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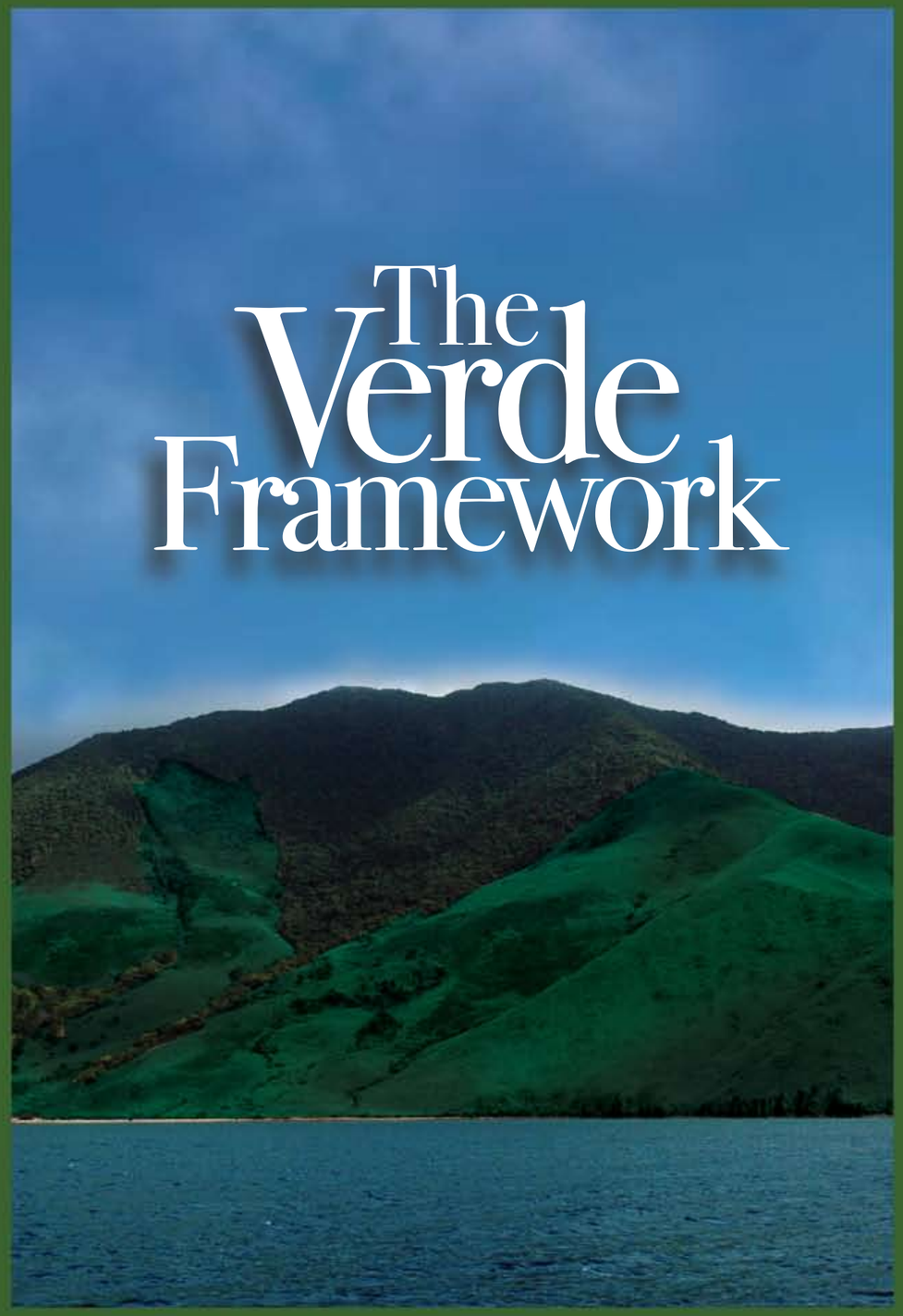
CONSERVATION INTERNATIONAL PHILIPPINES

The Verde Framework



The Verde Framework

A Management Plan Framework for The Verde Island Passage Marine Corridor

The Verde Vision & Mission

Verde Island Passage Marine Corridor at the center of global marine biodiversity, is a socially and economically developed community of responsible citizenry committed and empowered to be effective, conscientious and accountable stewards of our environment and natural resources."

"To mobilize partnerships and strengthen capability among local government units, national government agencies, private sectors, non-government organizations, academe, volunteer groups, social/civic organizations and coastal communities and residents for sustained biodiversity conservation and socio-economic development"

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The Verde Framework

The Verde Island Passage Marine Corridor Management Plan Framework

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FOREWORD

It might be easy to talk about sustainability and biodiversity as essential components of sustainable development, and even of life itself. But the fact remains that we need to persuade as many people as possible that healthy, thriving and diverse ecosystems are essential to a healthy, thriving and diverse society.

With our ambitious targets on biodiversity, it is imperative for the government to continue its constructive engagement and collaboration with other sectors with the end view of minimizing negative environmental implications.

Executive Order 578 of 2006 created an enabling policy environment that will enhance our institutional and regulatory capacities especially in the Sulu-Sulawesi Marine Ecoregion and the Verde Island Passage Marine Corridor. It paved the way for all government departments and agencies to integrate and mainstream the protection, conservation and sustainable use of biological diversity into our policies, plans and programs.

The global significance of the Verde Island Passage as the "center of the center" of marine shorefish diversity cannot be underestimated. All the more does it present us with challenges, which could not be faced if each of us worked in isolation.

This Management Plan Framework – the Verde Framework for short – demonstrates the possibility of reaching agreements between the government and other sectors on practical steps towards a more sustainable world. This is about a step-change – a move from words to concerted action and implementation.

Let us all work together in harmony, guided by a management framework that will help set the forward path to biodiversity conservation and sustainable management of the Verde Island Passage Marine Corridor.

JOSE L. ATIENZA, JR.
Secretary, DENR and
Chair, PCICDSCS

EXECUTIVE SUMMARY

In 2005, a study by Dr. Kent Carpenter, IUCN Global Marine Species Assessment coordinator, and Victor Springer of the Smithsonian Institute revealed that the Verde Island Passage, situated between the province of Batangas and the island of Mindoro, Philippines, contained a high concentration of marine species per unit area. The Verde Island Passage Marine Corridor (VIPMC) thus merited the distinction of being the "center of the center" of the world's marine shorefish diversity, having 1,736 overlapping marine species over a 10-kilometer area, the highest concentration of marine life in the world.

However, human activities such as fishing, tourism and navigation pose a serious threat to this center of marine biodiversity. Carpenter and Springer warn that habitat degradation and probably mass extinctions of unique marine biotic communities are inevitable if marine conservation is not prioritized.

In response to this urgent call, President Gloria Macapagal-Arroyo, during the National Biodiversity Conference held on November 8, 2006, issued Executive Order No. 578 establishing the national policy on biodiversity. This was to be implemented throughout the country, particularly in the Sulu Sulawesi Marine Ecosystem and highlighting and prescribing the policy implementation in the Verde Island Passage Marine Corridor.

This led to the convening of an Ad Hoc Task Force, which spearheaded a series of meetings and consultations geared towards the formulation of a management plan for the VIPMC. The 120-day time frame provided under the executive order to come up with a comprehensive management plan for the VIPMC was not enough and it was resolved that a framework shall instead be developed to serve as the guide in formulating the management plan.

The VIPMC, which consists of the coasts, islands, and waters of the five provinces of Southern Luzon, namely, Batangas, Mindoro Occidental, Mindoro Oriental, Marinduque, and Romblon, is a critical marine corridor which facilitates exchange and migration of species and nutrients across corridor waters. As the "center of the center" of marine shorefish diversity, the VIPMC has a high concentration of species per unit area and indicates that a number of unique communities in the area support this multitude of species, some of which are endangered and threatened. Coral reefs, mangroves, seagrasses, fishes and charismatic marine species in the area confirm this fact.

Philippine laws and policies, as well as international agreements and local and regional plans, influence and stimulate the kind of management plan that will be developed for the VIPMC.

Currently, various conservation efforts are being carried on within the VIPMC. Majority of the conservation work are concentrated in the Batangas and the Mindoro areas of the corridor where resource use conflict is highlighted, and different sectors and environmental groups are pushing for integrated coastal management (ICM) to address the conflict. The VIPMC management plan shall build on these partnerships and initiatives and ensure that the projects, plans and programs are integrated and incorporated into the overall plan for the corridor.

During the Sulu-Sulawesi Congress held last June 20-22, 2007, participants identified the following issues affecting the VIPMC, arranged in order of urgency: 1) Institutional/ Attitude; 2) Fishing related issues; 3) Biodiversity; 4) Land use; 5)Pollution; 6) Resource Use and Tourism; and, 7) Socio-economic.

Under the above context, a set of management strategies has been developed to address the issues and ensure the viability and sustainability of the VIPMC.

The Ad Hoc Task Force adopted the following vision in the formulation of the Verde Island Passage Corridor Management Plan Framework:

"Verde Island Passage Marine Corridor, at the center of global marine biodiversity, is a socially and economically developed community of responsible citizenry committed and empowered to be effective, conscientious and accountable stewards of our environment and natural resources."

Drawing on the partnerships among the various sectors of society in recognition of the fact that the protection, conservation and sustainable use of biodiversity is a shared responsibility, the mission for VIPMC is:

"To mobilize partnerships and strengthen capability among local government units, national government agencies, private sectors, non-government organizations, the academe, volunteer groups, social/civic organizations and coastal communities and residents for sustained biodiversity conservation and socio-economic development"

It is envisioned that the VIPMC will achieve the following management goals by the year 2018:

1. Increase the area and numbers of well-managed MPAs and MPA networks;
2. Establish an inventory of flora and fauna;
3. Address issues of other marine and coastal habitats such as estuarine waters, saline lagoons, and intertidal marshes;
4. Reduce threats to species and habitats;
5. Reduce threats from shipping and navigation;
6. Enforce laws and regulations effectively;
7. Improve the management of fisheries;
8. Set up and implement land and water use plans;
9. Improve the standard of living and make basic services accessible to stakeholders;
10. Establish the carrying capacity of the resources;
11. Regulate resort operations and other economic activities based on carrying capacity;
12. Minimize pollution from land-based and sea-based sources;
13. Set up and establish sustainable financing mechanisms; and,
14. Institutionalize a management body to oversee the implementation of the management plan.

The formulation of the overall plan shall be guided by the following principles:

- Adherence to the three pillars of Sustainable Development: viable, sound and broad-based economic development, ecological soundness and socially acceptable and enriching
- Application of the precautionary principle
- Informed decision-making through use of science, appropriate technology and environmental education
- Participatory governance/ participation of all stakeholders in all relevant activities
- Compliance with national policies
- Support to international commitments
- Support for local stakeholders where threats to local resources, ecosystems, livelihood and human health
- Application of adaptive management
- Adherence to sound moral values

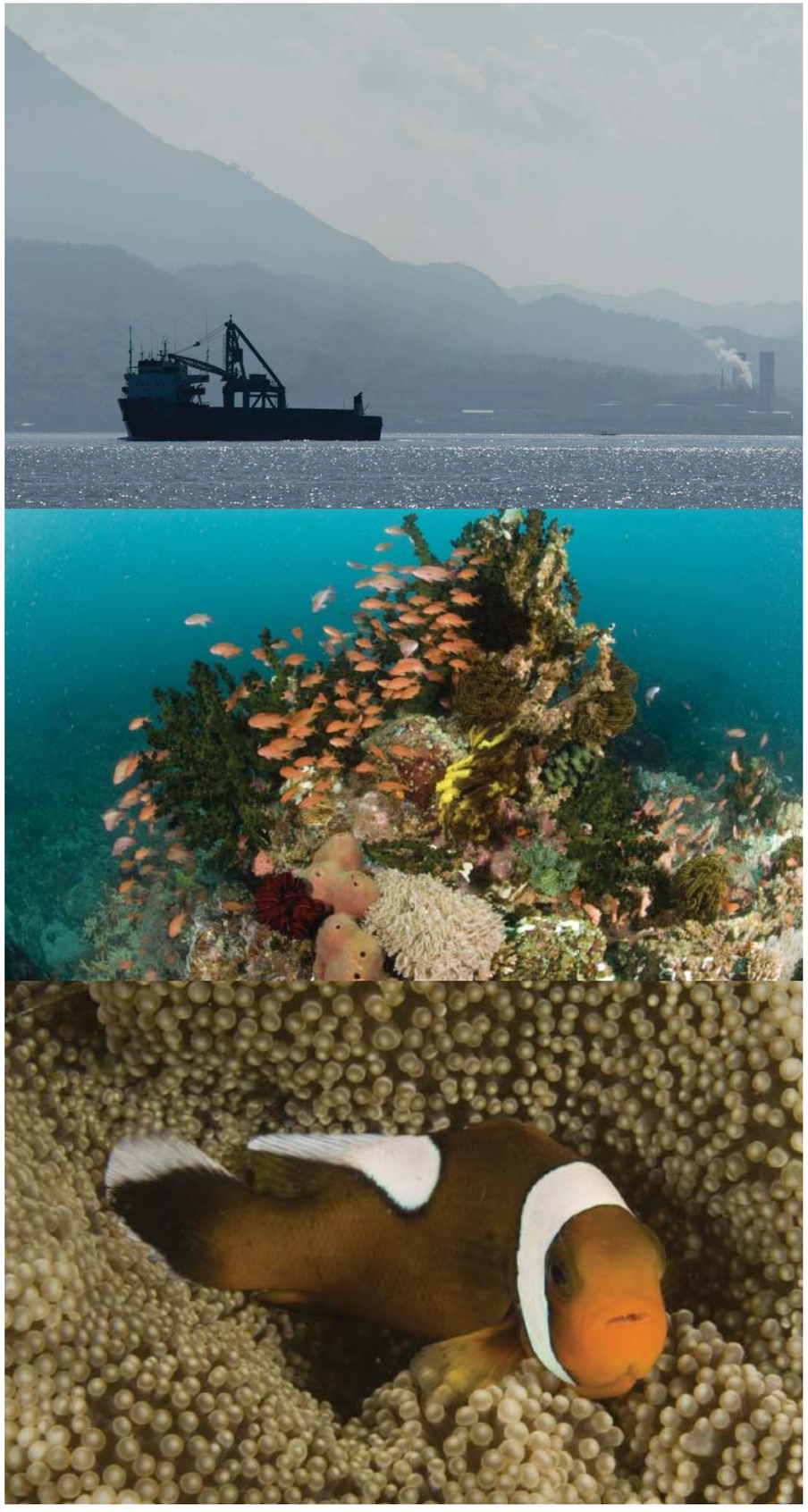
The general management strategies to be adopted in the VIPMC management plan are:

- Community-based coastal resource management (CBCRM)
- Multi-stakeholder partnerships
- Sustainable financing
- Local management and networking of Marine Protected Areas
- Research and knowledge management
- Information, education and communication (IEC) campaign
- Passage-wide enforcement
- Emergency/Disaster Risk Management Plan

In response to the identified issues affecting the VIPMC, this framework lays down a set of proposed specific strategies to address each of the identified issues.

Lastly, a management body shall be created to implement the management plan. The management body shall take on the following roles: coordination; policy coordination and direction; oversight; monitoring and evaluation; fund sourcing and inspiration (assist in fund sourcing); conflict resolution (convener); and, facilitating access to technical assistance and information.

The determination of the structure and the composition of the management body that shall oversee the implementation of the VIPMC management plan is guided by EO 533. However, the structure and composition of the management body mentioned in this framework is only a proposal. It may be adopted, modified or revised in the formulation of the provicial management plan.



TheVerde Framework

Management Plan Framework for the Verde Island Passage Marine Corridor

I. INTRODUCTION

The Sulu-Sulawesi Marine Ecoregion (SSME) straddles the three countries of Indonesia, Malaysia and the Philippines. It is situated at the apex of the Coral Triangle, recognized as the world's center of marine biodiversity. Within the SSME lies the Verde Island Passage, located between the province of Batangas and the island of Mindoro, Philippines. During the Philippine Biodiversity Conservation Priority-setting Program (PBCPP) in 2000, the Verde Island Passage was identified as one of the rich biodiversity areas in the country and among the marine conservation priority areas, given a high level of priority. In 2005, a study by Dr. Kent Carpenter, IUCN Global Marine Species Assessment coordinator, and Victor Springer of the Smithsonian Institute found that the Verde Island Passage contained the high est concentration of marine fish species per unit area. The Verde Island Passage Marine Corridor (VIPMC) merited the distinction of being the "center of the center" of the world's marine shorefish diversity, having 1,736 overlapping marine species over a 10-kilometer area. Its priority level in terms of conservation was elevated from high to extremely high.

Human activities such as fishing, tourism and navigation pose a serious threat to this center of marine biodiversity. Carpenter and Springer warn that habitat degradation and probably mass extinctions of unique marine biotic communities are inevitable if marine conservation is not prioritized.

In response to this urgent call, President Gloria Macapagal-Arroyo, during the National Biodiversity Conference held on November 8, 2006, issued Executive Order No. 578, establishing the national policy on biodiversity to be implemented throughout the country, particularly in the Sulu-Sulawesi Marine Ecosystem and the VIPMC.

Under the Executive Order, the Presidential Commission for the Integrated Conservation and Development for the Sulu Celebes Seas (PCICDSCS) was tasked to create the Ad Hoc Task Force on Verde Island Passage composed of the concerned government agencies, namely, DENR, DOT, DOST, DA, DOH, DOE, DOTC, DFA, DTI, DND, DILG, NEDA, and the local government units of the provinces of Batangas, Romblon, Mindoro Oriental, Mindoro Occidental, and Marinduque.

This Ad Hoc Task Force shall formulate the Verde Island Passage Management Plan in consultation with stakeholders, the private sector, civil society and local communities. The plan shall take into account existing efforts to protect marine biodiversity, implement the Integrated Coastal Management (ICM) and conduct disaster risk assessment and management.

The Ad Hoc Task Force was convened and from thereon, a series of meetings and consultation workshops with stakeholders in attendance were held with the objective of coming up with a management plan for the Verde Island Passage Marine Corridor pursuant to the Executive Order (Table 1).

In the course of the consultations and workshops, the Ad Hoc Task Force realized that the 120-day time frame provided under the Executive Order to come up with a comprehensive management plan for the Verde Island Passage Marine Corridor was not enough. It was resolved that the Ad Hoc Task Force shall instead develop a framework which would be the guide in formulating the provincial management plans.

Table 1 : List of Workshops and Meetings in Relation to the VIPMC

ACTIVITY	PLACE	DATE
Batangas-wide Seminar Workshop on MPA Management	Days Hotel, Batangas City	6-8 Deceber 2006
Ad Hoc Task Force for Verde Meeting (1)	Aguila Hall, PAWB Visitor's Center, NAPWC, North Ave., Diliman, QC	26 Feb 2007
Ad Hoc Task Force for Verde Meeting (2)	Office of the Secretary Conference Room, DENR Visayas Avenue, Diliman, QC	12 April 2007
Sulu-Sulawesi Seascape Congress	Richmonde Hotel, Ortigas Center, Pasig City	20-22 June 2007
VIPMC Management Plan Framework Drafting Committee Meeting	Kalaan Hall, PAWB Visitor's Center	11 July 2007
VIPMC Management Plan Framework Drafting Committee Meeting	Kalaan Hall, PAWB Visitor's Center	30 July 2007
Consultation Meeting on the Proposed VIPMC Management Plan Framework	Days Hotel, Batangas City	8 August 2007

II. DESCRIPTION OF THE VERDE ISLAND PASSAGE MARINE CORRIDOR

A. Geographic Location

The Verde Island Passage is part of the internal waters of the Philippines, lying between the southern coast of the province of Batangas and the northern coast of Mindoro Island. Verde Island divides the Passage into two channels, the North Pass and the South Pass.

The Verde Island Passage connects the South China Sea with Tablas Strait, the Sibuyan Sea and the Cuyo Pass. It covers an area of approximately 1.4 million hectares.

The boundary extent of the VIPMC has been identified as follows: the corner points of the passage lie at the boundary of San Juan, Batangas in the northeast; the boundaries of Mogpog and

Buenavista, Marinduque in the east; the boundary of Pinamalayan, Oriental Mindoro at the south; extending further southeast to cover the waters and the island municipalities of Concepcion, Corcuera and Banton, Romblon; Calisurigan Point, Cape Calavite and Paluan, Occidental Mindoro at the southwest; the westernmost tip of Cabra Island of Lubang, Occidental Mindoro at the west, and the Limit Point, Nasugbu, Batangas at the nortwesternmost side (Figure 1) . The technical description is provided in Annex 1.

