorb funds.
5. Using the target MPAs as archetypes as well as assumptions regarding the number and size of all other MPAs in the Philippines, make cost projections regarding the full MPA system in the SSME.

Deliverables

- Excel-based cost and revenue model(s). (Note: Either each of 3 target MPAs will have its own model or one model will be used to capture information from all target MPAs)
- Basic guide manual for how to use the Excel model

3. Reporting Phase

Approach

During the reporting phase, additional analysis will take place and all relevant findings and data will be compiled into a "Initial Sustainable Financing Scoping Exercise for MPAs in the SSME Philippines" final report.

Primary Activities

1. Conduct financing options assessment for these target MPAs focusing on how to strengthen existing sources and identifying the most important and likely new financing mechanisms. This will include market-driven (e.g., taxes, fines, fees, royalties), donor (e.g., donations, grants), and government (e.g., direct allocations at the national or sub-national level). The assessment will consider the feasibility, scale and sustainability of each source.
2. Articulate clear recommendations for improving MPA financing within the target MPAs as well as at local and national levels.
3. Develop final report.

Deliverables

- Final *Philippines SSME Initial MPA Finance report* with the following sections:
    - A summary of the 3 target MPAs in the SSME and an overview of the key enabling conditions that allow successful implementation and use of MPAs to achieve conservation objectives
    - A summary of existing financial flows to the national MPA system
    - A summary of the cost and financing projections based of the target MPAs
    - A summary of capacity gaps and issues for the institutions managing target MPAs, if possible
    - An review of most effective existing and potential sustainable financing mechanisms and initial recommendations for how to pursue the strengthening or development of these for the target MPAs
    - List of key stakeholders involved in consultations, and other relevant references
- Power point presentation summarizing above report, general findings, and recommendations
- Deliver presentation in Manila

4. Consolidation Phase

Approach

During the consolidation phase our tam will assist WWF in reviewing and consolidating the SSME financing reports from Malaysia, Indonesia and the Philippines into one concise and consistent document.

Primary Activities

1. Review final reports for the three countries.
2. Draft consolidated report format and structure.
3. Draft consolidated report with existing information.

Deliverables

- Consolidated report including key findings from financing projects in Malaysia, Indonesia and the Philippines
- Present at relevant Tricom (or similar meeting)

TEAM

The Starling Resources team will include:

- Dada Bacudo, Mazars Starling Resources principle analyst
- Hirason Horuodono, Mazars Starling Resources analyst
- Mazars Starling Resources associate
- Research Assistant appointed by WWF
- John D. Claussen, advisor

SCHEDULE

The schedule for this assignment will include a launch by the first week of September with a final *Philippines SSME Initial MPA Finance report* by December 2011. A detailed schedule will be produced in the initial preparation phase.

Meeting Details

Philippine Consultative meetings August 31-September 5, 2011 and Philippine Field Work October 5-13, 2011.

Meeting	Date	Contacts, Key Informants
MPA Support Network (MSN) meeting	August 31, 2011	Perry Alino, UP MSI Anna Meneses, DAI Stuart Green, DAI Arun Abraham, DAI Rina Rosales, REECS Luz Baskinas, WWF Philippines
MSN MPA awards night	August 31, 2011	MiladelQuibilan, UP MSI Perry Alino, UP MSI
Interviews during the MSN meeting	September 1, 2011	Perry Alino, UP MSI Glenda Simon, OIC Tubbataha National Park
Project Kick off meeting	September 2, 2011	Lynette Laroya, PAWB-DENR Jacob Meimban, Regional Technical Director and ED, CMMO Luz Baskinas, WWF Philippines
PAWB PA finance meeting	September 2, 2011	Norma Molinyawe, OIC PAWB/DENR Biodiversity Division FlorademaEleazar, PAWB-UNDP-GEF
Meeting with WWF team, Sablayan (Apo Reef)	September 4, 2011	John Manul, WWF Area Manager
Meetings in Sablayan (Apo Reef) Protected Area Officers and LGU officials	September 4, 2011	Hon. Ed Gadiano, Sablayan Mayor Ms. Luzviminda Alto, Sablayan Municipal Tourism Officer Robert Duquil, Asst PASU CPO Wilbert Fetalvero, PAMB Member
Meetings in Sablayan (Apo Reef) Protected Area Officers and LGU officials	September 5, 2011	Muriel Reguinting, Municipal Planning and Development Coordinator Fe Santos, Municipal Budget Officer Greg Sagana, Municipal Treasurer Rose Mopia, OIC Municipal Accountant Fernando Dalangin, MENRO PENRO
PAMB meeting in Sablayan (Apo Reef)	September 5, 2011	Roberto Royil (PCGA) CP Wilbert Fetalvero (PCG) Raymond Sy (KabalikatCivicomm) Lorenzo Ehurango Robert DUquil, Assistant PASU John Manul, WWF Area Manager
Data gathering at the Tubbataha Management Office	October 10-11	Glenda Simon

Data gathering at the AIPLS	October 12-14	PENRO PASU ViernonGrefalde Accounts Officer Nanette ___ Former PASU ____ PAMB Member Chancellor Danmutning, Silliman University DauinMayorHON. NEIL B. CREDO

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Overview of Key Laws and Regulations

The Government of the Philippines has instituted a number of policies and programs aimed at conserving biodiversity. A list of some of such actions and their highlights are listed below:

- Formulation of the National Biodiversity Action Plan. In 1992, as a result of signing the Convention on Biological Diversity, the Philippines undertook an assessment of its biodiversity and formulated its National Biodiversity Strategy and Action Plan. The Philippine Council for Sustainable Development (PCSD) was mandated to coordinate and oversee the National Plan and its six strategies and action plans.