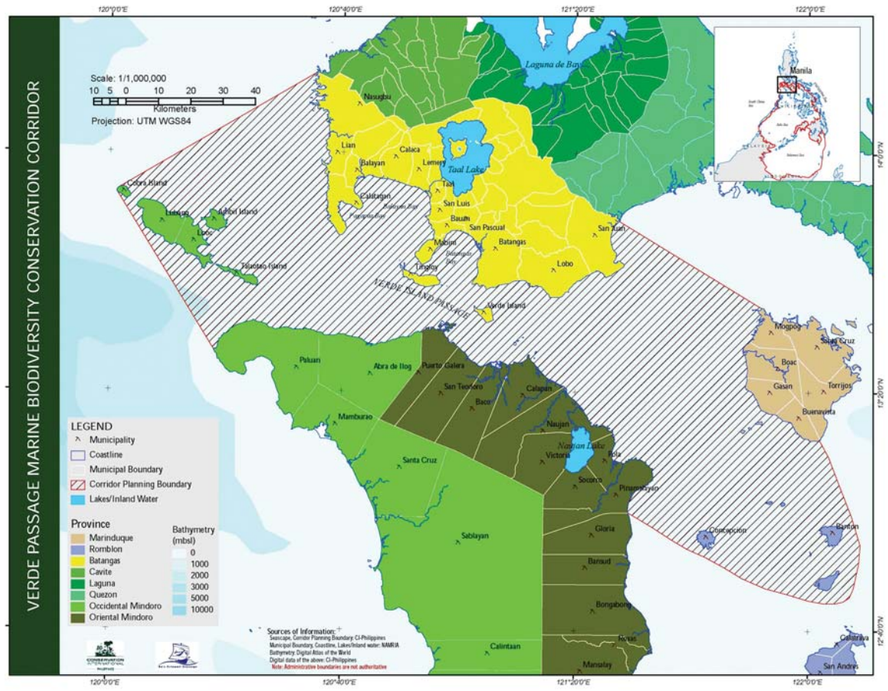


Figure 1. Map of the Verde Island Passage Marine Corridor

B. Political Boundaries

The VIPMC consists of the coasts, islands, and waters of the five provinces of Southern Luzon, namely, Batangas, Mindoro Occidental, Mindoro Oriental, Marinduque and Romblon. Surrounding the Verde Island Passage are fourteen municipalities and one city in Batangas; seven municipalities in Mindoro Oriental; four municipalities Mindoro Occidental; four municipalities in Marinduque and three municipalities in Romblon (Table 2).

Considering that the Corridor cuts across five provinces, no single local government has sole exclusive jurisdiction over the area. While any activity undertaken in a particular area requires the approval of the local government unit concerned, the potential impacts of such activities to the entire Corridor should not be overlooked.

The Province of Batangas

The Province of Batangas is located along the southwestern edge of the island of Luzon. It is part of the Southern Tagalog Region, Region IV-A or the CALABARZON, and is bordered by the provinces of Cavite on the north and Laguna and Quezon on the east. To its west is the

South China Sea and to its south the island of Mindoro. The Verde Island Passage separates Batangas from the island of Mindoro.

The Province of Batangas has a land area of approximately 3,165.81 square kilometers and consists of thirty-one municipalities and three cities. Twenty-six of these component local government units are found along the coastline which extends to 456 km.

The province's terrain is a mix of elevated lands, rolling hills, small low flat lands, and numerous mountains. Fifty percent of its land area has a generally rolling terrain of a grade of less than 15°. Slopes are situated along the shores of the Verde Island Passage and the shores of Taal Lake.

There are three major bays in the province, namely Batangas Bay, Balayan and adjacent Bays, and Tayabas and adjacent Bays. The three bay regions are essentially agricultural areas. The coastline of Batangas Bay supports the industrial, residential, commercial and transportation needs of various sectors. Balayan and adjacent bays coastlines are used more for residential, commercial, transportation and recreation activities although some industries are being established therein. The coastline of Tayabas Bay, on the other hand, is utilized for residential and recreational purposes.

Batangas hosts the country's second largest and most modern international port, power generation plants, two of three oil refineries and twelve industrial estates or ecozones. These developments ushered an increase in navigation and port related activities. Throughout the year, a significant rise in shipping traffic, cargo traffic and passenger traffic has been noted.

Of the thirty-four (34) component local government units of the province, fourteen (14) municipalities and one city border the Verde Island Passage.

The Province of Marinduque

Marinduque is an island province which is situated almost at the center of the Philippines. It is bounded on the north by Tayabas Bay, on the northeast by Mompong Pass, the southeast by Tayabas Strait, on the south by Sibuyan Sea, and on the west by Tablas Strait.

It lies in the Sibuyan Sea, somehow blocking the North Verde Island passage going to San Bernardino Strait (between Sorsogon and Samar, opening to the Pacific Ocean) and a little north of the Verde Island passage going to Visayan and Sulu Sea.

The province has a total land area of 959.25 square kilometers including 17 outlying islets. Marinduque is under the Region IVB or the MIMAROPA Region. It is a fourth class province with a lone congressional district. It is composed of six municipalities and 218 component barangays.

In general, Marinduque has a largely undulated hilly and mountainous topography with flat terrain the coastal areas. The coastal and alluvial plain is about 17% while hilly terrain and mountains account for 83% of the province's total land area. The island province is rich in mineral resources and fertile plains. While agriculture is its primary industry, Marinduque's mineral resources have attracted mining industries. Marinduque's coastal waters and marine resources have suffered irreparable damage from irresponsible mining activities.

Table 2 : Cities and Municipalities of the Five Provinces Bordering the Verde Island Passage Marine Corridor

PROVINCE	COMPONENT LOCAL GOVERNMENT UNITS
Batangas	Batangas City Muncipalities of Nasugbu, Lian, Calatagan, Balayan, Calaca, Lemery, Taal, San Luis, Mabini, Tingloy, Bauan, San Pascual, Lobo, San Juan
Marinduque	Municipalities of Mogpog, Boac, Gasan, Buenavista
Mindoro Occidental	Municipalities of Abra de Ilog, Paluan, Lubang, Looc
Mindoro Oriental	Calapan City Municipalities of Puerto Galera, San Teodoro, Naujan, Baco, Pola, Pinamalayan
Romblon	Municipalities of Concepcion, Corcuera, Banton

Four of the six component municipalities of the province of Marinduqe, namely the municipalities of Mogpog, Boac, Gasan and Buenavista, are situated along the Verde Island Passage.

There are four (4) marine protected areas in Marinduque: 1) Gasan Marine Reserve Community (3,036 ha); 2) Pook Marine Reserve and Fish Sanctuary (4 ha); 3) Lipata Marine Reserve and Fish Sanctuary (30 ha); and 4) Balancan Cave Marine Reserve (18 ha).

The Province of Mindoro Occidental

Mindoro Occidental is located south of the province of Batangas in Southern Luzon and northwest of the Visayas. The province is bound by the Verde Island Passage on the north, by the Mindoro Strait and the China Sea on the west and south, and by its sister province, Mindoro Oriental, on the east.

The land area of Mindoro Occidental is 5,883.50 square kilometers. The province comprises 12.5 percent of the entire area of the Southern Tagalog Region.The province's terrain is characterized by mountain ranges, intermittent valleys, elongated plateaus with rolling prairie lands along the coastal region. The entire coast of the province boasts of rich fishing grounds, but its main asset is a broad stretch of fertile land with agriculture as its major industry.

Four of Mindoro Occidental's eleven municipalities are situated along the Verde Island Passage.

The Province of Mindoro Oriental

Located on the eastern side of Mindoro Island is Mindoro Oriental. Its coastline spans a length of 161 kilometers and is separated from Mindoro Occidental by a natural boundary,

the Halcon-Baco Mountain Range. Its boundaries are the Verde Island Passage on the north; the Maestro del Campo Island and Tablas Strait on the east; the Semirara Island on the south; and, Mindoro Occidental on the west.

The total land area of Mindoro Oriental is 4,364.72 square kilometers. It is composed of fourteen municipalities and one component city. Of these 15 component local government units, 13 are coastal. The most well-known of its coastal municipalities is Puerto Galera which is a famous tourist destination.

The general topography of the province is characterized by hilly to mountainous and relatively flat areas. The hilly to mountainous sections comprise 53% of the province's total land area while the remaining 47% are plains. Mt. Halcon in the municipality of Baco is the highest mountain in the province with a peak elevation of 2,586 meters. About 2,100 square kilometers of the province's land area are classified as forestland. This forest area serves as watershed that collects and regulates the flow of water, controls soil erosion and minimizes pollution.

Seven out of Mindoro Oriental's 13 coastal municipalities, along with one city, border the Verde Island Passage.

The Province of Romblon

The province of Romblon, located at the heart of the Philippine archipelago, is a cluster of islands and islets with a total land area of 1,355.9 square kilometers. It lies in the Sibuyan Sea near the island provinces of Masbate and Mindoro. Its boundaries are: Marinduque to the north, Mindoro to the west, the Bicol Peninsula to the northeast and Masbate to the southeast.

Romblon has seventeen municipalities, nine of which are situated on Tablas Island, three on Sibuyan Island and five island municipalities (Romblon, San Jose, Banton, Concepcion and Corcuera). The province h was a generally hilly and mountainous terrain, with narrow strips of coastal lowlands, and low hills and plains. Tablas Island, the largest island in the province measuring 70 kilometers long and 17 kilometers wide is characterized by continuous rolling plain in the west that reaches the sea on the east. Sibuyan Island, on the other hand, is a mountain mass marked by thick forest. Forest land in Romblon comprises 32% or 153.07 square kilometers of the province's total land area.

While agriculture is its main industry, Romblon is more well-known for its marble quarrying and processing.

Three of the five island municipalities of Romblon, namely Banton, Concepcion and Corcuera, are included in the Verde Island Passage Marine Corridor.

Fish Sanctuaries in Romblon include: Sibali, Alegria, Takan, Suyuan, Iligan, Mangansag.

C. Bio-physical Profile

The VIPMC is a critical marine corridor that facilitates exchange and migration of species and nutrients across corridor waters. As the "center of the center" of marine shorefish diversity, the VIPMC has a high concentration of species per unit area and indicates that a number of unique communities in the area support this multitude of species, some of which are endangered and threatened. Coral reefs, mangroves, seagrasses and fishes are important features of the corridor.

There is a dearth of information with respect to the bio-physical profile of the marine ecosystem of the provinces of Marinduque, Mindoro Occidental and Romblon. Most of the data and information on the biophysical characteristics of the VIPMC are derived from studies on Batangas and Mindoro Oriental.

Corals

Coral reefs harbor an abundance of life and serve as habitats for various plant and animal species. They are nurseries and feeding grounds for juveniles and home to demersal as well as some pelagic species. Different reef types harboring soft and hard corals can be observed in the corridor. There are encrusting and fringing corals and massive corals as well. At least 319 coral species occur in Balayan Bay and its adjacent bays, of which eight are considered rare.

In 2003, 25 new coral species were discovered and added to the list of Philippine corals. The coral fauna of the bay is said to be the most diverse in view of the high number of species encountered in a limited number of dives. Recent surveys conducted by coral experts in the Anilao area in July 2007 (Emre and Turak, Hoeksema unpublished data, July 2007) update the total number of coral species found in Batangas from 319 (Fenner unpublished data, 2003) to 338. Dr. Wilfredo Licuanan and Dr. Rob Van Woesik also recently noted the possible discovery of a new species of *Acropora* in Lian, Batangas. Once confirmed, this will officially bring the total number of coral species to 339.

In 2001, an independent survey of the coral reefs in the southern part of the Balayan Bay showed that the conditions of the corals in the area generally improved from 33% to 48% compared to 1993 levels. Mindoro Oriental also boasts of a variety of corals where numerous reef fishes and commercially important species are observed.

Fishes and other marine species

The VIPMC is home to many endangered and threatened species. These include 3 species of sea turtles, the green turtle (*Chelonia mydas*), the olive ridley (*Lepidochelys olivacea*), and the critically endangered hawksbill turtle (*Eretmochelys imbricata*). There are also reports of sightings of whale sharks and manta rays. The VIPMC is also known as the Tuna Highway, serving as the migration route of different species of tuna (Scombridae).

A marine mammal survey supported by Conservation International-Philippines (CI-P) and conducted in 2006 confirmed the sightings of five (5) species of cetaceans, namely Risso's dolphin (*Grampus griseus*), spinner dolphin (*Stenella longilongtris*), pantropical spotted dolphin (*Stenella attenuata*), Fraser's dolphin (*Lagenodelphis hosei*), common bottlenose dolphin (*Tursiops truncatus*) and with one stranding recovery of a dwarf sperm whale (*Kogia sima*). Anecdotal evidence reveals the presence of eight other species of cetaceans in the area.

The ichtyoplankton survey in 2006 conducted by the University of the Philippines Visayas Foundation in the area initially showed high densities of fish eggs and larvae around a number of sites in the corridor, namely: Verde Island, Tingloy, the islets and shoals of Calapan, Puerto Galera, and west of Balayan Bay.

The Balayan and its adjacent Bays and Tayabas Bay are biodiversity refuges. Two hundred sixty-two (262) species of fish were identified in the area. The presence of charismatic species like spinner dolphins, marine turtles, sperm whales, and recent sightings of manta rays and whale sharks in the area indicate abundant food resources and is a good bio-indicator of the richness of the bays' coastal marine area.

In the biological assessment study conducted in eight sites around Verde Island, Batangas, about 162 species of fishes belonging to 30 families were identified. Of the total species identified, 28% (46 species) were commercially important species from 12 families. The most dominant target or commercially important species were the surgeonfishes (*Ctenochaetus binotatus, Naso minor, Naso hexacanthus*), fusiliers (*Pterocaesio pisang*) and triggerfishes (*Melichthys vidua*) and wrasses (*Oxycheilinus diagrammus*). Of the eight established sites, Pulong Bato and Nalayag, which are both MPAs, showed the highest number of fishes observed and correspondingly with the highest estimate of fish biomass. Both areas were dominated by basslet (*Pseudanthias squamipinnis*), surgeonfishes, triggerfishes and wrasses. However, more species of surgeonfish were observed in Nalayag than in Pulong Bato. The latter was observed with high abundance of parrotfish which was almost absent in Nalayag. Pulong Bato was also observed with high dominance of damselfishers. Other non-target species was a large school of butterflyfish (*Chaetodon kleinii*).

In the case of the non-MPA sites, fishes observed were damselfishes (Pomacentridae) and schooling wrasses (Labridae). Among the target species, surgeonfishes, wrasses and triggerfishes were observed in almost all sites.

Mindoro Oriental's fishing grounds are the Verde Island Passage, Calapan Bay, Tablas Strait, and Bulalacao Bay. These fishing grounds cover 13 coastal municipalities. The major commercial species being caught are blue marlin, tuna, mackerel, caranx, big-eyed scad, herring and grouper. Minor sea products, other than fish, are being cultured in municipal waters like seaweeds, mussel, oyster and crabs.

Based on studies in the province, reef fishes and commercially important species of fish are observed in Mindoro Oriental's reefs. Among these are Acanthurids, Apogonids,

Aulostomids, Balistids, Blenniids, Carangids, Caesionids, Cirrhitids, Chaetodontids, Grammistids, Haemulids, Labrids, Lutjanids, Mullids, Nemipterids, Pomacentrids, Scarids, Serranids, Siganids, Synodontids, Tetradontids, and Zanclids; target species observed were represented by family Serranidae and family Lutjanidae while six indicator species observed were under families Chaetodontidae (butterflyfishes), Pomacanthidae (angelfishes) and Zanclidae (Moorish idol). A number of reef-associated carnivores are also found. These include members of the families Carangidae (jacks), Lethrinidae (emperors), Lutjanidae (snappers) and Serranidae (groupers).

Mangroves

Mangroves are essential to the ecological and socio-economic health of the area in which they thrive. They serve as barriers to prevent erosion and sediment deposits from the mainland to nearby coral reefs, and from storm surges and high winds. They also play an important role in nutrient cycling and provide habitats to many species such as birds, small fishes, shells and crustaceans.

The biophysical assessment of the Philippine side of the Sulu-Sulawesi Marine Ecoregion (SSME) conducted by the World Wildlife Fund-Philippines (WWF-Phils.) shows that mangrove areas are found to occur in protected coves and quiet embayments. These are the coastal areas of islands facing the marine waters of the Sulu Sea such as the coastal area of Batangas and the protected coastal areas of large and small islands within the Sulu Sea such as Mindoro, Marinduque, and Romblon. The largest mangrove and swamp area in Batangas is found in the municipality of San Juan along Tayabas Bay. The area measures 4.96 square kilometers, 1 square kilometer of which is intact.

The mangrove forest in Puerto Galera in Mindoro Oriental measures 0.53 square kilometers. It hosts 18 true and 17 associate mangrove species belonging to 19 families and 24 genera of vascular plants. In Balayan and its adjacent Bays, 32 mangrove and associated species were noted.

Table 3 : Estimated Area of Mangroves in the Philippines

COASTAL AREAS FACING THE SULU SEA	ESTIMATED AREA (km²)	Remarks
Batangas (southern side)	-	All
Lucena (southern side)	-	All
Bicol (western side)	-	All
Samar (western side)	226	Part
Leyte (western side)	37	Part
Surigao, Zamboanga, Cotabato, Davao Gulf	-	Part
Basilan Island	62	All
Bongao Island	-	All
Sulu Archipelago	-	All
Palawan (main island, eastern side)	-	All
Palawan (islands north of main island)	-	All
Palawan (islands north of main island)	-	All
Islands Within Sulu Sea		
Mindoro Island	27	All
Marinduque	31	All
Burias Island	-	All
Romblon Group of Islands	7	All
Masbate	17	All
Cebu	4	All
Negros Island	10	All
Bohol Island	85	All
Siquijor	-	All

Seaweeds and seagrasses

Seaweeds and seagrasses are the sources of organic matter and energy which support other marine ecosystems. Seagrass beds control the erosion of the reef flats because they stabilize the substrata. Seagrass beds and areas with diverse seaweed species function as nursery, feeding grounds and habitat for many associated groups of animals such as mollusks, crustaceans, echinoderms, fishes, reptiles, birds and mammals, such as the endangered dugongs and turtles. In addition to its contribution to the food chain, seaweeds and seagrasses are noted for their industrial and medicinal potential.

Information on seaweeds and seagrass ecosystems in the VIPMC is limited. Nine seagrass species are noted in Balayan Bay and its adjacent Bays while ten seagrass species of six genera are found Mindoro Oriental. The seagrass beds in Mindoro Oriental are dominated by *Cymodocea rotundata, Syringodium isoetifolium, Thalassia hemprichii, Enhalus acoroides* and *Halophila ovalis*.

Watersheds

A watershed is defined as a discrete geographical area of land from which rainwater can drain as surface runoff, via a specific stream or river system to a common outlet point which may be a dam, irrigation system or municipal/urban water supply off take point, or where the stream/river discharges into a larger river lake or sea.

The continuity of the upland to the coast is provided by the river systems. River systems and their tributaries carry nutrients from the upland areas and empty into estuaries and the coastal waters. Therefore, the quality of river water is determined by the land uses upstream.

Southern Batangas is identified as one of the areas facing the Sulu Sea with a large watershed. The rest of the other provinces in the VIPMC, Marinduque, Mindoro Occidental, Mindoro Oriental, and Romblon are among the islands within the confines of the Sulu Sea which are watersheds by themselves. The land classification data of each of the provinces shows that a huge percentage of their total land area are classified forest lands and further classified as established forest reserves or timberland.

D. Existing MPAs

There are already established marine protected areas in the VIPMC (Tables 4, 5). Almost 50% of these were established more than 10 years ago. Management of the MPA is exercised by a locally based management body which may be a people's organization or a barangay.

It is worthwhile to note that Puerto Galera in Mindoro Oriental, known for its beautiful coastal and marine habitats that harbor high diversity of corals, mangroves, seagrass and fishes, was designated by the UNESCO as a Biosphere Reserve under its Man and the Biosphere Programme in 1973. Biosphere reserves are sites recognized under UNESCO's Man and the Biosphere Programme which innovate and demonstrate approaches to conservation and sustainable development. In addition, the Beautiful Bays of the World Club, a French-based and UNESCO supported organization, named Puerto Galera Bay as one of the most beautiful bays in the world in 2005.

Table 4 : Marine Protected Areas in Batangas

City/ Municipality	Name of MPA (established)	Name of Sanctuary (established)	Area (ha.)
1. Balayan	1. Carenahan Fish Sanctuary and Reserve		6.5
2. Batangas	2. Nalayag Point Fishery Refuge and Sanctuary		18.79
	3. Pulong Bato Fishery Refuge and Sanctuary (2002; amended 2007)		15.3
	4. Pagkilatan Fishery Reserve (2005)		1.8
3. Bauan	5. Dive and Trek Fish Sanctuary (1995)		2.2
4. Calatagan	6. Pagapas Bay and Municipal Waters Marine Reserve (1992)	Tanagan Marine Sanctuary (1997), 2 ha.	48,000
		Bagong Silang Fish Sanctuary (1998), 2 ha.	
		Sta. Ana Marine Sanctuary (1998), 2 ha.	
		Carretunan Fish Sanctuary (2003), 2 ha	
5. Lobo	7. Sawang/Olo-Olo Fish Sanctuary (2001)		9.0
	8. Malabrigo Fish Refuge and Sanctuary (2002)		3.0
	9. Biga Marine Sanctuary (2006)		20.0
6. Mabini	10. Municipal Marine Reserve (1991)	Arthur's Rock Sanctuary (1991), 17.9 ha.	356.0
		Cathedral Sanctuary (1991), 22.9 ha.	
		Twin Rocks Sanctuary (1991), 15.3 ha.	
7. Nasugbu	11. Municipal Marine Sanctuary and Reservation (1994)		25.0
8. San Juan	12. San Juan Marine Protected Area (2006), in 9 barangays		600.0
9. Tingloy	13. Batalang Bato Marine Sanctuary (2002)		4.8
9 LGUs	**13 MPAs**	**7 sub-sanctuaries**	**49,062.39**

Source: Batangas SE Profile, 2005

Table 5 : List of Fish Sanctuaries in Mindoro Oriental

Name of Fish Sanctuary	Location Barangay, Municipality	Year Established	Area	Coordinates	Ordinance
Harka Piloto Fish Sanctuary	Lazareto, Calapan City	2003	26	Harka Piloto Reef 13⁰ 26' 35"N 121⁰ 13 ' 01 E Kamasuhan Reef 13⁰ 26' 61"N 121⁰ 13 2"E 13⁰ 26' 41"N 121⁰ 13' 29"N	Resolution No. 60 City Ordinance No. 22
Tamayuan Reef Fish Sanctuary	Water, Baco	2006	10	13⁰ 07' 26"N 121⁰ 33' 03"E	Resolution No. 68-2006 Ordinance No. 02-2006
Punta Ilag Fish Sanctuary	Ilag, San Teodoro	2003	15	13⁰ 26' 41"N 121⁰ 01' 03"E	
Ranzo Fish Sanctuary	Ranzon, Pinamalayan	2005	10	13⁰ 02' 41.8"N 121⁰ 29' 43.2"E	Municipal Ordinance No. 00-001
Sta. Brigida Fish Sanctuary	Palayapay Cove, Mansalay	2006	18		Ordinance No. 2006-21
Herrera Fish Sanctuary	Herrera, Naujan	2006	16		Municipal Ordinance No. 39 Series of 2005
Puerto Galera, MPA	Balatero, San Antonio, Poblacion, Sabang, Sinandigan, Palangan and portions of Tabinay, Aninuan, San Isidro and Dulanagan	2006	4,828	13⁰ 52' 10.3"N 120⁰ 9' 45.02"E 13⁰ 52 23.6"N 121⁰ 9'43.51"E 13⁰ 52' 58.5"N 120⁰ 9' 45.54"E 13⁰ 52' 49.0"N 120⁰ 9' 47.17"E 13⁰ 51' 66.2"N 120⁰ 9' 58.88"E 13⁰ 50' 65.8"N 121⁰ 9' 51.95"E	Municipal Ordinance No. 00-001
Agsalin Fish Sanctuary	Agsalin, Gloria	2005	35.6	13⁰ 59' 95"N 121⁰ 29' 47"E	Resolution No. 3051 - A Municipal Ordinance No. 04
Masaguisi, Fish Sanctuary	Masaguisi, Bongabong	2005	10		
Bacawan Fish Sanctuary	Bacawan, Bulalacao	2006	10	13⁰ 07' 20"N 121⁰ 33' 45"E	Municipal Ordinance No. 06-01
Balatasan Fish Sanctuary	Balatasan, Bulalacao	1999	300		Municipal Ordinance No. 999-10-021
San Isidro Fish Sanctuary	San Isidro, Roxas	2005	10	12⁰ 33' 63"N 120⁰ 31' 02"E	

E. Socio-Economic Profile

Population

Based on the 2000 Census of Population and Housing conducted by the National Statistics Office (NSO), the population in the provinces in VIPMC for that year totaled 3,449,165 (Table 6). It is estimated to reach 4,323,100 by the year 2010. The average annual population growth rate in the area is 2.27%.

Of all the provinces in the VIPMC, Batangas has the highest average number of persons per square kilometer of land area measured by population density at almost 596 persons.

The records of the National Commission on Indigenous Peoples (NCIP) show that the population in the provinces of Mindoro Occidental, Mindoro Oriental and Romblon include the indigenous peoples (Table 7). There are no recorded indigenous peoples in the provinces of Batangas and Marinduque.

The Mangyan is the indigenous group living in Mindoro. They are of different tribes or ethnic groups: Iraya, Alangan, and Hanunuo. The Irayas are the Mangyans of Mindoro who occupy the northwestern part of Mindoro Island. The estimated population of the Iraya-Mangyan is 10,689 distributed in around 141 settlements in the municipalities of Abra de Ilog, Mamburao, and Paluan. Alangan population, on the other hand, is estimated to be 47,580. Their economic life is primarily based on the upland agriculture or kaingin system. They cut open the forest every year or two to make new swidden sites. As for the Hanunuo Mangyans, they can be found within the territorial jurisdiction of the towns of Mansalay and San Pedro (Bulalacao) along the periphery of Southeastern Mindoro. Their population is approximately 66,132.

The indigenous group in Romblon, on the other hand, are the Bantonaons who reside on the island of Banton. Bantonaons are engaged in fishing, upland and lowland agriculture, trade and business. The estimated population of the Bantonaons is 36,139 composed of an estimated number of households of 7,478.

Table 6. Population Data of the Five Provinces in the VIPMC

Province	Population		Annual Growth Rate	Projected Population			
	1995	2000	1995-2000	2007	2008	2009	2010
Batangas	1,635,567	1,905,348	2.98	2,198,700	2,242,300	2,286,000	2,330,900
Mindoro Occidental	339,605	380,250	2.45	464,000	476,700	489,600	502,400
Mindoro Oriental	339,605	380,250	2.46	819,400	476,700	489,600	882,600
Marinduque	199,910	217,392	1.81	225,500	260,500	266,300	271,900
Romblon	244,654	264,357	1.67	313,400	320,400	327,900	335,300

Source: http://www.nscb.gov.ph

Human Development Index

Human Development Index (HDI) is a composite index measuring average achievement in three basic dimensions of human development, namely, a long and healthy life, knowledge and a decent standard of living. It measures how well a country and/or a province performed, in terms of growth in real income through social indicators of people's ability to lead a long and healthy life, to acquire knowledge and skills, and to have access to the resources needed to afford a decent standard of living. The state of health is reflected by the life expectancy which measures the numbers of years a person is expected to live from birth. The education index indicates the functional literacy and combined elementary and secondary enrollment rates. Real per capita income is reflected by the income index which generally dictates the goods and services that a family can afford to acquire.

Using the 2000 HDI data ranking the 77 provinces of the Philippines (Annex 2), it shows that of all the provinces in the VIPMC, it is only Batangas which is ranked among the top ten at number six. It is followed by Mindoro Oriental at the 19th rank. The provinces of Marinduque, Mindoro Occidental and Romblon ranked 23rd, 31st and 44th, respectively.

In terms of the health index, Batangas consistently ranked as the third province in the country with the highest life expectancy. The other provinces placed between the 40th and 55th spot in terms of the health index. In terms of the education index, the provinces in the VIPMC ranked relatively high among all the provinces of the country. Three of the provinces are in the top ten with Batangas ranked first, Marinduque at number 5 and Oriental at number 7. Romblon placed at number 20 while Mindoro Occidental ranked 35.

With respect to the income index, the provinces ranked as follows: Batangas at 7, Mindoro Oriental at 22, Mindoro Occidental at 27, Marinduque at 31, and Romblon at 64.

Table 7. Indigenous Population in the MIMAROPA

Provinces	Land Area (Hectares)	Number of		No. of Brgy.	Indigenious Population 2000 Census	Total Population 2000 Census
		Municipalities	Cities			
MIMAROPA	2,745,601	70		1,457	430,109	2,299,229
Occidental Mindoro	587,985	11		162	25,223	380,250
Oriental Mndoro	436,472	14	1	426	38,069	681,818
Marinduque	95,925	6		218		217,392
Romblon	135,593	17		219	72,607	264,357
Palawan	1,489,626	22	1	432	294,210	755,412

Source : http://www.rdcmimaropa.gov.ph/index.php

Industry

The provinces in the VIPMC mainly have an agricultural economy. Crops produced are palay, corn and coconuts. Fish production obviously constitutes a part of the provinces' agricultural production.

The five provinces in the VIPMC contributed a total of 239,220 metric tons of fish production or 5.42% of the total fish production in the Philippines in 2006. 57,078 metric tons of five province's total fish production come from aquaculture; 36,432 metric tons from marine municipal fishing; 17,424 metric tons from commercial fishing; and, 8,286 metric tons from fishing in inland municipal waters.

Batangas posted the highest volume of fish production among the five provinces in terms of aquaculture, and municipal fishing, both inland and coastal. In terms of commercial fishing, however, it is Mindoro Occidental which posted the highest number of fish produced among the five provinces (Table 8).

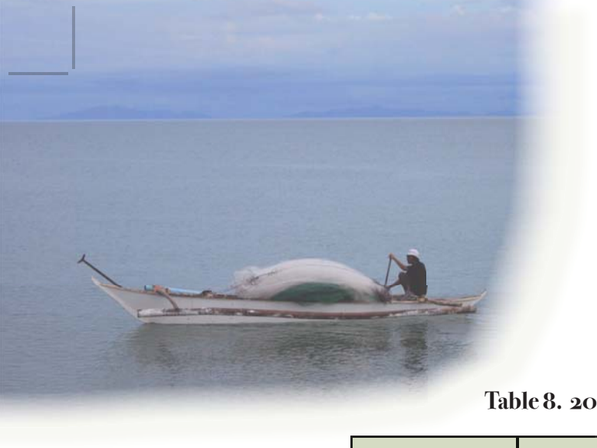


Table 8. 2006 Annual Fishing Production in Metric Tons

	Commercial	Inland Municipal	Marine Municipal	Agriculture	TOTAL
Philippines	1,080,668	161,353	1,074,134	2,093,371	4,409,526
Batangas	5,150	7,590	15,113	48,896	76,749
Marinduque	250	36	3,541	1,249	5,076
Mindoro Occidental	9,313	114	4,218	3,696	17,341
Mindoro Oriental	2,320	530	7,601	2,749	13,245
Romblon	391	16	5,959	443	6,809
Total of the Provinces	17,424	8,286	36,432	57,078	239,220

*Source: Figures for the Philippines and the provinces from the Bureau of Agricultural Statistics website: www.bas.gov.ph**

* Based on the BAS statistics, fisheries production is divided into three (3) sectors ; (1) Municipal (2) Commercial (3) Aquaculture. Commercial Fishery Production is from commercial fishing which is the taking of fishery species by passive or active gear for trade, business or profit beyond subsistence or sport fishing , to be further classified as : 1. Small scale commercial fishing – fishing with passive or active gear utilizing fishing vessels of 3.1 gross tons (GT) up to twenty (20) GT ; 2 . Medium scale commercial fishing – utilizing active gears and vessels of 20.1 GT up to one hundred fifty (150) GT; and, 3. Large scale commercial fishing – fishing utilizing active gears and vessels of more than one hundred fifty (150) GT. Municipal production is from municipal fishing which refers to fishing within municipal waters using fishing vessels of three (3) gross tons or less, or fishing net requiring the use of fishing vessels. Aquaculture production is from fishery operations involving all forms of raising and culturing fish and other fishery species in fresh, brackish and marine water areas.

The provinces within the VIPMC are known for their tourism values given their cultural, historical, and religious attractions, and more specially their natural endowments which are concentrated in the marine and coastal areas. Tourist arrivals in the provinces have been growing steadily through the years. Directly proportional to the increase in tourist arrivals are the growt h of tourism activities and facilities.

III. LEGAL AND INSTITUTIONAL FRAMEWORK

A. The Legal Framework

Laws and policies, as well as international agreements and local and regional plans, influence and stimulate the kind of management plan that will be developed for the VIPMC.

The National Laws and Policies

General principles and state policies relating to natural resources protection and utilization are embodied in the Philippine Constitution of 1987 (Table 9). Ownership and control

over the country's natural resources is vested in the State on the basis of the Regalian Doctrine. Rights of the people to a balanced and healthful ecology are recognized, and the rights of subsistence fishers are protected. Moreover, the participation and consultation of the people and their organizations has been guaranteed and institutionalized in the Constitution. The Constitution mandates the pursuit of the twin goals of economic development and of the preservation and protection of the natural and indigenous resources of the country.

Considering the land-sea continuum, the legal framework for the formulation of the VIPMC management plan is not limited to laws which are specific to coastal and marine resource utilization and management.

There are numerous national laws, issuances and administrative orders relating to environmental protection. The Philippine Environment Policy and the Philippine Environment Code, both enacted in 1977, clearly state the general principles to be applied by the government in managing and regulating our environment and its natural resources. These laws are comprehensive and address all aspects of environmental protection. The Philippine Environment Code, for instance, individually addresses air quality management, water quality management, land use management, natural resources management and conservation, and waste management. In further implementation of these provisions, subsequent laws were enacted with more detailed and specialized scope and application.

Philippine environmental laws insofar as coastal and marine utilization and management are concerned can be categorized as follows:

- Coastal and Ocean Management
- Fisheries
- Species and Habitat Protection
- Pollution
- Land Use Management
- Shipping and Navigation

Coastal and ocean management. In 1997, then President Fidel V. Ramos issued

Table 9. Relevant Provisions of the 1987 Constitution

Art. II, Sec. 16 - "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature."

Art. II, Sec. 15 - "The State shall protect and promote the right of the people and instill health consciousness among them."

Art. II, Sec. 10 - "The State shall promote social justice in all phases of national development."

Art. XII, Sec. 2 - "All lands of the public domain, waters, minerals, coal, petroleum, and other mineral oils, all forces of potential energy, fisheries, forests or timber, wildlife, flora and fauna, and other natural resources are owned by the State. x x x The exploration, development, and utilization of natural resources shall be under the full control and supervision of the State. x x x."

Art. XIII, Sec. 7 - "The State shall protect the rights of subsistence fishermen, especially of local communities, to the preferential use of communal marine and fishing resources, both inland and offshore. x x x. The State shall also protect, develop, and conserve such resources. x x x."

Art. XIII, Sec. 16 - "The right of the people and their organizations to effective and reasonable participation at all levels of social, political, and economic decision-making shall not be abridged. The State shall, by law, facilitate, the establishment of adequate consultation mechanisms."

Proclamation No. 1028 "declaring the entire Sulu and Celebes Seas as an integrated conservation and development zone." The Proclamation created the Presidential Commission for the Integrated Conservation and Development of the Sulu and Celebes Seas (PCICDSCS). The purpose of the proclamation was to conserve the rich biodiversity of the Sulu and Celebes Seas while implementing sustainable development activities particularly in the fisheries and tourism sectors, ensuring the economic well-being of coastal communities surrounding the area. Pursuant to the proclamation, the commission has drawn up a logical framework for the integrated conservation and development program (ICDP) of the Sulu-Celebes Seas upon which activities in the areas shall be based.

Last June 2006, President Gloria Macapagal-Arroyo issued Executive Order 533 "adopting integrated coastal management as a national strategy to ensure the sustainable development of the country's coastal and marine environment and resources." Integrated coastal management (ICM) is adopted as a framework for managing coastal and marine environment and resources to contribute to economic development and improve the quality of life of the people, at the same time promoting social equity and preserving ecological integrity.

Providing the legal basis for the formulation of a management plan for VIPMC is Executive Order 578 issued on November 8, 2006. It established the national policy on biological diversity and prescribed its implementation throughout the country particularly in the Sulu Sulawesi Marine Ecosystem and the VIPMC. The Executive Order directed the PCICDSCS to create the Ad Hoc Task Force on Verde Island Passage and to identify other biodiversity corridors in the SSME. It also expressly called for the development of a management plan for the VIPMC as a required output of the Ad Hoc Task Force on Verde Island Passage.

Fisheries. R.A. 8550, otherwise known as the Philippine Fisheries Code of 1998 obviously is the most relevant of the laws insofar as coastal resource management is concerned. It provides for the development, management and conservation of the fisheries and aquatic resources with food security as its overriding policy. The jurisdiction of cities and municipalities over their respective municipal waters and the preferential rights of municipal fisherfolk in its use are emphasized. FARMCs are institutionalized as a support to local government units in fishery management.

The concept of shared fishery areas such as rivers and lakes is highlighted in the Fisheries Code. It mandates that contiguous fishery resources straddling several municipalities, cities, or provinces should be managed as single resource systems and in an integrated manner independent of political subdivisions. These contiguous resources refer to bays, gulfs, lakes, rivers, and dam-areas. The local government units sharing or bordering such resources are encouraged to group themselves and coordinate with each other for purposes of integrated fishery resource management.

Species and habitat protection. R.A. 7586 or the National Integrated Protected Areas System (NIPAS) Act and R.A. 9147 or the Wildlife Conservation Act are the laws governing the protection of species and habitats. The NIPAS Act is a process legislation providing for the establishment of a system of outstanding remarkable areas and biologically important public lands, biogeographic zones and related ecosystems designated as "protected areas." Pursuant to this law, numerous marine protected areas are identified and developed. The Wildlife Conservation Act, on the other hand, provides for the conservation and protection of wildlife resources and their habitats, and the regulation of the collection and trade of wildlife. It also governs bioprospecting activities. Inasmuch as majority of the marine resources remain untapped, biotechnology applications of marine resources are being explored and must be regulated.

Pollution. Air quality management, water quality management and waste management all pertain to the issue of pollution. Industries are commonly located in coastal areas like the Batangas Bay Region, and are subject to the strict implementation of pollution laws because of the pollution they generate. Adjacent coastal waters are not spared from air pollutants which are carried by smoke and fumes and are brought back to earth through precipitation. Industries and households generate solid wastes which, if not properly managed, find their way into the coastal waters. On the other hand, there is vessel-sourced pollution which refers to marine pollution coming from ships, including those resulting from maritime accidents.

Governing the laws on industrial and commercial pollution is the Pollution Control Decree of 1976 (Presidential Decree No. 984). It was revised under the title "Revised Industrial and Commercial Wastewater Permitting Rules and Regulations of 1999 amending the Permit Regulations of 1978." This law requires industrial facilities to secure the wastewater discharge permit and the payment of corresponding fees associated with effluent discharge volume.
Air pollution is now governed by R.A. 8749, otherwise known as the Clean Air Act of 1999. The Act provides for a comprehensive air pollution control policy, balancing development and environmental protection. Solid waste management is addressed by R.A. 9003 or the Solid Waste Management Act of 2000 where a systematic, comprehensive and ecological solid waste management program is adopted. This, in essence, is to segregate, recycle and reuse. Local government units have the responsibility of managing waste disposal at their level. Marine pollution continues to be governed by P.D. 979, the Marine Pollution Decree enacted in 1976, with the Philippine Coast Guard as the implementing and enforcing agency.

Insofar as water quality is concerned, there is R.A. 9275 or the Clean Water Act (2004). It aims to protect the country's water bodies from pollution from land-based sources (industries and commercial establishments, agriculture and community/household activities) and provides for a comprehensive and integrated strategy to prevent and minimize pollution through a multi-sectoral and participatory approach involving all the stakeholders within a water quality management area.

The issue on nuclear wastes is addressed by R.A. 6969 or the Toxic Substances and Hazardous and Nuclear Wastes Control Act (1990). This law highlights the right of the state to regulate, restrict or prohibit the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and mixtures that are risky and injurious to health or the environment. It also prohibits the entry and disposal of hazardous and nuclear wastes into Philippine territory.

Land use management. Land use management, insofar as coastal areas and marine ecosystems are concerned, is addressed by provisions of P.D. 705 or the Forestry Code; P.D. 1067 or the Water Code and P.D. 1586 or the Environmental Impact Statement (EIS) System and subsequent rules and regulations.