- National Integrated Protected Areas Systems Law (Republic Act 7586). The Government has promulgated the National Integrated Protected Areas System (NIPAS) Law as the primary national legal framework covering protected areas in the Philippines. The NIPAS Law requires an overall planning and decision-making body for a protected area called the Protected Area Management Board (PAMB). Each PAMB is chaired by the Regional Executive Director of the DENR and composed of various stakeholders, such as local government, NGOs, POs, and other national government departments. The NIPAS Law also created the Protected Area and Wildlife Bureau within the DENR. The NIPAS Law generally covers protected areas that are national in scope and are declared by Congress as compared to the small municipal protected areas such as marine sanctuaries that are declared through municipal ordinance.

- The Local Government Code of the Philippines (Republic Act 7160). This Code provides for the decentralization of certain functions of the national government to the local government units (LGUs). The Code provides more powers, authority and responsibilities to the LGUs to carry out their specified functions. These functions include assessment, planning, regulation, legislation, enforcement, revenue generation, and monitoring of their environment and natural resources. The adoption of the Local Government Code contributed to the growth in numbers of municipal MPAs. The Code gives extensive powers to the LGUs to manage their coastal and marine resources out to 15 kilometers offshore.

- The Fisheries Code of 1998 (Republic Act 8550). The Fisheries Code provides the framework for the management of the country's fisheries. It reaffirms the jurisdiction of city governments over municipal waters and their important roles in enforcing fishery laws and managing coastal resources. The Code supports local planning of MPAs through the Municipal or City Fisheries and Aquatic Resources Management Council (FARMCs). Each FARMC is composed of fisherfolk organizations, NGOs, LGUs, and government agencies.

- The Fisheries Sector Program (FSP). In 1991, this program was instituted to generate and implement Costal Resource Management (CRM) plans in 12 bays. It intended to rehabilitate, conserve, and sustainably manage aquatic resources; shift commercial fishing from overfished areas to under-exploited ones; and improve productivity to maintain ecological balance.

- The Fisheries Resource Management Project (FRMP). The FRMP is a six-year (1998-2003) project supported by loans from ADB and OECF of Japan with co-financing from the Government of the Philippines. It has three main components: fisheries resource management; capacity building; and income diversification through community development and identification of alternative livelihood.

- The Coastal Resources Management Project (CRMP). CRMP, jointly implemented by the DENR and USAID, aims to: implement community management systems for sustainable coastal resource use; enhance existing and potential leadership capacity; and find solutions to key problem areas on the national level. CRMP provides technical assistance and training to LGUs, coastal communities, national government agencies, and NGOs. It has initiated coastal management improvements in 90 municipalities covering about 2,500 kilometers of coastline that constitute six learning and expansion areas of the project. The CRMP will end in 2003.

- Coastal Conservation and Education Foundation (CCE Foundation). CCE Foundation is an offshoot of CRMP. It will carry out similar programs to the CRMP but through the private, non-profit sector. An initial undertaking of the CCE Foundation is the implementation of a two-year CRM program in Siquijor Island (six municipalities) and southern Cebu (6 municipalities). CCE Foundation will assist municipal marine sanctuaries to become self-sustaining through revenue generation from tourism. CCE Foundation will also carry on the information functions of the CRMP together with the DENR (White, 2002).

- The Integrated Coastal Resources Management Project. With the assistance from ADB, the Integrated Coastal Resources Management Project will build on the national policy framework and lessons generated through the CRMP and other completed and current projects. IFC is coordinating with ADB to maximize synergies with this project.

- The Coastal Environment Program. Started in 1993, the Coastal Environment Program of the DENR assists LGUs with MPAs. It is the only national government program to promote and manage the entire coastal environment, including water quality and shoreline land use.

- The Coastal and Marine Office at the DENR. The newly established Coastal and Marine Management Office (CMMO) is under the office of the Secretary of the DENR. Its principal role is policy-making for coastal management, especially assisting LGUs in the implementation of their CRM programs.

- The National Integrated Protected Area Project (NIPAP). In 1995-2001, the DENR and EU provided technical assistance in the management of natural habitats and biodiversity in eight protected areas, including the El Nido-Taytay Managed Resource Protected Area.

- The Philippine Government's Development Agenda. The Philippine Government addresses environmental sustainability through its Medium-Term Philippine Development Plan (MTPDP). It stipulates that the government will be guided by the principle of environmental sustainability in pursuing economic growth. As part of the Agenda, the National Council for Sustainable Development (NCSD) was created in 1992 to address general environmental issues on a cross-sectoral basis. In 1996, the Philippine Agenda 21 was adopted to serve as the national action agenda for sustainable development. The Government intends to further institutionalize its environmental commitment by supporting several legislative acts, including the National Land Use Act, Clean Water Act, and National Solid Waste Policy.

- The Presidential Commission for the Integrated Conservation and Development for the Sulu Celebes Seas. In June 1997, Presidential Proclamation 1028 declared the Sulu Celebes Seas as an Integrated Conservation and Development Zone (ICDZ) and established a Presidential Commission devoted to the conservation and sustainable use of the marine resources in the Sulu Celebes Seas. A goal of the Presidential Commission is conserve a biologically representative complement of the biodiversity of the Sulu and Sulawesi Seas by protecting a network of areas of outstanding of biological diversity and natural resources.

The policies and programs summarized above have developed important tools for enhancing capacities of communities, municipal, provincial and national government, and NGOs to improve the overall management of coastal resources. There are successful MPAs as a result of these policies and projects but without the much larger effort to build more integrated CRM programs, the MPAs would not be functioning as they are. It is essential that projects must target the broader capacity problems.