Mangrove areas are considered as part of the forest ecosystem. The Forestry Code addresses issues relating to mangroves, particularly their utilization and the provision of requisite easements therein. The issue of easement is likewise addressed in the Water Code with respect to shores of the seas. Under the same Code, the ownership by the State of all waters is emphasized.

Preparing an assessment of a project's environmental impacts is required of proponents of all government and private projects affecting the quality of the environment to prepare an assessment of the project's environmental impacts pursuant to P.D. 1586 and related

administrative issuances. The Environmental Impact Statement (EIS) System refers to the entire process of organization, administration and procedures institutionalized for purposes of assessing the significance of the effects of any project or undertaking on the quality of the physical, biological and socioeconomic environment, and designing appropriate preventive, mitigating and enhancement measures. Environmental Impact Assessment (EIA), on the other hand, is the process of predicting the likely environmental consequences of implementing projects or undertaking and designing appropriate preventive, mitigating and enhancement measures. Compliance with the process and a finding that the project or undertaking is environmentally sound and feasible leads to the issuance of an Environmental Compliance Certificate (ECC). It is the document issued by the DENR Secretary of the Regional Executive Director certifying that based on the representations of the proponent and the preparers, as reviewed and validated by the review committee.

Shipping and navigation. P.D. 474 otherwise known as the Maritime Industry Decree of 1974 created the Maritime Industry Authority or the MARINA. MARINA is given the power to supervise, regulate and rationalize the organization management, ownership and operations of all water transport utilities and other maritime enterprises. This includes shipping, ship-building, maritime manpower, and related industries, with the exception of the port industry and the fishing industry which are governed by different laws. Shipping is further divided into domestic and overseas shipping. Any regulations over shipping-related activities must be undertaken through the MARINA, which has jurisdiction over all Philippine-registered vessels for purposes of ensuring their safety and seaworthiness.

In 2004, RA 9295 or the "Domestic Shipping Development Act of 2004" was enacted. It is an act promoting the development of Philippine domestic shipping, shipbuilding, ship repair and ship breaking. The law reinforces and strengthens MARINA's authority over Philippine-registered vessels. It emphasized MARINA's responsibility over vessel registration and compliance with safety standards by highlighting its power to inspect all vessels and all equipment on board.

P.D. 857 refers to the Revised Charter of the Philippine Ports Authority. The law mandates the PPA to implement an integrated program for the planning, development, financing, and operation of Ports or Port Districts for the entire country. Ports are a necessary complement to the shipping industry.

Other relevant laws. R.A. 8371 or the Indigenous Peoples' Rights Act (IPRA) is one law which should be taken into account in the development of VIPMC management plan. This is in consideration of Mangyans, the main ethnic group in Puerto Galera, Mindoro Oriental comprising 7% of its population, who have been marginalized in terms of decision-making and resource access. The IPRA recognizes and promotes the rights of Indigenous Cultural Communities/Indigenous Peoples, like the Mangyans, within the framework of national unity and development. It includes their rights to their ancestral domains and their rights to preserve and develop their cultures, traditions and institutions. It guarantees the respect for their cultural integrity and assures them of participation in aspects of education, health and other services.

R.A. 7160 which is known as the Local Government Code of 1991 provides the constitutional policy framework in the Philippines that ensures local government autonomy through the decentralization of governance from national to local governments. Local government units are transformed into self-reliant communities and active partners in the attainment of national goals through a more responsive and accountable local government structure. The regulatory functions of selected government agencies and the responsibility of providing basic services and facilities within their jurisdictions are transferred to the local government units. This includes exercising their authority to manage the resources within their jurisdiction. Existing laws specifically impose upon the local government units the responsibility of implementing national programs at the local level.

EO 111 is a relevant law insofar as ecotourism is concerned. This EO, issued in 1999, established the guidelines for ecotourism development in the Philippines. It provided for the creation of the National Ecotourism Development Council (NEDC) composed of the DOT, DENR, DILG, DTI, DOF, NEDA, DepEd (previously DECS) and representatives from the private and non-government sectors. The NEDC is tasked to formulate and develop a national ecotourism strategy and program for the promotion and development of ecotourism in the country; and to formulate and recommend policies, guidelines and programs relevant to the development and promotion of ecotourism in the nation.

In implementation of the national laws and policies, government agencies enact administrative orders and issuances which provide details and guidelines to achieve the objectives of the law.

Administrative orders issued by the DENR (Annex 3) are significant in the preparation of the VIPMC management plan. Much of these DENR Administrative Orders or DAOs provide the policy and guidelines for special areas of concern such as water quality, mangrove areas, foreshore areas, foreshore lease agreements, protected areas, user's fees and the EIS process, among others. A number of these DAOs, on the other hand, such as DAO Nos. 1992-25 and 2005-10, provide the implementing rules and regulations of national laws like the NIPAS Act and the Clean Water Act, respectively.

The BFAR under the DA, issues administrative orders referred to as Fisheries Administrative Orders or FAOs (Annex 4). Some of these FAOs date back to as early as 1933. Majority of the FAOs provide rules and regulations governing fishing activities and fishery resources. For example, there are FAOs which regulate or prohibit specific fishing methods such as electrofishing, use of fine-meshed nets, superlights, pa-aling and hulbot-hulbot. Other FAOs govern the exploitation of specific fishery resources such as corals, seaweeds, mollusks, and tropical aquarium fishes, while the rest are guidelines in implementation of the provisions of the Philippine Fisheries Code of 1998.

Where a special area of concern involves two or more national agencies, an administrative issuance is enacted jointly by these agencies (Annex 5). This happens when a particular subject matter concerns the expertise of two or more national agencies. For example, the DOT and the DENR have mandates and responsibilities insofar as ecotourism is concerned. In view of this, a joint DOT-DENR Memorandum Circular is issued providing for guidelines for ecotourism in the country. In other instances, in order to clarify the roles of the involved national agencies with respect to the implementation of a specific law, a joint issuance is necessary.

Local Ordinances

Among the powers vested on the local government unit is the power to promulgate laws or ordinances which are applicable and enforceable in its own jurisdiction. Most of these local laws and ordinances are enacted in conformity with the basic national policy codes and, where applicable, with special laws.

The local governments of the provinces covered by the VIPMC have valid and existing provincial ordinances and resolutions which are significant to coastal and marine resources utilization and management (Annex 6). In fact, the provinces of Batangas and Mindoro Oriental have developed the Strategic Environmental Management Plan and the Provincial Coastal Resource Management (CRM) Code, respectively. Some component cities and municipalities of these provinces (e.g. Batangas City and Puerto Galera), as well as Boac, Buenavista, Gasan and Mogpog in Marinduque, have developed their CRM plans which shall be integrated and incorporated into the VIPMC management plan.

In addition to ordinances on CRM, some provinces, like Marinduque, have codified their fishing and fishery rules and regulations to come up with their Provincial Fishery Ordinance. Mindoro Oriental, for its part, has codified its environmental laws and enacted its Environment Code in 2004. Other provincial ordinances govern specific environmental concerns such as pollution and destructive fishing activities.

At the municipal and barangay level, there are a quite a number of ordinances which created marine and/or fish sanctuaries and marine reserves.

International and Regional Agreements and Initiatives

The Philippines is committed to several international agreements or conventions related to the conservation and management of fisheries and coastal resources. Documents and instruments such as action plans have been formulated as a result of the agreements, in compliance with the Philippines' commitments.

International agreements which shall form part of the legal framework of the VIPMC management plan are:

The Rio Declaration and Agenda 21

The United Nations Convention on the Law of the Sea (UNCLOS)

The Convention on Biological Diversity (CBD)

The Convention on Wetlands (Ramsar Convention)

The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)

The Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention)

International Maritime Organization (IMO) Conventions

International Convention for the Safety of Life at Sea (SOLAS), 1974

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention, or LDC), 1972 and Protocol, 1996;

International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)

International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (INTERVENTION) 1969 and Protocol, 1973;

International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), 1990;

International Convention on Civil Liability for Oil Pollution Damage (CLC), 1969 and Protocols 1976 and 1992;

International Convention on the Establishment of an International Fund of Compensation for Oil Pollution Damage (FUND), 1971 and Protocols 1976 and 1992;

Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Materials (NUCLEAR), 1971

Regional initiatives set the framework for a more concrete cooperative action among participating countries. These initiatives produced instruments upon which the VIPMC management plan shall be based. Some of these are as follows:

Sulu-Sulawesi Marine Ecoregion Plan. The World Wildlife Fund-Philippines, through its Sulu-Sulawesi Marine Ecoregion (SSME) Program, initiated the development of the Sulu-Sulawesi Marine Ecoregion Conservation Plan whereby the governments of Indonesia, Malaysia and the Republic of the Philippines were engaged in the process. The SSME Conservation Plan presents the ecoregion actions and national plans of the three countries. The plan was validated in Manila in June, 2003. In the same year, the Tri-national Memorandum of Understanding endorsing the Ecoregion Conservation Plan (ECP) for the SSME was signed by the governments of Indonesia, Malaysia and the Republic of the Philippines.

Sustainable Development Strategy for Seas of East Asia (SDS-SEA). The GEF/UNDP/IMO Regional Programme on Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) commissioned the establishment of the Sustainable Development Strategy for Seas of East Asia (SDS-SEA). This provides a functional framework to streamline national, regional and international environmental management efforts in the East Asian Seas. It was developed over a period of three years through consultation among countries and regional stakeholders, and adopted by twelve countries, including the Philippines, on December 12, 2003 through the Putrajaya Convention of Regional Cooperation for the SDS-SEA. It is a non-binding instrument but countries may opt to comply on a voluntary basis or through national programs.

B. The Institutional Framework

Institutions play a significant role in the management of coastal and marine resources. These provide a structure for coordination and interaction among resource users, government agencies and local communities.

Government Agencies

Government agencies exercise their respective mandates in relation to the utilization and conservation of coastal and marine resources.

Responsibility over policy-making, general management and socio-economic aspects with respect to coastal and marine resources is exercised by the following government agencies:

The DENR has overall responsibility for environmental protection and management of both marine and coastal environment;

The Department of Agriculture (DA) has jurisdiction over the conservation and proper use of agricultural and fishery resources;

The Department of Tourism (DOT) exercise jurisdiction over tourism activities;

The Department of Transportation and Communications (DOTC) is responsible for marine transportation through the Maritime Industry Authority (MARINA) and the Philippine Ports Authority (PPA) with respect to ports;

The Department of Energy (DOE) has mandate over energy exploration and exploitation, and seabed mining;

The Department of Public Works and Highways (DPWH) has responsibility over coastal land use, particularly in infrastructure development and industrial siting;

The National Economic Development Authority (NEDA) coordinates various social and economic plans, policies, programs and projects on a national and sector basis.

Scientific, educational and cultural aspects are under the jurisdiction of the following:

The Department of Science and Technology-Philippine Council for Aquatic and Marine Resources Development (DoST-PCAMRD) - a policy formulating and coordinating body for aquatic and marine science and technology development;

The NFRDI - the main coordinating body for research conducted by the DA;

The DENR-Ecosystem Research and Development Bureau (ERDB) - DENR's research coordinating unit; and

The University of the Philippines – Marine Science Institute (UP-MSI) – designated as the national center of excellence in the marine sciences.

Law enforcement and coordinating functions, including maritime safety and security and safeguarding territory and jurisdiction, are exercised by the following agencies:

The Department of the Interior and Local Government – Philippine National Police-Maritime Group (DILG-PNP-MARIG) has the responsibility of enforcing the laws and the apprehension of violators;

The Philippine Coast Guard (PCG) under the DOTC has the primary responsibility in the prevention and control of marine pollution as well as search and rescue and law enforcement at sea;

The Department of Foreign Affairs (DFA) addresses the various concerns on the implementation of the United Nations Convention on the Law of the Sea (UNCLOS);

The Department of National Defense (DND) assumes responsibility for maritime territorial monitoring and defense.

The LGUs, by virtue of the devolved functions under the Local Government Code, have the exclusive authority to manage natural resources in the municipal waters. In some LGUs, like Batangas, there is the Provincial Government - Environment and Natural Resources Officer who coordinates environmental conservation activities. Furthermore, LGUs are involved in almost all aspects of coastal resource management from policy formulation, establishment of protected areas, mangrove reforestation, municipal fishery licensing and registration, law enforcement, pollution abatement, monitoring and enforcement, land use management, tourism management and establishment of municipal fishing ports.

Civil Society

Non-government organizations (NGOs), the academe and other research organizations play a crucial role in the management of the environment and natural resources. They initiate studies as well as organize communities so as to ensure a participatory process. NGOs oftentimes facilitate the linking of the local government units with national government projects and/or donor agencies. In most instances, however, NGOs and the academe provide the technical assistance and training needed by stakeholders.

Emerging Institutional Arrangements

The participation of local communities in resource management is the primary objective. However, partnerships among different sectors may be an ideal approach in certain situations in order to create a concerted effort in coastal and marine management. There may be intra-LGU and intra-government arrangements. Different offices within a given LGU coordinate and perform their respective mandates in implementation of the local government plan or program. On the other hand, coordination among government agencies and between two levels of local government units (e.g., municipality and province; barangay and municipality) is recognized. Inter-LGU arrangements, on the other hand, is best expressed in Section 33 of the Local Government Code whereby local government units may "group themselves, consolidate or coordinate their efforts, services and resources for purposes commonly beneficial to them." This arrangement holds true for neighboring local government units. It calls for joint management of common resources. Another institutional arrangement involves local and national government agencies. This is best illustrated by DENR's Coastal Resource Management Project (CRMP) which is being implemented in selected coastal communities in the country. CRMP is funded by the US Agency for International Development (USAID) and implemented by the DENR in partnership with the DA-BFAR, and local government units, together with NGOs and POs. The project gives assistance to LGUs primarily by building their capacity in coastal resource management.

Public-private sector partnership is generally defined as a scheme wherein a government service, or sometimes private business venture, is funded and operated through a partnership of government and one or more private sector companies. The government may provide capital for investment while it runs the operations jointly with the private sector. Otherwise, capital investment is made by the private sector premised on the strength of an agreement with government. The latter system is the more common type of public-private partnership in the country in view of the limited resources of government. The usual case is that the government provides a policy and investment environment and in some cases co-financing while the private sector provides the financial resources including their technical and management expertise.

IV. EXISTING PARTNERSHIPS AND CURRENT CONSERVATION EFFORTS

Various conservation efforts are currently in place in the VIPMC. Majority of the conservation work in the VIPMC are concentrated on the Batangas side and the Mindoro side of the corridor where resource use conflict is highlighted. Organizations and environmental groups are pushing for integrated coastal management to address the conflict. The VIPMC management plan shall build on these partnerships and initiatives and shall ensure that the projects, plans and programs are integrated and incorporated into the overall plan for the corridor.

In the province of Batangas, the major environmental groups are the Conservation International-Philippines (CI-P), the World Wide Fund for Nature – Philippines (WWF-Phils.) and the First Philippine Conservation, Inc. (FPCI). These are the very same groups that are active in the preparation of the management plan for VIPMC.

CI-P is implementing its Sulu-Sulawesi Seascape Project, focusing on the Verde Island Passage's fourteen municipalities and one city in Batangas. First Generation Corporation (First Gen), a private energy company involved in corporate social responsibility (CSR) projects, and its partner corporate foundation, First Philippine Conservation, Inc. (FPCI), are CI-P's partners in its Integrated Conservation and Development program in Verde Island Passage which commenced in December 2004. This project now also covers the Municipality of Tingloy, Batangas. Currently on its third phase, the effort entitled "Project Center of Center" envisions that, in time, Verde Island Passage (VIP) and Apo Reef Natural Park (ARNP) are sustainable and responsibly managed by politically empowered, and technically knowledgeable stakeholder groups that ensure the conservation of their coastal and marine resources and the sustained well-being of people who depend on them.

In the next three years, for which First Gen has committed its funding support, FPCI will focus on establishing a well-informed, well-tested platform for the ecological, institutional and financial sustainability of Verde Island Passage and Apo Reef Natural Park. For this purpose, Project Center of Center is working in five outcome areas, to wit: (1) Marine Protected Areas (MPAs) as part of a strategy of area-based protection and conservation are created and increased in number of time; (2) MPAs are managed sustainable by its direct stakeholders; (3) Capability of direct stakeholders involved in planning for and managing MPAs are developed and enhanced; (4) Industry locators within the VIP adopt responsible and environment-friendly practices; and , (5) Biodiversity-related information is gathered, publicized and used to increase conservation involvement and commitment among stakeholders.

Studies in the VIP marine biodiversity corridor are being conducted by CI-P and its partners. One study involves the University of the Philippines in the Visayas Foundation, Inc. (UPVFI), the University of the Philippines Marine Science Institute (UPMSI), and De La Salle University through the Marine Environment and Resources Foundation, Inc. (MERF). The study focuses on marine ecosystems with the objective of understanding ecosystem health, the ecological processes behind biodiversity distribution in the corridor, and determining the impacts from various disturbances.

CI-P also collaborated with Reef Check and the Marine Aquarium Council in the establishment of sustainable fishing levels of aquarium species and the enhancement of local capacities for ecologically sound collection practices. CI-P likewise supported species surveys and threat assessments in partnership with the Tropical Marine Research for Conservation (TMRC), the PAWB through the Pawikan Conservation Project (PCP), the DA-BFAR-National Fisheries Research and Development Institute (NFRDI), and the Marine Threatened Species Fisheries Interaction (MTSFI), a CI-based group.

The Philippine Council for Aquatic and Marine Research and Development (PCAMRD) is coordinating the project entitled "Capacity Building Local Government Units (LGUs) on Integrated Coastal Management (ICM) and Fisheries Management in the Verde Passage also with funding support from CI-P under the latter's Sulu-Sulawesi Seascape Project. The objective of the training is to strengthen the management capability of the relevant stakeholders in the Passage.

WWF-Philippines is implementing three projects in the VIPMC area. Two of these projects are based in Batangas and one is based in Puerto Galera, Mindoro Oriental.

WWF-Philippines began its conservation work in Batangas in 1998 through the "Mabini-Tingloy Marine Biodiversity Conservation Project" which was supported by the Woolcott Henry Foundation and Homeland Foundation. The project focused mainly on marine law enforcement and conservation financing. In 2005-2006, the project was renamed as "Sustaining CRM Initiatives in Maricaban Strait" with primary focus on CRM planning and integrating land and water use planning.

During the period 2000-2004, WWF-Philippines implemented the "Integrated Coastal Management (ICM) of Balayan and Adjacent Bays," undertaken in collaboration with the PG-ENRO and supported by the MacArthur Foundation. The major outputs of this project were the Coastal Environment Profile of Balayan and Adjacent Bays, an ICM plan, and the institutionalization of the Bantay Dagat Bay Watch Network. The ICM plan was adopted by the Provincial Development Council and later subsumed under the Strategic Environmental Management Plan (SEMP) of Batangas province adopted by the Sangguniang Panlalawigan.

WWF-Philippines is currently implementing the project "MPA Establishment in Batangas Province of the Verde Passage Marine Corridor" which commenced in July 2006 and is funded by CI-P. The project focuses on the establishment of a network of MPAs, strengthening marine law enforcement, and identification of potential sustainable financing mechanisms, all of which support and/or complement in part the Provincial Government of Batangas' Strategic Environmental Management Plan (SEMP) 2005-2020. Another WWF-Philippines project currently being implemented in the Mabini-Tingloy area is "Enforcing Water Use Zones in the Maricaban Strait" which commenced in 2007 and is supported by the Woolcott Henry Foundation. A parallel project likewise implemented in both municipalities is the "Coastal Resources and Fisheries Conservation (CRFC) Project" funded by the USAID for the period 2006-2007.

In Puerto Galera, WWF Philippines is implementing the "Puerto Galera Coastal Resource and Marine Biodiversity Conservation Project." The Participatory Coastal Resoruce Assessment (PCRA) was conducted, and a resource and socio-economic study of the area was made in 2004. Among the components of the project are livelihood, tourism, solid waste management, capacity building, and IEC. WWF-Philippines assisted in the development of the Provincial Fisheries Development Plan as well as the Puerto Galera Tourism Master Plan, and in the review of the municipality's land use plan.

The Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) is a regional program supported by the GEF/UNDP/IMO and has been in existence for fourteen years or since 1993. The Batangas Bay Region is one of its demonstration sites for integrated coastal management with the application of intergovernmental, interagency and multi-sectoral partnerships. The program boasts of a number of achievements including the creation of the Batangas Provincial Government-Environment and Natural Resources Office (PG-ENRO), as lead local agency for environmental management and project management office; the establishment of the Batangas Bay Region Environmental Protection Council (BBREPC) for Integrated Coastal Management established by Provincial Ordinance; the adoption of the Strategic Environmental Management Plan and Action Plan for Integrated Waste Management by the BBREPC and the preparation of the Coastal Environmental Profile of the Batangas Bay Region.

Noteworthy is the fact that marine law enforcement activities have been organized stemming from the conservation projects in the area. The Bantay Dagat teams of the municipalities were constituted and regular patrols are being conducted. In fact, the current projects mentioned above aim to establish and strengthen a province-wide marine law enforcement to benefit both the province of Batangas and the corridor.

Each of the provinces has its respective Provincial Physical Framework Plan. The different provinces have outlined their programs and projects on coastal resource management. For instance, the province of Mindoro Oriental has identified programs and projects on CRM and fisheries. These include fisheries rehabilitation; coastal and fishery resources management program to cover database development, establishment of fishery sanctuaries and reserves, and formulation of fishery ordinances, among others; bangus fingerling production; establishment of fish processing centers; capacity building; and, research. The province of Romblon, on the other hand, identified environment rehabilitation; agriculture development such as promotion of marine produce agriculture (i.e. seaweeds, crabs, lapu-lapu, etc.); and other environment programs such as monitoring of integrated social forestry, mangrove planting, strengthening of FARMCs and establishment of fish sanctuaries.

Similarly, the provinces and a number of their component municipalities have adopted their own CRM/ICM plans, some of which were enacted in appropriate ordinances.

On a regional level, priority programs and projects in the MIMAROPA Region for the Coastal, Fisheries and Aquatic Resources Management Program are as follows:

IEC on Coastal Resources Management

Mangrove Plantation

Alternative Livelihood Programs for fisherfolk

Zoning of Water Bodies

With respect to the priority programs and projects in the CALABARZON Region for the Coastal, Fisheries and Aquatic Resources Management Program, these are:

Mangrove Plantation Establishment Project

Mangrove Rehabilitation Project

IEC on Coastal Resources Management

Alternative Livelihood Programs for Fisherfolks

Skills Training/Upgrading Program on Coastal and Marine Ecosystems Management

Fisheries and Aquatic Resource Management Councils Mobilization Project

Zonification of Water Bodies

(Source: CALABARZON Medium-Term Regional Development Plan 2004 -2010)

V. CRITICAL ISSUES IN THE VIPMC

During the Sulu-Sulawesi Congress held last June 20-22, 2007 at Richmonde Hotel, participants identified issues affecting the VIPMC. These issues were grouped into categories, which are listed below in the order of urgency:

Institutional/Attitude

Fishing related issues

Biodiversity

Land use

Pollution

Resource Use and Tourism

Socio-economic

Table 10: Chronology of Conservation - Related Efforts in Balayan Bay Region

1978	Passed P.D. 1801 declaring the islands and reefs of Maricaban Island a tourism zone under the Dept. of Tourism
1980	Marine Parks Task Force of the National Environmental Protection Council surveyed coral reefs in Sombrero, Sepoc and Layag-Layag to be included in a proposed national marine park
1988	Haribon Foundation started a community-based conservation project in San Teodoro, Mabini
1991	First marine reserve declared by municipal ordinance in Mabini establishing three marine sanctuaries with restrictions in recreation and fishing activities.
1993	First Earthwatch expedition to survey coral reefs in Mabini/Tingloy area
1994	Rapid assessments and community organizing in Calatagan, Balayan and Mabini by CERD, an NGO.
1994	Haribon Foundation undertakes socio-economic assessment and plan for a conservation program
1995	BFAR conducted rapid ecological and socio-economic assessment of Balayan Bay
1997	GEF-supported UNDP-IMO project to curb marine pollution in Batangas Bay launched
1998	WWF launches enforcement in Mabini and Tingloy. A sisterhood agreement between Mabini and Tingloy to promote conservation was signed.
2000	Provincial Government of Batangas and WWF launches Integrated Coastal Management for Balayan Bay and adjacent Bays Willingness-to-pay survey conducted in Mabini and Tingloy
2001	Balayan Bay Integrated Fisheries and Aquatic Resources Management Council (11 coastal towns) formed
2002	Baywide Bantay Dagat Network from 6 towns formed
2004	Baywide ICM Plan formulated

Source : Balayan Bay Region Integrated Coastal Management Profile

A. Institutional/Attitude issues

This issue relates to the interactions among the stakeholders, most particularly among LGUs and government agencies. For coastal resource management to succeed, a strong partnership between the national government, specifically DENR and DA-BFAR, and the LGUs must be present. Inherent overlaps in terms of the roles, functions and mandates of government agencies, however, hamper the effective coordination among them. Sometimes they maintain conflicting positions on certain issues.

Lack of political will on the part of the local executives to seriously implement and enforce environmental laws was identified. It sometimes happens that coastal management decisions are not based on scientific and/or social data. The need to improve inter- and intra-agency coordination was highlighted as well as the need to use scientific and socially "relevant" information in decision making rather than political or personal interests.

Enforcement is described to be generally weak because of limited personnel or equipment to carry things out. Some coastal LGUs do not have ICM plans and appropriate institutions such as MFARMCs in place. This being the case, there is very limited participation of fisherfolk.

"Ningas cogon" attitude among stakeholders is cited as an issue as well. This refers to the attitude in Filipino society characterized by an initial enthusiasm in a project but which dies out quickly, characteristic of the burn quality of the cogon grass. Ensuring sustained support and long-term commitment among stakeholders is a challenge.

B. Fishing related issues

Much of the problems relating to fisheries concern the harmful and unsustainable methods and practices employed by fishers in the exploitation of fishery resources. The Verde Island Passage hosts a spectacular array of aquarium fish. Collection of aquarium fish is an emerging industry in the area. Unfortunately, collectors of aquarium fish are using noxious substances in catching the fishes.

Blast fishing is resorted to by some fishers. While these harmful methods of fishing are criminalized by the Philippine Fisheries Code and by local ordinances, the use of these methods remains unabated.

The problem of encroachment by commercial fishers into municipal waters is a perennial fishing-related issue. Despite the designation of the area15 km from the coastline as municipal waters, commercial fishers still continue to breach the boundary and compete with their municipal counterparts.

"Fish kills" was also cited as an issue. Fish kills are mostly caused by destructive microorganisms and indirectly by irresponsible and unregulated human activity. Overfishing was identified as another problem. All the foregoing issues contribute to the problem of dwindling fish catch.

C. Biodiversity issues

Biodiversity loss is a primary concern in coastal resource management. The loss is attributable to both anthropogenic and natural causes. Among the anthropogenic causes identified in the VIPMC are what can be considered as extractive in nature: coral gathering, illegal transport of corals, mangrove destruction, destructive collection/practice in fishing, and by-catch of threatened marine species.

Biological pollution is an emerging threat to biodiversity loss. "Biological pollution" is defined as the movement of living organisms, either accidentally or intentionally, from their native places to new environments where their populations increase. These organisms, referred to as invasive alien species, threaten the ecosystems, resources and other organisms, and, can cause disruptions in the normal functioning and processes in the natural ecosystem. Biological pollutants are brought about by human activities. An example of this is the discharge of ballast water from vessels.

Ports are situated throughout the VIPMC. The ballast water of shipping vessels can be a primary means of introducing alien species. The proliferation of "bioinvasive" species can cause disruptions in the natural ecosystem. They become pests, threatening biodiversity, fisheries and aquaculture. Some introduced species severely deplete native populations or deprive them of food. Others form colonies which can smother existing fauna. Introduced toxic organisms can cause red tides and algal blooms that can adversely affect or even kill shellfish, fish, sea birds and humans.

Another circumstance where natural species cause disruption to the VIPMC ecosystem is the outbreak of crown-of-thorns seastar. Crown-of-thorns seastars feed on living coral tissue. Outbreak populations can dramatically reduce coral cover, resulting in a major disturbance to the whole system.

Threatened seabirds, marine turtles and cetaceans are some of the species naturally found in the VIPMC. Unfortunately, it has been noted that there is lack of initiative to conserve these wildlife species. Conservation and protection of these species from extinction is imperative given the threatened status of some of their populations.

D. Land use issues

The detrimental impact of land misuse on aquatic and marine resources in the VIPMC still persists. It is imperative that land misuse be arrested in order to ensure the sustainability of the whole ecosystem.

The provinces surrounding the VIPMC all have their comprehensive land use plans (CLUPs) that aim to guide the local government units (LGUs) to plan for various sectors in their area to regulate the use of land in the most efficient and ethical way. However, it is observed that implementation of these CLUPs still is inadequate to attain the sustainable development of the said provinces. Activities that degrade the integrity of the environment are still prevalent in these areas.

Recent consultations with stakeholders revealed that the issues on the use of land resources along the VIPMC can be classified into access use, resource use, public safety and regulatory processes. Access use issues arise from the construction of permanent and temporary structures along the foreshore and shore land areas. The proliferation of these structures forms a solid and continuous obstruction along the area as its owners fence and continually expand their properties farther inland. Private individuals and corporations with Foreshore Lease Agreements (FLAs) build their structures from dry land and out to the water to the sea preventing public access to the beach and water which is a violation of the FLAs. Squatters are also found in the area further aggravating conditions such as the lack of solid waste and water management mechanisms of beach resort establishments.

Resource use issues arise from mangrove forest conversion to fish ponds and pens. The denudation of watershed areas and indiscriminate cutting of trees to support industries, such as charcoal-making, has contributed to siltation of nearby bodies of water. Beach quarrying where white sand and gravel are extracted along foreshore areas to be used as construction or gardening material is identified as a threat to the ecosystem.

The structures mentioned above create public safety concerns in the long term. Structures situated on narrow strips of land between coastal roads and highways are vulnerable to day-to-day erosion processes which can be suddenly intensified by storm activities. Residential structures or commercial establishments may collapse at any time without warning because of erosion which sufficiently undermines any foundation that support these structures. Even uninhabited and abandoned structures contribute to this problem. Contrary to early misconceptions, these structures do not help prevent erosion by retaining beach sand and coastal coverage. Studies show that they help magnify the waves where water motion tend to focus on the structures.

The fragmented and weak framework in the management of foreshore lands is also contributory to problems arising in the VIPMC. This problem was due to the fact that the management of foreshore areas was once unclear to mandated agencies such as the local government units and the DENR. However, with the passage of the Local Government Code of 1991 and devolution of services formerly provided by national government agencies, this ambiguity in the delivery of services was resolved. Nonetheless, the sufficient capacity of LGUs to carry out these services still remains to be desired.

E. Pollution

The issue on pollution in the VIPMC is closely associated with waste generation and management in the surrounding regions and in the passage itself. Pollution in the area comes from point sources such as industrial effluents, water runoff from urban areas and sewage discharges, and non-point sources such as land clearance, livestock production and agricultural activities including the use of fertilizers and pesticides.

The household sector generates tons of solid waste and is projected to increase further in view of rapid industrialization and urbanization and population growth. Solid waste accumulates in the absence of an efficient solid waste management program. This results in indiscriminate

dumping and disposal of waste materials. Unregulated settlements along the coasts are growing at a fast rate and are contributing to the pollution from sewage flowing directly into the bays.

Unsustainable agricultural practices in the provinces surrounding the VIPMC are a cause for concern. For instance, Calumpang and Pinamucan Rivers in Batangas, the only two major rivers that provide water supply for crops and animals, are heavily silted due largely to organic wastes indiscriminately discharged by poultry and piggery farms and by market and commercial establishments. The recent epidemic of typhoid fever in the municipality of San Jose, which has been traced from piles of untreated animal wastes in varying stages of decomposition that contaminated sources of drinking water and affected more than 2,000 people, is a glaring example of human impact of improperly disposed and untreated solid waste. The use of fertilizers and pesticides in agricultural crops are sources of coastal pollution. This leads to the recurrence of harmful algal blooms which can cause massive fish kill.

Industries are strategically located in coastal areas because of its accessibility to transport facilities and resources. Industries largely contribute to pollution in the VIPMC in terms of volume and the level of contaminants contained in the effluents. The wastes generated by the industries cause both water pollution and air pollution. Industrial effluents are almost regularly dumped into the bays. Gases and particulates from oil refineries and chemical plant containing lead and sulfur oxide, among others, are being emitted, posing hazard to both the environment and human health.

Ship and port wastes are another source of pollution. The VIPMC is a navigation route for both passenger and cargo ships. It was reported that domestic passenger ships plying the route indiscriminately dump their solid and liquid garbage, such as plastics, styrofoam and paper into the open waters along Nasugbu Strait, Nasugbu Bay and Batangas Bay, particularly at Matoco Point. This irresponsible practice not only pollutes the marine resources, but also endangers the safety of other sea vessels.

Threats of pollution to marine environment may arise from marine-based pollution from oil spills, release of sediments from mining and organic compounds (e.g., anti-fouling paint, ballast water discharges and sewage from vessels). Pollution of marine waters is expected to escalate due to potential oil spill from increased vessel traffic and unregulated mining and quarrying. Incidents of oil spills have been recorded by the Philippine Coast Guard in other parts of the Sulu-Sulawesi Seas, the most recent of which is the oil spill in Guimaras. The prospect of oil spills seem to be in the light of the international port development in Batangas, which will ultimately intensify the vessel traffic condition in the passage. Soil erosion and sedimentation of coastal waters are caused by mining.

Direct or indirect disposal of toxic mine tailings and sediments from open-pit mining and quarrying operation, although small-scale, pollute the marine environment. Sedimentation from mining activities causes destruction of fish habitat (coral reefs) and the reduction of the natural reproductive capacity of fish in the coastal areas. The nature and extent of mining activities have direct and indirect impacts on the marine ecosystem. They cause widespread destruction to the ecosystem, and adversely affect the lives, health and livelihood of the communities.

F. Resource Use and Tourism

Tourism is a growing industry, more so in the areas of Batangas and Mindoro Oriental. Much of the tourism industry is largely dependent or closely related to the quality of coastal marine resources and/or to the scenic values of the coastal zone. Marine sanctuaries with excellent coral cover attract tourists, particularly scuba divers.

An influx of tourists entails a corresponding increase in the development of resorts and sometimes private subdivisions. As the tourism industry grows, the conflict between tourism and fishing becomes more apparent. "Inequitable access to resources" is evident in instances where private subdivisions and resort owners claim "exclusive" use over fishing grounds along their beachfronts, excluding fishers from access thereto whether to fish or to dock.

The construction of resorts and other tourism facilities most often fail to comply with the legal requisites and they violate environmental laws. For example, some resorts do not have foreshore lease agreements (FLA). Sometimes FLAs are issued without the knowledge of the LGU or without prior consultation with affected fishing communities.
Mangroves are indiscriminately cut and sea grasses are uprooted.

Further compounding the conflict, especially in the Batangas side of the corridor, is the growing industrialization of the area, brought about by regional initiatives, the accessibility to Metro Manila, and the good harbors offered by the bays. LGUs inadvertently situate their industrial zones near or along the coast. As a result, the passage is becoming a major navigational lane for the shipping industry and is prone to industrial pollution.

G. Socio-economic issues

Growing population, robust economic growth, uncontrolled increase in tourism, development of ports, shipping, oil and gas exploration, and rising economic demand for fish and fishery products all have combined to exert tremendous pressure on the VIPMC. Natural resources, particularly fisheries, have been depleted, and mangroves, coral reefs, seagrass beds and other habitats have been destroyed.

Despite the perceived economic growth and development, poverty in the coastal areas and the inequitable distribution of income remain as the major socio-economic issue in the VIPMC. Sectors of society that are dependent on the depleted natural resources such as the fisherfolk are among the low-income earners. Inadequate post-harvest and cold storage facilities aggravate their situation. Fisherfolk are further pushed into poverty because of inadequate livelihood opportunities and their low level of educational attainment.

Other related issues concern the high population and population density and congestion in the coastal areas, the poor access of coastal communities to education, health, housing, recreation and other basic services. These problems are compounded by inadequate, and sometimes absent, livelihood support.

VI. MANAGEMENT STRATEGIES

A. Vision Statement

The Ad Hoc Task Force on Verde Island Passage Marine Corridor has adopted the following vision in the formulation the VIPMC Management Plan:

"Verde Island Passage Marine Corridor at the center of global marine biodiversity, is a socially and economically developed community of responsible citizenry committed and empowered to be effective, conscientious and accountable stewards of our environment and natural resources."

B. Mission

Drawing on the partnerships among the various sectors of society in recognition of the fact that the protection, conservation and sustainable use of biodiversity is a shared responsibility, the mission is:

"To mobilize partnerships and strengthen capability among local government units, national government agencies, private sectors, non-government organizations, academe, volunteer groups, social/civic organizations and coastal communities and residents for sustained biodiversity conservation and socio-economic development."

C. Goals

By 2018, it is envisioned that the VIPMC will achieve the following management goals:

- Increase the area and numbers of well managed MPAs and MPA networks;
- Establish an inventory of flora and fauna;
- Address issues of other marine and coastal habitats such as estuarine waters, saline lagoons, and intertidal marshes;
- Reduce threats to species and habitats;
- Reduce threats from shipping and navigation;
- Enforce laws and regulations effectively;
- Improve the management of fisheries;
- Set up and implement land and water use plans;
- Improve the standard of living and make basic services accessible to stakeholders;
- Establish the carrying capacity of the resources;
- Regulate resort operations and other economic activities based on carrying capacity of the area;
- Minimize pollution from land-based and sea-based sources;
- Establish sustainable financing mechanisms; and,
- Institutionalize a management body to oversee the implementation of the management plan.

D. Guiding Principles

The preparation of the VIPMC management plan shall be guided by the following principles:

The three pillars of Sustainable Development: viable, sound and broad-based economic development, ecological soundness and socially acceptable and enriching. The VIPMC management plan shall take into account the fact that allowing poverty to exist is harmful to all and adversely affects the delicate balance of nature; that the destruction of and damage to biodiversity and the natural resources negatively impacts on human wellbeing and commercial activities; and, that commercial activities which disregard social and environmental consequences will, in the long run, fail and become harmful to commerce and industry. Poverty alleviation, natural resource conservation and business development shall be addressed simultaneously and treated with equal importance in the formulation of the VIPMC management plan. The VIPMC management plan shall allow sustainable resource use and development pursuant to the national and regional environmental and developmental policies, at the same time ensure that activities within the area do not cause environment degradation in the VIPMC or in areas beyond the limits of the corridor.

The precautionary principle. In situations where there is a potentially serious or irreversible threat to the environment, there is a need to act immediately in order to reduce potential hazards or forestall disasters before there is solid evidence of harm. The precautionary principle provides that the absence of full scientific certainty shall not be used as a reason for postponing decisions when faced with the threat of serious or irreversible harm. There is adequate information about potential hazards, such as pollution, oil spills and climate change, and their impacts in the VIPMC. The VIPMC management plan shall provide for actions and programs in anticipation of these serious or irreversible harm, as well as to identify and reduce the impact of the cause of the damage. In the development of options and making decisions and policy measures, the costs and benefits of action or inaction shall be taken into account. It shall also recommend actions to reduce potential risks that are foreseen and provide for further research and monitoring for the purpose of detecting hazards.

Informed decision-making through the use of science, appropriate technology and environmental education. The effects of various factors on the coastal and marine environment are not apparent. This requires particular information of external influence which may only be obtained through the use of science or appropriate technology. Planning and management, to be effective, should be informed by reliable data. Collection and analysis of data enables the planners to refine management objectives and evaluate and make decisions based on these. Decisions must be based on knowledge culled from available data and must be supported by scientific/ecological theory.

Participatory governance/participation of all stakeholders in all relevant activities. The involvement of all stakeholders and interest groups is important if there is to be a consensus around objectives of the management plan. It is significant that the involvement of the people affected by the management of the VIPMC should be from the very beginning and should continue throughout. Stakeholders must be identified to ensure that everyone is included and accounted for in order to guarantee them active participation in the planning, implementation, monitoring and evaluation of the management plan.

In preparing the management plan, the stakeholders become active collaborators in the analysis of the environmental, political, cultural, physical situation of the passage. Having the experience and familiarity with the situation in the area, on-site stakeholders will be able to identify the problems and the possible solutions and activities that shall be adopted and sustained. They would be able to identify the detailed objectives of the management plan as well as the issues and concerns that influence the attainment of the identified management objectives. The management plan, therefore, will more likely be implemented if concerned stakeholders are involved in its formulation and development, giving them a sense of "shared ownership;" instilling in them a greater sense of commitment and greater support for the protection of the area; and giving them a sense that they can influence and change management plans. A stakeholder-developed management plan ensures that its implementation beyond project life with minimal management personnel.

From another perspective, participation of stakeholders ensures access to information and data needed for management. Furthermore, this provides a mechanism for communication of major players in the VIPMC.

Considering that the population in the VIPMC includes indigenous groups, their involvement should not be overlooked. The traditional rights of the indigenous peoples shall be recognized and understood in order that their customs and social structures are kept intact. Likewise, their share of economic benefits form the conservation activities and projects should be ensured.

Compliance with national policies. The VIPMC management plan is a technical document, the formulation of which was mandated by EO 578. The preparation of the VIPMC management plan shall be within the context of the legal and institutional framework discussed above to ensure consistency and coordination among involved agencies and existing systems. The requisites/requirements of existing laws and regulations must be complied with where new developments having substantial environmental impact are foreseen. Moreover, the management plan shall be aligned with the physical framework plan and with local plans. It shall also be aligned with the National Biodiversity Strategic Action Plan (NBSAP), the Logical Framework of the Presidential Commission for the Integrated Conservation and Development of Sulu-Celebes Seas, the Conservation Plan for Sulu Sulawesi Marine Ecoregion, Sustainable Development Strategy for Seas of East Asia (SDS/SEA).

Support to international commitments. The process, requisite and content of the VIPMC management plan are dictated and influenced by Philippine commitments to and obligations in international and regional agreements. The VIPMC management plan shall incorporate and adopt principles and actions in fulfillment of the mandatory obligations of the Philippines under international agreements. It shall also incorporate the action plans committed by the Philippines in the Tri-National SSME Memorandum of Understanding.

Support for local stakeholders where threats to local resources, ecosystems, livelihood and human health. Planning for conservation should be linked and balanced with planning for development. The VIPMC management plan shall ensure that communities will benefit from the management of the area in terms of "perceived improvements in their social and economic conditions." The management plan shall provide measures that will diversify the sources of income local communities in order to help them achieve higher productivity and meet their basic needs. The management plan shall ensure that communities will derive direct economic benefits from conservation-related projects. Long-term benefits to the community specially the IPs and accommodation of their culture and traditions should be built into the management plan. The VIPMC management plan shall integrate conservation with providing alternative livelihoods. This would mean raising the income of local stakeholders at the same time reduce pressure on the resources.

Application of adaptive management. The VIPMC shall be flexible and adaptive. It shall be subject to monitoring and periodic review and it shall be revised accordingly. Circumstances

and situations change. Through the years, more information or data are acquired, issues and problems will vary, stakeholders change, and new experiences are encountered. The plan, therefore, shall allow for change and modification, and shall adapt to the changes within its timeframe.

Adherence to sound moral values. The VIPMC management plan shall abide by the tenets that other life forms have the right to exist, and that man has the responsibility of stewardship to protect his natural inheritance for future generations.

E. Key Conservation Strategies

Successful management of coastal ecosystems in the VIPMC requires that their vulnerability to present and impending threats is managed as well as their resilience to constant pressures built up. The interconnectedness of ecosystems reflects that disturbances and changes in one ecosystem can have an adverse impact in another.

It is impossible to conserve biodiversity, especially marine biodiversity, by managing it directly. Rather, the root causes of biodiversity loss, namely human activities, must be managed. In the marine environment, this management requires direct actions, such as regulations, fishery controls, water use zonation, and pollution reduction. Indirect actions involve education, economic, social and political measures, based on current knowledge of marine ecology and ecosystem processes or dynamics.

The general management strategies which shall be adopted in the VIPMC management plan are:

Community-based coastal resource management (CBCRM). Community-based system of management shall be established throughout the VIPMC. CBCRM is an effective mode of administration of the coastal and marine environment considering that local communities have the greatest interest in the conservation and sustainable use of coastal resources. Community participation in policy and program formulation as well as in program implementation assure the success of CRM. Communities set their own plans and take responsibility for implementation of decisions and actions. CBCRM best illustrates the integrated conservation and development strategy in managing natural resources. It responds to resolving conflicts over multiple resource uses, at the same time it seeks to address the socio-political and economic dimension of resource management.

Multi-stakeholder partnerships. Multi-stakeholder partnerships shall be instituted to implement the action plans. Stakeholders from different sectors shall be involved in order to accomplish management responsibilities and to meet management goals. Each sector has its role to play. The resources and assets of each of the sectors shall be tapped and maximized. NGOs and the academe have the logistics and technical skills, corporations and funding institutions provide the financial support to projects, while the public sector provides the policy direction.

Sustainable financing. Sustainable financing for the VIPMC will be identified and secured. This entails identifying and setting up funding mechanisms that will ensure that the VIPMC management projects will be supported and sustained in the long term.

Budget support from the local and national governments as well as economic instruments shall be explored. This may include the payment for environmental services scheme, the polluters pay system, accessing CSRs and application of tradeable permits.

Local management and networking of MPAs. The IUCN defines an MPA network as "a collection of individual marine protected areas operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfill ecological aims more effectively and comprehensively than individual sites could alone. The network will also display social and economic benefits, though the latter may only become fully developed over long time frames as ecosystems recover." MPA networks contribute to sustainable development goals by promoting an integrated coastal and marine management over a wider area at the same time eliminating duplication of efforts in managing resources.

There exist well-managed MPAs in the VIPMC that demonstrate benefits to the local communities. In addition to these, new MPAs shall be established and all MPAs shall be linked together to form a network that will provide increased biodiversity and conservation values as well as showcase the corridor's unique characteristics.

Research and knowledge management.

Effective management of the VIPMC requires the development of a coordinated and focused research program. Researches are designed to improve knowledge of the VIPMC's environment and resources and to acquire data and information that are most useful to the decision-makers. Data and information shall be gathered to form part of the general body of scientific knowledge. The management-specific focus of the research shall provide useful information for application in other marine and coastal areas. At present, there is relatively a dearth of information on the coastal and marine ecosystems in the Marinduque and Romblon side of the VIPMC. The priority for research shall be to generate acceptable site profiles and to secure relevant biophysical information which are essential to the formulation of other suitable management strategies in the vicinity.

Information, education and communication (IEC). Information dissemination and education are modes of acquiring the trust of and involving stakeholders in the development and implementation of the management plan. A comprehensive and effective IEC campaign shall be developed and implemented through a wide range of stakeholder-validated methods, themes and formats. IEC proved to be a useful tool in resource protection and management. Its implementation in the VIPMC will be designed to reach not only to those directly affecting the VIPMC but also those indirectly affecting it. Imparting knowledge on the marine ecosystem in general and the uniqueness of the VIPMC in particular, its importance, the threats, and the need to conserve them substantially contribute to the establishment of safe and sustainable practices in the marine ecosystem. This will also promote a sense of ownership over the VIPMC.

Passage-wide enforcement. This strategy was already initiated by CI-P. Inasmuch as the boundary of the VIPMC extends up to Romblon, the coverage of the current marine law enforcement program shall be expanded accordingly. Each of the component provinces shall contribute its resources. Coordination across jurisdictions shall be streamlined.

Emergency/Disaster Risk Management. As called for by EO 578, disaster risk assessment and management shall be a component of the VIPMC management plan. Disaster risk management shall cover the four stages of the emergency management framework being followed by National Disaster Coordinating Council (NDCC) through the Office of Civil Defense (OCD), namely: mitigation, preparedness, response and rehabilitation. Specific activities that will address events such as oil and chemical spills, fish kills, coral bleaching, and crown of thorns infestation shall be outlined. It should be able to address issues which arise in times of emergencies and disasters. Protocols will be

developed to address impending emergencies or disasters and will include decision-making guidelines, the roles of specific agencies and coordinating lines, damage assessment, equipment logistics and financial requirements. Below are the proposed specific strategies to address each of the identified issues:

Institutional/Attitude

Information, education and communication (IEC) and advocacy

Sustainable financing

Capability building (e.g., law enforcement)

Networking (partnership)

Moral Recovery Program

Harmonization of laws

Reorientation/reorganization/strengthening of FARMCs

Integrated coastal resource management planning

Fishing-related issues

Policy implementation

Networking

Capability building

Research (e.g., fish stock assessment)

Biodiversity

Research and development (seabirds, dugong, sharks, marine turtles, cetaceans, fisheries, etc.)

Marine protected areas establishment/ management

Rehabilitation and restoration (mangrove areas)

Protection/conservation of important ecosystems (tidal flats, estuaries, mangrove, seagrass beds, coral reefs, etc)

Land-use

Formulation and approval of CLUPs; zoning

Harmonize local land-use plans with EIS (may include small-scale and large-scale mining)

Study the appropriateness of declaring VIPMC as a PA under NIPAS

Study the best options for managing the VIPMC

Harmonize foreshore leases with existing zoning ordinances and the CLUPs

Study appropriateness of issuance of Foreshore Lease Agreements along coastal areas

Integrate water use in land use planning

Undertake water classification and water use zoning

Carrying capacity assessment

Involvement of the indigenous peoples in the water use and land use planning and their implementation, and respect for their traditional land rights and access to local resources

Pollution

Solid waste management

Ballast water management

Agricultural waste management

Industrial waste management

Hospital waste management (toxic and hazardous waste)

Disaster risk management (to cover preparedness, management and rehabilitation)

Regulation of livestock, poultry population

Polluter's pay principle (incentives and penalties)

Sewage and septage treatment facilities (to look into Saranggani as a model)

Tourism

Policy enforcement (e.g. tourism code)

Review of ordinances creating MPAs and MPA management plans

Waste management

IEC targeting resorts and tourists

Development of tourism standards in EIS

Packaging VIP to be known as a "green" tourism area

Rationalization of collection and use of user's fees

Profiling of tourism in Batangas

Study and rationalize navigational routes of shipping vessels

Determination of carrying capacity of tourism areas

Socio-economic

Sustained livelihood program

Population, health and environment program

Research and development on livelihood development

IEC and advocacy

Socio-economic assessment employing participatory rural appraisal techniques to investigate and accommodate interests, aspirations, hopes and fears of indigenous peoples.

VII. PROPOSED MANAGEMENT BODY TO IMPLEMENT THE PLAN

A management body shall be put in place to implement the management plan. This management body shall be clearly identified to all stakeholders. This is particularly important on a large site where there is a need to take account all interests, users, and pressures on the VIPMC, in a complex ownership and management situation.

The management body shall take on the following roles:

- Coordination and networking
- Policy coordination and direction
- Oversight
- Monitoring and Evaluation
- Fund sourcing and inspiration (assist in fund sourcing)
- Conflict resolution (convener)
- Facilitating access to technical assistance and information

Based on consultations and meetings, the determination of the structure and the composition of the management body that shall oversee the implementation of the VIPMC management plan shall be guided by EO 533. The EO provides that in implementation of the management plan there shall be "an inter-agency, multi-sectoral mechanism to coordinate the efforts of the different agencies, sectors and administrative levels." It also requires the mainstreaming of the ICM programs into the national and local government planning and socio-economic development programs and allocating adequate financial and human resources for implementation. The EO further emphasizes the roles of mandated agencies, the local government units and the civil society in the development and implementation of the ICM program.

Representation of the local government units in the management body is important. The provincial governors are the appropriate representatives of their respective provinces in the VIPMC management board. There is, however, the concern over sustaining the management plan. This perennial problem is attributed to the political environment. Coastal management decisions are sometimes based on the political interests of those in power. Sometimes the level of knowledge and degree of commitment to coastal and marine management processes, and priorities change with turnovers in political administrations.

It is a fact that the term of office of the provincial governor is limited to three years and he shall not serve for more than three consecutive terms, hence, a maximum of nine years.

Management and development plans usually cover a period of five years at a minimum. A change in administration for the duration of the plan implementation even for a short-term is almost always certain.

While the provincial governor plays a very significant role in decision making, his occupancy of the position for a short term may somehow work against the success and sustainability of the management plan. To ensure commitment and sustainability, representation of the province in the VIPMC Management Board should ideally be vested in one who can see the implementation of the management plan through changes in administration and beyond the terms of office of those currently seated in office.

The Provincial Planning and Development Officer (PPDO) is a permanent and mandatory position in the local government structure whose functions refer to the general planning and development aspect but whose decisions directly influence coastal and marine management. The position of Provincial Agriculture Officer (PAO) is likewise permanent and mandatory. He takes charge of the office for agricultural services such that among his concerns is the fisheries sector. The Provincial Government Environment and Natural Resources Officer (PG-ENRO) is also a permanent position, but it is an optional one. The provincial government may create the position at its option. The powers and duties of the PG-ENRO are more specialized and focused on the environment and natural resources. Despite the permanency of their positions and no matter how effective is the PPDO, PAO or the PG-ENRO, the support and commitment of the provincial governor is crucial. Therefore, due recognition should be given to the provincial governor by letting him take an active role in the VIPMC Management Board.

The role of the private sector is recognized. Its involvement in the policy and decision-making in the management of the VIPMC is also important. NGOs, POs and the academe provide valuable support in terms of organizing and mobilizing communities and other stakeholders, formulating IEC campaigns, strengthening linkages between environmental and social programs, providing expertise and advise on significant concerns, undertaking research and development programs to address information gaps, building and strengthening local capacities through appropriate trainings, as well as sourcing of funds to support the management of the VIPMC. As part of their social responsibility, corporations invest in the environment at the same time develop opportunities to benefit the local communities. They provide the financial as well as technical support and work in partnership with civil society groups and the local government units to achieve the goals of sustainable development.

Given the foregoing, it is proposed that a VIPMC Management Board be constituted, to be composed of the following members:

(1) The representative of the national government agencies pursuant to EOs 533 and 578 :

DENR;
DOT;
DOJ;
DOST;
DA;
DOH;
DOE;
DOTC;
DFA;
DTI;

DND;
DILG; and,
NEDA

(2) The Provincial Governors of the five provinces:

Governor of the Province of Batangas
Governor of the Province of Marinduque
Governor of the Province of Mindoro Occidental
Governor of the Province of Mindoro Oriental
Governor of the Province of Romblon

(3) Two (2) representatives from the civil society

(4) Four (4) representatives from the corporate sector (number of representatives can increase per approval of the VIPMC Management Board)

Each of the member national government agencies shall perform their respective institutional mandates. Insofar as the decision-making powers of the members of the VIPMC Management Board are concerned, principles of equitable representation would involve consideration of the political jurisdiction of the representatives, particularly at the level of the Provincial Governors. It should be noted that the number of component LGUs that border the VIPMC per province are disproportionate, and Batangas province alone accounts for 15 out of the 33 component LGUs and as such it may be necessary to distribute decision-making powers such as voting powers in a manner proportionate to the area of jurisdiction of the members.

Because of its mandate and its current role as chair of PCICDSCS, the DENR shall chair the VIPMC Management Board. The co-chair or alternate chair, on the other hand, shall be chosen from among the provincial governors who shall take turns in presiding over regular meetings. The high-level management board guides and sets out the policy direction. It is not the appropriate body to effectively carry out the programs and actions that have been decided. An implementing arm shall be constituted to carry out the action plans. The Provincial Planning and Development Officer (PPDO), the Provincial Agriculture Officer (PAO) and/or the Provincial Government Environment and Natural Resources Officer (PG-ENRO) of the composite provinces shall be part of this implementing arm. Their counterparts at the municipal and barangay levels shall likewise be engaged. This implementing arm shall coordinate on-site activities and shall establish cooperative agreements with the stakeholders and local agencies.

The membership of the provincial governments in the VIPMC Management Board as well as the designation of their respective PPDOs, PAOs and PG-ENROs shall be confirmed by a provincial resolution.

Technical working groups or committees may be formed by the VIPMC Management Board, as necessary, composed of representatives of the different agencies, and concerned organizations or institutions, including LGU created entities. This shall ensure broad-based participation. These committees shall function as advisory bodies and shall be consulted on issues relating to their field of expertise. There shall be a TWG or committee for each of the following components to be chaired by the concerned national agency: environment and biodiversity - DENR; fisheries - DA-BFAR; law enforcement - DILG; tourism - DOT; navigation and marine pollution - DOTC; disaster risk management – OCD; population and public health - DOH; energy - DOE; finance - DOF and, information education and communication – PIA and DepEd (Figure 2).

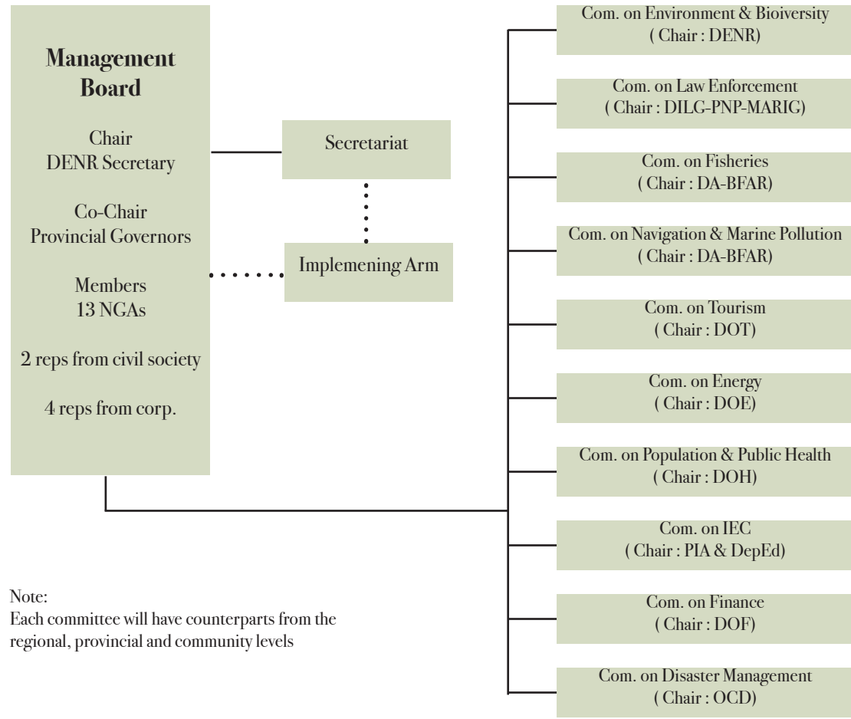


Figure 2. Structure and relationship of the TWGs/Committees to the VIPMC Management Board

There should be a body to serve as secretariat for the VIPMC. The secretariat shall provide administrative support to the VIPMC Management Board. Its functions include the coordination of day-to-day activities related to the implementation of the plan, arranging and servicing meetings of the board, and preparing necessary reports and documents. It shall serve as a networking hub and liaison within the VIPMC. The VIPMC Management Board may appoint an existing organization or institution with the necessary capability to be the secretariat for the VIPMC. In the absence of such an organization, the Board may create a Management Office through a board resolution. Such Management Office (MO) shall assume the secretariat functions, taking on the responsibility for the day-to-day coordination and monitoring of the implementation of the Plan. The MO may adopt this organizational structure (Figure 3).

One structure that may be considered is for the VIPMC Management Board to include only the governors of the five provinces, representatives from the civil society and the corporate sector. The position of chair shall be rotated among the provincial governors. Under this structure, the number of board members is manageable and securing a quorum during the meetings is more feasible. The concerned national government agencies exercise their respective mandates and functions conferred upon them by existing laws in relation to biodiversity conservation and ICM, and their assistance shall be sought by the board whenever appropriate and necessary. The commitment of the national government agencies to the VIPMC is based on national laws and policies without necessarily involving them directly through membership in the management board.

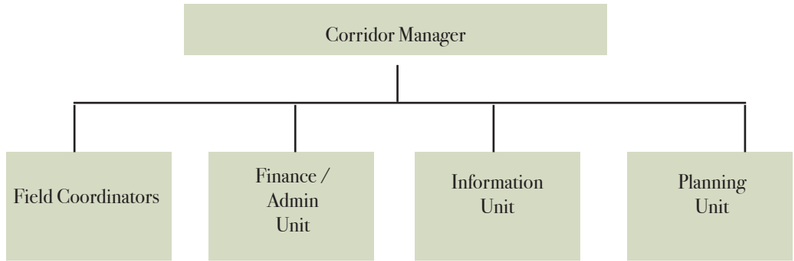


Figure 3. Proposed Organizational Structure of the VIPMC Management Office

The matter of monitoring and evaluation of the programs and projects under the management plan, as well as the financial and funding concerns shall be dealt with in the formulation of the management plan.

The VIPMC Monitoring Office (MO) shall ensure that the office efficiently delivers the support functions demanded by the implementation of the plan and effectively reflect the oversight role of the Management Board in the operationalization of the strategies laid out in the plan. It shall facilitate exchange of information, know-how and expertise and shall also be in charge of organizing meetings of the board, providing the logistical and secretariat support for such meetings.

As far as the relationship of the VIPMC Management Board to the PCICDSCS is concerned, note should be taken of the fact that the PCICDSCS was created to formulate, recommend and implement programs aimed at ensuring the conservation of the rich marine biodiversity in the Sulu Celebes Seas while providing income-generating opportunities to coastal communities through sustainable development activities. The VIPMC is a subset of the Sulu Celebes Seas. As such, the VIPMC Management Board shall report to the PCICDSCS. Consequently, the VIPMC Management Board shall coordinate with the PCICDSCS Technical Working Group (TWG) (Figure 4).

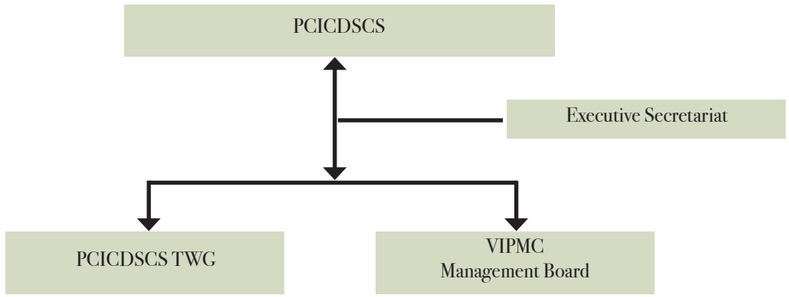


Figure 4. Relationship between the PCICDSCS and the VIPMC Management Board

It is reiterated that the structure and composition of the implementing body presented herein is merely a proposal. This may be adopted, modified or revised as soon as the management plan is in place. In the meantime, other implementing structures and arrangements may be considered.

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Annex 1 : Technical Description of the Verde Island Passage Marine Corridor

Point	X Coordinates	Y Coordinates	LONGTITUDE			LATITUDE			Remarks
			DEG	MIN	SEC	DEG	MIN	SEC	
1	121.45733	13.81120	121	27	26	13	48	40	Boundary bet. San Juan & Sariaya (River)
2	121.86471	13.56996	121	51	53	13	34	12	Northern tip of Marinduque (Mogpo)
3	122.03394	13.20391	122	2	0	13	12	14	Boundary of Buenavista & Torrijos (S. Tip)
4	122.14901	12.90621	122	8	56	13	54	22	Water (SE of Banton Island)
5	122.14901	12.11870	122	7	7	13	45	39	Water
6	122.09967	12.74913	122	5	59	13	44	57	Water
7	122.08140	12.74523	122	4	53	13	44	43	Water
8	122.08031	12.74514	122	4	49	13	44	43	Water
9	122.04462	12.74501	122	2	41	13	44	42	Water
10	122.00176	12.75186	122	0	6	13	45	7	Water
11	121.48678	12.99637	121	29	12	13	59	47	Boundary b/w Pinamalayan & Gloria
12	120.29944	13.44654	120	17	58	13	26	48	Tip of Paluan (Cape Calavite)
13	120.02122	13.88239	120	1	16	13	52	57	Cabra Island
14	120.02540	13.89695	120	1	31	13	53	49	Cabra Island A
15	120.58856	14.22214	120	35	19	14	13	20	Cabra Island A

Annex 2. Ranking of Provinces Based on Human Development Index (HDI) and Its Component Indices: 2000

Rank	HDI	Health Index	Education Index	Income
1	Bataan	Pampanga	Batangas	Batanes
2	Cavite	Cebu	Abra	Bataan
3	Batanes	Batangas	Cavite	Cavite
4	Bulacan	Bulacan	Bulacan	Rizal
5	Rizal	Rizal	Marinduque	Bulacan
6	Batangas	Cavite	Batanes	Laguna
7	Laguna	Nueva Ecija	Oriental Mindoro	Batangas
8	Pampanga	La Union	Nueva Ecija	Pampanga
9	Ilocos Norte	Ilocos Norte	Bataan	Ilocos Norte
10	Benguet	Camarines Sur	Rizal	Benguet
11	La Union	Iloilo	Isabela	Ilocos Sur
12	Ilocos Sur	Pangasinan	Pangasinan	Tarlac
13	Pangasinan	Bohol	Laguna	Nueva Vizcaya
14	Tarlac	Tarlac	Eastern Samar	Tawi-Tawi
15	Isabela	Davao del Sur	La Union	Zambales
16	Nueva Ecija	Laguna	Mt. Province	La Union
17	Quezon	Bataan	Cagayan	Quezon
18	Zambales	Guimaras	Benguet	Aurora
19	Oriental Mindoro	Albay	Camarines Sur	Pangasinan
20	Sorsogon	Negros Occidental	Romblon	Isabela
21	Aurora	Isabela	Camarines Norte	Aklan
22	Iloilo	Zambales	Quezon	Oriental Mindoro
23	Marinduque	Benguet	Catanduanes	Apayao
24	Abra	Misamis Oriental	Ilocos Sur	Antique
25	Nueva Vizcaya	Sorsogon	Aurora	Kalinga
26	Camarines Sur	South Cotabato	Ilocos Norte	Quirino
27	Cebu	Quezon	Agusan del Norte	Occidental Mindoro
28	Albay	Ilocos Sur	Zambales	Iloilo
29	Guimaras	Sarangani	Southern Leyte	Palawan
30	Aklan	North Cotabato	Iloilo	Abra
31	Occidental Mindoro	Leyte	Tarlac	Marinduque
32	Cagayan	Davao Oriental	Bohol	Nueva Ecija
33	Quirino	Surigao del Norte	Siquijor	Capiz
34	Antique	Negros Oriental	Albay	South Cotabato
35	Catanduanes	Zamboanga del Sur	Occidental Mindoro	Guimaras
36	Southern Leyte	Bukidnon	Quirino	Ifugao
37	Camarines Norte	Nueva Vizcaya	Sorsogon	Bukidnon
38	Capiz	Cagayan	Camiguin	Sorsogon
39	Bohol	Biliran	Misamis Oriental	Camarines Norte
40	Mt. Province	Southern Leyte	Davao (del Norte)	Basilan

Rank	HDI	Health Index	Education Index	Income
41	Misamis Oriental	Oriental Mindoro	Pampanga	Mt. Province
42	Negros Occidental	Marinduque	Cebu	Southern Leyte
43	Palawan	Misamis Occidental	Misamis Occidental	Sultan Kudarat
44	Romblon	Catanduanes	Surigao del Sur	Camiguin
45	Misamis Occidental	Capiz	Nueva Vizcaya	Catanduanes
46	Bukidnon	Aurora	Negros Occidental	Albay
47	South Cotabato	Siquijor	Biliran	Cagayan
48	Camiguin	Davao (del Norte)	Sultan Kudarat	Misamis Occidental
49	Sultan Kudarat	Romblon	Antique	Zamboanga del Norte
50	Apayao	Batanes	Guimaras	Zamboanga del Sur
51	Surigao del Norte	Masbate	Aklan	Davao del Sur
52	Davao (del Norte)	Occidental Mindoro	Surigao del Norte	Camarines Sur
53	Biliran	Abra	Capiz	Surigao del Sur
54	Kalinga	Aklan	Palawan	Samar (Western)
55	Zamboanga del Sur	Sultan Kudarat	Leyte	Agusan del Sur
56	Leyte	Camiguin	Bukidnon	Davao (del Norte)
57	Davao del Sur	Camarines Norte	Masbate	Misamis Oriental
58	Surigao del Sur	Quirino	Zamboanga del Sur	Surigao del Norte
59	North Cotabato	Zamboanga del Norte	Samar (Western)	Negros Occidental
60	Agusan del Norte	Lanao del Norte	Apayao	North Cotabato
61	Eastern Samar	Antique	Kalinga	Cebu
62	Siquijor	Palawan	Northern Samar	Leyte
63	Zamboanga del Norte	Agusan del Norte	North Cotabato	Biliran
64	Negros Oriental	Surigao del Sur	Zamboanga del Norte	Romblon
65	Davao Oriental	Northern Samar	Negros Oriental	Sarangani
66	Samar (Western)	Apayao	Davao Oriental	Bohol
67	Sarangani	Kalinga	South Cotabato	Negros Oriental
68	Masbate	Mt. Province	Agusan del Sur	Northern Samar
69	Northern Samar	Eastern Samar	Lanao del Norte	Maguindanao
70	Agusan del Sur	Basilan	Davao del Sur	Davao Oriental
71	Lanao del Norte	Agusan del Sur	Sarangani	Agusan del Norte
72	Ifugao	Samar (Western)	Lanao del Sur	Masbate
73	Basilan	Ifugao	Maguindanao	Eastern Samar
74	Tawi-Tawi	Lanao del Sur	Ifugao	Siquijor
75	Lanao del Sur	Maguindanao	Tawi-Tawi	Lanao del Norte
76	Maguindanao	Sulu	Basilan	Lanao del Sur
77	Sulu	Tawi-Tawi	Sulu	Sulu

Source: National Statistical Coordination Board
http://www.nscb.gov.ph/ru5/updates/hdi/rankings.html

Annex 3. Relevant DENR Administrative Orders (DAO)

DAO	TITLE/SUBJECT MATTER
DAO 1987-76	Establishing buffer zone in coastal and estuarine mangroves areas
DAO 1990-15	Regulations governing the utilization development and management of mangroves resources
DAO 1990-34	Revised water usage and clasification/water quality criteria; Includes water quality classification for coastal and marine waters
DAO 1990-35	Establishing effluent standards
DAO 1990-85	Imposing fees on mine tailings and wastes to compensate for damage to lands, agriculture crops, forest products, marine life, aquatic re sources, and the destruction of infrastucture which are privately owned
DAO 1991-03	Policy and guidelines for the award and administration of mangrove stewardship agreement
DAO 1991-08	Guidelines on the issuance of Environmental Compliance Certificate (ECC) or Environmental Clearance (EC) for the conversion of agricultural lands to non-agricultural uses
DAO 1991-18	Rules and guidelines governing the distribution of canceled or expired FLAs under EO 407 as ammended by EO 448; identifies responsibilities of DA-BFAR and DAR with respect to canceed or abandoned FLAs
DAO 1991-29	Guidelines in the inventory and sketching of foreshore areas
DAO 1991-34	Guidelines for the issuance of ECC for fishponds development
DAO 1991-48	Establishment of a National List of Rare (R), Endangered (E), Threat ened (T), Vulnerable (V), Indeterminate (I), and Insufficiently Known (K) species of Philippine Wild Birds, Mammals and Reptiles
DAO 1992-25	National Integrated Protected Areas System (NIPAS) Implementing Rules and Regulations
DAO 1992-28	Guidelines on the issuance of permits for pebble-picking along beaches
DAO 1992-30	Guidelines for the transfer and implementation of DENR functions devolved to the LGUs
DAO 1998-24	Schedule of approving authority for foreshore lease
DAO 1999-34	Rules and Regulations Governing the Administration Management, and Development of Foreshore Areas, Marshy Lands, and Other Lands Bordering Bodies of Water
DAO 1999-39	Guidelines for the Development and Management of Ecological Destinations in the Philippines
DAO 2000-51	Guidelines and Principles in Determining Fees for Access To and Sus tainable Use of Resources in Protected Areas
DAO 2000-83	Guidelines for the Management adn Development of Small Islands in cluding its Coastal Areas

DAO 2002-31	Amending DAO 2000-83
DAO 2003-29	Implementing Rules and Regulations (IRR) of the National Caves and Cave Resources Management and Protection Act
DAO 2003-30	Implementing Rules and Regulations (IRR) for the Philippine Environ mental Impact Statement (EIS) System
DAO 2003-39	Implementing Rules and Regulations (IRR) of DAO 16 Series of 2002 Entitled "The DENR-EMB Natioanl Environmental Users' Fee of 2002"
DAO 2004-15	Establishing the List of Theatened Species and Their Categories, and the List of Other Wildlife Species Under the Jurisdiction of DENR Pursuant to Republic Act 9147, Otherwise Known as the Wildlife Resources Conservation and Protection Act of 2001
DAO 2004-55	DENR Streamlining / Procedural Guidelines Pursuant to the Joint DENR-DA-PCSD Implementing Rules and Regulation of Republic Act No. 9147 Otherwise Known as "Wildlife Resources Conservation and Protection Act"
DAO 2005-10	Implementing Rules and Regulations of the Philippine Clean Water Act of 2004 (Republic Act No. 9275)
DAO 2007- 01	Establishing the National List of Threatened Plants and their Categories and the List of Other Wildlife Species
DAO 2007- 02	Guidelines on the Establishment and Management of Critical Habitats
DAO 2007 - 04	Procedure in Cave Classification
DAO 2007-17	Rules and Regulations Governing Special Uses in Protected Areas

Annex 4. Relevant Fisheries Administrative Orders (FAO)

FAO NUMBER	TITLE/SUBJECT MATTER
FAO 2, s. 1933	Deepsea of offshore fishing and regulations.
FAO 2-2, s. 1935	Amendment to Deep sea or Offshore Fishing Regulations.
FAO 14, s. 1937	Regulations governing issuance of fishpond permits and leases on public forest lands
FAO 14-1, s. 1939	Regulations covering issuance of fishpond permits and leases on public forest lands, and for other purposes.
FAO 14-12, s.	Guiding Principles in the Granting Fishpond Leases Covering Big Areas.
FAO 29 (Eff 4/28/51)	Rules and regulations governing the gathering of aquatic turtle eggs.
FAO 29-1, s. 1952	Amending Sections 8 and 9 of FAO 29.
FAO 32, s. 1952	Regulations governing the issuance of certificates of clearance by the Bureau of fisheries to operators of licensed commercial fishing boats.
FAO 32-1, s. 1963	Amending Sections 1, 2 and 3 of FAO 32 governing the issuance of certificates of clearance issued by the Philippine Fisheries Commission to operators of licensed commercial fishing boats.
FAO 32-2, s. 1964	Further amending Sections 1 and 2 of FAO 32, as amended, governing the issuance of certificates of clearance issued by the Philippine fisheries Commission to operator of licensed commercial fishing boats.
FAO 36, s. 1954	To establish a closed season for the gathering or killing marine turtles, turtle eggs, or turtle shells.
FAO 40, s. 1954	Prohibiting the use of fine-meshed nets or sinamay cloth at the bunt of "basing," "iwag," "saplad," etc.
FAO 40-1, s. 1956	Amending section 1 of FAO 40.
FAO 40-2, s. 1956	Further amending Section 1 of FAO 40, as amended.
FAO 40-3, s. 1958	Further amending Section 1 of FAO 40, as amended.
FAO 40-4, s. 1973	Further amending Section 1 of FAO 40, as amended.
FAO 44, s. 1956	Establishing communal fisheries in Naujan, Oriental Mindoro and regulating its use.
FAO 45, s. 1956	Regulations governing the gathering of seaweeds producing "agar-agar."
FAO 45-1, s. 1965	Amending FAO 45, rules and regulations governing the gathering of seaweeds producing "agar-agar".
FAO 60, s. 1960	Regulations governing the issuance of fishpond lease permits and/or leases on public forest lands.
FAO 69, s. 1963	Regulations governing the gathering of ornamental or fancy shells, sea snakes, trepang, corals and miscellaneous minor aquatic products.
FAO 76, s. 1964	Regulations governing the collecting and gathering of marine turtles
FAO 82, s. 1965	Prohibiting the operation of all fishing gear using strong lights to attract fish in Taal Lake

FAO 83, s. 1966	Regulation governing the issuance of oyster bed permits or leases on public forest lands or swamps
FAO 84, s. 1965	Prohibiting electro-fishing in all waters of the Philippines
FAO 84-1, s. 1967	Amending FAO 84
FAO 84-2, s. 1967	Further amending FAO 84
FAO 88, s. 1967	Regulations for the conservation of turtle, turtle eggs and turtle shells in the Philippines
FAO 108 s. 1973	Regulations governing the gathering and farming of seaweeds.
FAO 109 s. 1973	Regulations governing the construction or establishment of fishpens or fish enclosures in all inland waters.
FAO 112, 1974	Rules and regulations governing the issuance of permits for the exportation of fish and aquatic/fishery products
FAO 112-1, s.1976	Amending Section 7 of FAO No. 112, dated August 13, 1974.
FAO 118, s. 1975	Establishing a Fish Sanctuary in TaaI Lake to be known as the TaaI Lake Fish Sanctuary.
FAO 121, s. 1976	(Eff. 9/6/76) Rules and regulations governing charter contracts, lease or lease purchase agreements of fishing boats, or contract for assistance with a foreign person, corporation or entity.
FAO 122, s. 1977	Prohibiting the use of "Pantukos" under certain conditions in fishing.
FAO 123	Implementing rules and regulations of PD 1151 on Fisheries and aquatic resources extraction and exploitation.
FAO 124, s. 1979	Regulating the gathering/catching/taking/removing of marine tropical aquarium fishes.
FAO 125, s. 1979	Rules and regulations governing conversion of Ordinary Fishpond Permits and Ten (10) Year Fishpond Lease Agreements into Twenty-five (25) Year Fishpond Lease Agreements and other related matters.
FAO 135, s. 1981	Rules and regulations governing importation of fish and fishery/aquatic products
FAO 141, s. 1982	Banning the exportation of live gravid shrimps of the genus Penaeus.
FAO 144, s. 1983	Rules and regulations on commercial fishing
FAO 146, s. 1983	Rules and regulations governing the gathering and farming of seaweeds.
FAO 147, s. 1983	Rules and regulations governing the issuance of permits/commodity clearance for the exportation of fish and fishery/aquatic products.
FAO 148, s. 1984	Regulation on the gathering, catching, taking or removing our marine tropical aquarium fish.
FAO 149, s. 1984	Adopting all existing rules and regulations on Fisheries.
FAO 155, s. 1986	Regulating the use of fine meshed nets in fishing.
FAO 157, s. 1986	Rules and regulations on the gathering, taking, removing, or collecting of "kapis" of the species Placuna Placenta in Philippine waters.

FAO 158, s. 1986	Prohibition on the gathering, taking, collecting, selling, transporting, or possessing for sale of mollusks be longing to the genus Triton or Charonia and Casis.
FAO 159, s. 1986	Suspension of the effectivity of Fisheries Administrative Orders No. 107 and 107-1, both series of 1973, prohibiting the exportation of eel fry and eel fingerlings (elvers), and for other purposes.
FAO 160, s. 1986	Rules and regulations governing the construction, establishment or operation of fish pens and fish cages in Philippine waters
FAO 162, s. 1986	Rules and regulations governing the issuance of permit for the exportation of live mud crabs of "alimango" (*Scylla serrata*)
FAO 163, s. 1986	Prohibiting the operation of "Muro-Ami" and "Kayakas" in all Philippine waters
FAO 164, s. 1987	Rules and regulations governing the operations of "Hulbot-Hulbot" in Philippine waters
FAO 168, s. 1990	Rules and regulations governing the gathering culture and exportation of shelled mollusks (Phylum Mollusca)
FAO 169, s. 1990	Prohibiting the exportation of fresh Eucheuma seaweeds.
FAO 184, s. 1992	Guideline on the experimental collection of precious and semi-precious corals in Philippine waters.
FAO 185, s. 1993	Ban on the taking or catching, selling, purchasing, possessing, transporting and exporting of dolphins.
FAO 188, s. 1993	Regulations governing the operating of commercial fishing boats in Philippine waters using tuna purse seine nets.
FAO 189, s. 1994	Prohibiting the importation of live shrimp and prawn of all stages.
FAO 190, s. 1994	Regulations governing pa-aling fishing operation in Philippine waters.
FAO 193, s. 1998	Ban on the taking or catching, selling, purchasing and possessing, transporting and exporting of Whale Sharks and Manta Rays.
FAO 196, s. 2000	Guidelines on the Creation and Implementation of Fisheries and Aquatic Resources Management Council (FARMCs).
FAO 196-1, s.2004	Amending Section 4 (c, d, e, & f) of FAO 196
FAO 197, s. 2000	Rules and regulations governing the lease of public lands for fishpond development.
FAO 198, s. 2000	Rules and regulations on Commercial Fishing.
FAO 199, s. 2000	Guidelines on Fish Transshipment
FAO 200, s. 2000	Guidelines and Procedures in Implementing Section 87 of the Philippine Fisheries Code of 1998
FAO 201, s. 2000	Ban on fishing with active gear.
FAO 202, s. 2000	Ban on Coral Exploitation and Exportation.
FAO 203, s. 2000	Banning fishing by means of "muro-ami" and the like destructive to coral reefs and other marine habitat.

FAO 204, s. 2000	Restricting the use of superlights in fishing.
FAO 206, s. 2001	Disposal of confiscated fish and other items in fishing through explosives and noxious or poisonous substances.
FAO 207, s. 2001	Prohibiting the importation and culture of imported live shrimp and prawn of all stages.
FAO 208, s. 2001	Conservation of rare, threatened and endangered fishery species.
FAO 209, s. 2001	Guideline on the production, harvesting, handling and transportation of shellfish for implementation of the local government.
FAO 210,s. 2001	Rules and regulations on the exportation of fresh, chilled and frozen fish and fishery/aquatic products.
FAO 211, s. 2001	Requirements for pre-processing and processing plants, the SSOP thereof and the processing and quality requirements for shellfish.
FAO 212, s. 2001	Guideline on the implementation of HACCP System.
FAO 214, s. 2001	Code of Practice of Aquaculture.
FAO 214-1, 2004	Amending Section (c) of FAO 214.
FAO 216, s. 2001	Obstruction to navigation in streams, rivers, lakes and bays.
FAO 217, s. 2001	Obstruction to Defined Migration Paths.
FAO 222, s. 2003	Regulations on the Operation of Danish Seine (Hulbot-Hulbot)
FAO 223, s. 2003	Moratorium on the issuance of new Commercial Fishing Vessel and gear License (CFVGL) as part of a precautionary approach to fisheries management
FAO 223-1, s. 2004	Amending Sections 1 and 2 of Fisheries Administrative Order No. 223, s. of 2003, re: Moratorium on the issuance of new Commercial Fishing Vessel and gear License (CFVGL)
GAO 106, s. 1971	Rules and regulations governing fishing in lakes and inland waters within watershed reservations throughout the country.

Annex 5: Other Relevant Administrative Issuances

OTHER ADMINISTRATIVE ISSUANCES	TITLE/SUBJECT MATTER
DA General Memorandum Order No. 03, Series of 1990	Prescribing the guidelines for the establishment of marine sanctuaries and defining the criteria for site selection and management
Joint DOT-DENR Memorandum Circular No. 02, Series of 1998	Guidelines for Ecotourism in the Philippines
Joint DA-DENR Memorandum Order No. 01, Series of 2000	Identifying/Defining the Areas of Cooperation and Collaboration between the Department of Agriculture and the Department of Environment and Natural Resources in the Implementation of Republic Act No. 8550, Otherwise Known as the Philippine Fisheries Code of 1998
Joint DENR-NCIP Memorandum Circular 2003-1	Harmonization of the Implementation of the Indigenous Peoples Rights Act (IPRA) and Environment and Natural Resources (ENR) Laws and Policies.
Joint DENR-DA-PCSD No. 01 - 2004	Joint Implementing Rules and Regulations Pursuant to the Republic Act No. 9147: "An Act Providing for the Conservation and Protection of Wildlife Resources and their Habitats, Appropriating funds therefore and for other purposes
Joint DENR-DA-PCSD-NCIP Administrative Order No. 01, Series of 2005	Guidelines for Bioprospecting Activities in the Philippines
Joint DENR-NCIP Memorandum Circular 2007-01	Management of Overlapping Protected Areas and/or Their Buffer Zones and Ancestral Domains/Lands

Annex 6. Provincial Ordinances

PROVINCE	ORDINANCE NUMBER	TITLE/SUBJECT MATTER
Batangas	Sangguniang Panlalawigan (SP) Resolution No. 136, Series of 1995 and SP Resolution No. 292	Batangas Provincial Government – Environment and Natural Resources Office (PG-ENRO) was established
	AO-003-1995	PG-ENRO took on the developed functions from the DENR to include the hosting of the Global Environment Facility (GEF)/ United Nations Development Programme (UNDP)/International Maritime Organization (IMO) Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas (MPP-EAS) Project Management Office for the implementation of ICM in Batangas Bay and the implementing agency of the Batangas Bay Demonstration Project (BBDP) by facilitating and coordinating its various activities and studies.
	001-1996	Ordinance creating the Batangas Bay Region Environmental Protection Council (BBREPC) chaired by the Provincial Governor with the PG-ENRO as Secretariat; the BBREPC was responsible for the implementation of the Batangas Bay Region's Strategic Environmental Plan
	02-2007	"An ordinance creating the Verde Island Passage Development Authority to be chaired by the Provincial Governor and to be composed of a multidisciplinary group tasked to plan, direct and initiate ways and means for the protection and preservation of the undersea treasures of the passage dubbed as Center of the Center of Marine Biodiversity in the World"
	SP Resolution No. 129 Year 2007 (dated March 22, 2007)	Approving the 2005-2020 Strategic Environmental Management Plan of the Province of Batangas
Marinduque	1992-00003	An ordinance prohibiting any person or persons to throw, run, drain or otherwise dispose into any of the territorial water, air and/or land resources of the province of Marinduque, or cause, permit, suffer to be thrown, run, drain, allow to seep or otherwise dispose thereto any organic or inorganic matter or any substance in gaseous or liquid form that shall cause pollution and providing penalties in violation thereof
	1993-00002	An Ordinance Providing for the Mandatory Registration of All Fishing Vessels, Prescribing a Color and Numerical Code for Their Proper Identification and Imposing Penalty Thereof
	1997-00008	An Ordinance Protecting and Conserving Endangered Wildlife in the Province of Marinduque
	2004-00048	The Carabao Protection Ordinance of the Province of Marinduque
	2007-00069	An Ordinance Providing for the General Laws, Rules and Regulations Governing Fishing and Fisheries in the Entire Waters of Marinduque and For Other Purposes (Provincial Fishery Ordinance of Marinduque)

Annex 6. Provincial Ordinances

PROVINCE	ORDINANCE NUMBER	TITLE/SUBJECT MATTER
Mindoro Oriental	004-2004	Ordinance enacting the Coastal Marine and Inland Water Resource Management Code of Oriental Mindoro (Provincial Coastal Resource Management (CRM) Code)
	003-2004	Ordinance enacting the Environment Code of the Province of Oriental Mindoro
Mindoro Occidental	SP Resolution No. 22-2005 Approving Ordinance 65-2004 of Abra de Ilog	Kautusang magbabawal manghuli ng laman ng dagat, ilog, lawa, sapa at ilat tulad ng isda, hipon at iba pang mga nabubuhay sa tubig sa pamamagitan ng pggamit ng dinamita, kuryente, cyanide at iba pang uri ng likido maging pulbos o tabletang kemikal at bayate nakakalason sa lamang dagat.
	Resolution No. 38 Approving Ordinance 69-2005 of Abra de Ilog	An ordinance prohibiting the use of compressor as breathing apparatus in all fishing activities in the municipalities.
	Approving Ordinance No. 687 S-2005 of Sta. Cruz	Nagbabawal magtapon ng basura at dumi sa baybaying dagat at ilog ng lahat ng barangay ng Sta. Cruz, Occidental Mindoro

Annex 7. Programs / Projects on Coastal Resource Management & Fisheries

Fisheries Rehabilitation

a. Bangus and sugpo dispersal for affected fishpond operators in the province
b. Provision of fishing banca/fishing gear for Fishery and Agriculture Resource Management Council (FARMC) officers and members affected by calamity in 13 coastal municipalities
c. Marine ecosystems / habitat rehabilitation program

Coastal and Fishery Resources Management Program

a. Database development program: updating of coastal/fishery profile thru assessment; interviews and gathering secondary data; includes hiring of 1 technical staff
b. Marine and freshwater habitat rehabilitation, protection and conservation through establishment/maintenance of fish sanctuary and fishery reserve
c. Legal Institutional and Fiscal Services: strengthening of FARMCs, formulation of fishery ordinances
d. Establishment of mariculture zone project at Naujan and maintenance of mariculture zone / park project at Balatasan, Bulalacao including evaluation and extension of technical assistance re mariculture technology
e. Establishment and Maintenance of Marine Finfishes (bangus, siganid and grouper) Nursery at Calapan City, Pola, Naujan and Bulalacao and seaweeds Nursery at Gloria, Pinamalayan and Bulalacao for distribution to aqua and mariculture operators; includes site identification, assessment and monitoring of farms benefited fry/seedlings

Bangus Fingerling Production at Masipit, Calapan City

Fish Processing: Introduce technology on Fish Processing through conduct of demo and establishment / maintenance of fish processing centers at Pasi, Socorro; San Antonio, Gloria; Naujan and San Teodoro.

Maintenance of Tilapia Hatchery for distribution of tilapia fingerlings to freshwater fishpond operators; includes hiring of caretaker.

Skills and Management Trainings: Capability Building (training, meeting, public consultation) for fisherfolk, fishery technologist (municipal) and Fishery technical staff (provincial); includes conferences/meetings outside the province.

Research and Extension Service: Research on Fishery technology to be adapted in the locality, study on occurrence of seaweeds diseases in the province. Render financial/technical assistance re fishery technology and coordination with LGU re Fishery Laws, rules and regulations .

Annex 8. Plans and Programs of the Province of Romblon for CY2003 and Onwards

VISION

Romblon's vision statement dreams of "a united, peaceful, self-reliant and ecologically balanced province."

PLANS OF ACTION

To bring this dream to reality, and in consideration of the province's weakness and constraints, a Five Point Programs has been drawn up.

Capability Building

Organization, training and assistance to target sectors

At least one (1) cooperative in every barrio to boost livelihood opportunities.

Provide credit and technological aid to organization and/or cooperatives.

Environment Rehabilitation

Rehabilitation to reverse the effort of degradation and depletion of natural resources by:

Protection of remaining forest covers and marine resources

Rehabilitation forest and marine resources by community base reforestation, indus trial tree planting, integrated social forestry projects, etc.

Community - based vigilance and protection against harmful and illegal fishing methods, community-based rehabilitation of coral reefs, mangrove areas, fishing and marine nestling grounds etc.

Waste Management (solid and liquid disposals)

Promote high value crops (mango, cashew, cupflowers, etc.)

Promote Industry Growth

Marble
Fishing
Fish Processing
Seaweeds Farming
Marine Culture
Livestock Dispersal and Farming
Handcraft
Wood Processing
Coconut Processing
Eco-tourism

Provision of Support Facilities

Improve the delivery of social services:

Health: preventive as well as remedial medicine

Public health programs will have to be improved and hospitals will have to be streamlined for efficient of delivery of services by balancing the budget among the ideal expense components of manpower, equipment, facilities, materials (medicines) and technology.

Education: In the elementary grades, funds are good only for one (1) textbook out of the four (4) required. Computer literacy has to be integrated in the curriculum for global competitiveness, teacher training must be updated, etc.

Water/Power Supply: Electrical house connections have yet to be completed for all barangays together with 24 hours reliable service delivery. Safe water sources and house connections should be given priority attention.

Peace and Order have to be maintained. Vigilance against substance abuse have to be improve, etc.

Physical Infrastructure
- All weather roads
- Airports, Seaport for mobility and year round island accessibility
- Communications: phone in every barrio, land to sea, cell site, etc.

Shelter

Agriculture Development (Romblon's sources of income)

Strengthening and improve provincial agriculture resources by:

Expansion of irrigation system

Intensifying grains production by improved technology (fertilizer and hybrid varieties, etc.)

Provide post harvest facilities

Promote the livestock industry

Procure and produce agricultural raw materials for agro-based industrial production for export.

Promote marine produce agriculture, i.e. seaweeds, crabs, lapu-lapu, fish cages, etc.

To direct the province's growth and development, the provincial Physical Framework Plan (PPFP) has been crafted to provide us with a program of action within the next ten years. It consist of development policies, programs and projects that are geared to spur our socio-economic progress as well as ensure the sustainable utilization of our natural resources.

To properly orchestrate the province's development, the PPFP employs a two staged approach. The initial stage is focused on strategically identified projects that will start-up the economy and lay the foundation for future growth. The ultimate stage is focused on stabilizing the gains realized from the earlier stage and moving on to create more forward-looking activities.

The Strategic Development Programs outlines the projects that are necessary to ensure the realization of the broad vision and overall goals of Romblon within the plan period. The Program is designed to achieve results in three critical areas: Settlements Development, Environmental Management and Infrastructure Development.

Environmental Programs:

1. Inventory/Monitoring of Integrated Social Forestry
2. Mangrove Planting
3. Strengthening of Fisheries & Aquatic Resource Management Councils
4. Establishment of Fish Sanctuaries

Development Programs:

On-Going Projects:

1. Crops Production
2. Livestock & Poultry Production
3. Fishery Management
4. Habitat Management
5. Integrated Coastal Resources Management Program
6. Preventive/Curative Health Services
7. Comprehensive and Integrated Delivery of Social Services (CIDSS)
8. Concreting of Provincial & Farm to Market roads (3.49 km)
9. Construction of River Controls (2)
10. Construction/Improvement of Hospitals (3 hospitals)
11. Construction/Rehabilitation of Water Facilities (spring development, deep wells & shallow wells (5 units))
12. Identification & Promotion of Tourism Destination

Completed Projects:

1. Concreting of Provincial Roads (24.67 km)
2. Construction/Rehabilitation of Bridges (3)
3. Rehabilitation of Hospitals (3)
4. Improvement of Barangay Roads (2.26 km)
5. Construction/Rehabilitation of Water Facilities (53)
6. Construction of River Control (1)

Projects for Development:

1. Concreting of Provincial Roads (1.29 km)
2. Improvement of Hospital (2)
3. Reconstruction of Bridge (1)
4. Improvement of Barangay Roads (1.69 km)

Annex 9. Executive Order 578

MALACAÑANG
MANILA

BY THE PRESIDENT OF THE PHILPPINES

EXECUTIVE ORDER NO. 578

ESTABLISHING THE NATIONAL POLICY ON BIOLOGICAL DIVERSITY, PRESCRIBING ITS IMPLEMENTATION THROUGHOUT THE COUNTRY, PARTICULARLY IN THE SULU SULAWESI MARINE ECOSYSTEM AND THE VERDE ISLAND PASSAGE MARINE CORRIDOR

WHEREAS, biological diversity, also referred to as biodiversity, is essential to sustain all life and is a foundation of a sound environment that is necessary for human well-being and sustainable development;

WHEREAS, the Philippines, as one of eighteen (18) mega-biodiversity countries that collectively make up two-thirds of the earth's biological diversity, is immensely rich in both terrestrial and marine biodiversity;

WHEREAS, the Philippines is also known as one of the biodiversity hotspots where biological diversity is under constant threat due to unsustainable resource use practices, overexploitation, population pressure, poverty and other factors;

WHEREAS, the 1987 Constitution provides in Section 16 of Article II that the State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature;

WHEREAS, Republic Act (RA) No. 7586, otherwise known as the National Integrated Protected Areas System (NIPAS) Act of 1992, RA No. 9147, otherwise referred to as the Wildlife Resources Conservation and Protection Act, RA No. 9072, otherwise referred to as the National Caves and Cave Resources Management and Protection Act, and RA No. 8550, otherwise known as the Philippine Fisheries Code of 1998 mandate the state to protect and conserve biological diversity;

WHEREAS, the Department of Environment and Natural Resources (DENR), its partner institutions and civil society have developed the National Biodiversity Strategy and Action Plan (NBSAP) in 1997 and its iteration in 2002 entitled "Philippine Biodiversity Conservation Priority-Setting Program";

WHEREAS, Executive Order (EO) No. 533, issued in June 2006, adopted the Integrated Coastal Management (ICM) as a national strategy for sustainable development of marine and coastal resources;

WHEREAS, there are many efforts throughout the country by local communities, civil society organizations, and the private sector to conserve, protect and sustainably use biodiversity;

WHEREAS, the Philippines is a party to various multilateral environmental agreements with the aim of conserving and sustainably using biological diversity, including the United Nations (UN) Convention on Biological Diversity, the Cartagena Protocol on Biosafety, the Convention on Migratory Species of Wild Animals, the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora, the Convention on Wetlands, and the UNESCO World Heritage Convention, among others;

WHEREAS, the Philippines is a party to the UN Convention on the Law of the Sea and the Basel Convention, and is a member of the International Maritime Organization, as well as a party to various international agreements on marine pollution;

WHEREAS, the Philippines is a signatory to the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia (IOSEA), has adopted the Sustainable Development Strategy for the Seas of East Asia (SDS-EAS), and is a partner of the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA);

WHEREAS, the Sulu Sulawesi Marine Ecoregion (SSME) is situated at the apex of the coral triangle, which is recognized as having the highest coral diversity in the world, and is jointly managed by the Philippines, Malaysia and Indonesia under a Memorandum of Understanding signed in 2004 and in accordance with the SSME Conservation Plan;

WHEREAS, the Verde Island Passage Marine Corridor, within the SSME and inside Philippine territory covering the provinces of Batangas, Mindoro Occidental, Mindoro Oriental, Marinduque and Romblon, has been identified by scientists as the Center of the Center of Marine Shorefish Diversity in the world;

WHEREAS, there is a need to establish, in accordance with law, the National Policy on Biological Diversity, and prescribe its implementation throughout the country, particularly in the Verde Island Passage Marine Corridor, and in all Philippine territory within the SSME.

NOW, THEREFORE, I, GLORIA MACAPAGAL-ARROYO, President of the Republic of the Philippines, by virtue of the powers vested in me by law, do hereby order:

SECTION 1. Policy of the State on Biological Diversity. In accordance with law, it is the policy of the state to protect, conserve, and sustainably use biological diversity to ensure and secure the well-being of present and future generations of Filipinos. This state policy extends to all the components of biodiversity - ecosystems, species and genes.

The Departments of Environment and Natural Resources (DENR), Tourism (DOT), Science and Technology (DOST), Agriculture (DA), Health (DOH), Energy (DOE), Transportation and Communications (DOTC), Foreign Affairs (DFA), Trade and Industry (DTI), National Defense (DND), and Interior and Local Government (DILG), the National Economic Development Authority (NEDA), and all concerned government agencies and offices and local government units shall integrate and mainstream the protection, conservation and sustainable use of biological diversity into their policies, rules and regulations, programs, projects and development planning process.

All government agencies, including local government units, shall formulate and submit to DENR, for monitoring compliance, their respective biological diversity programs. The DENR shall provide technical assistance to all concerned agencies.

SEC. 2. Role of the Private Sector and Civil Society. Recognizing that the protection, conservation and sustainable use of biodiversity is a shared responsibility among all sectors, the DENR and all concerned government agencies and offices shall actively engage and collaborate with the private sector, civil society, and local communities so that biological diversity goals are incorporated in their respective programs and activities, including institutionalizing biodiversity conservation as a principal corporate environmental responsibility. Public participation in protection, conservation and sustainable use activities, especially at the local level, shall be encouraged to maximize conservation and community benefits.

SEC. 3. Guidelines on Critical Habitats and Key Biodiversity Areas. To implement the state policy on biological diversity, the DENR shall, in accordance with law and subject to public consultations, develop and promulgate rules, and regulations for the establishment of critical habitats within key biodiversity areas which are known to harbor habitats and ecosystems critical for the survival of threatened, restricted-range, and congregatory species, and provide the guidelines for their management and protection. Biodiversity impact assessment shall be integrated into the Environmental Impact Assessment and the Environmental Risk Assessment Processes, taking into consideration guidelines adopted under the United Nations Convention on Biological Diversity. Such rules, regulations and guidelines shall be issued within sixty days from the effectivity of this Order.

SEC. 4. The Presidential Commission for the Integrated Conservation and Development for the Sulu Celebes Seas. The DENR as Chairman of the Presidential Commission for the Integrated Conservation and Development of the Sulu Celebes Sea created in 1997 by Proclamation No. 1028, otherwise referred to as the Commission, is hereby instructed to immediately undertake the following tasks, viz: (1) review and update the SSME conservation plan; (2) create and organize an Ad Hoc Task Force on Verde Island Passage to ensure the protection, conservation, and sustainable use of biological diversity in the Verde Island Passage Marine Corridor; and (3) identify other marine biodiversity corridors within the SSME that require urgent attention and formulate appropriate conservation and management strategies.

The Task Force , which is to be composed of DENR, DOT, DOST, DA, DOH, DOE, DOTC, DFA, DTI, DND, NEDA and all local government units shall formulate the Verde Island Passage Management Plan in consultation with stakeholders, the private sector, civil society and local communities and shall submit the same to the Commission for approval. In the preparation of the plan, the Task Force shall take into the account existing efforts to protect marine biodiversity, implement Integrated Coastal Management, and conduct risk assessment and management in the Verde Island Passage Marine Corridor. The Commission shall ensure that the Plan is completed within 120 days from the effectivity of this Order.

SEC. 5. Funding. Starting 2008 and thereafter, the funding requirements shall be included in the General Appropriations Bill to be submitted to Congress.

All member-departments of the PC-ICDSCS and the TF-VIP are under obligation to fully support the activities by way of entering into appropriate agreements, as well as sharing financial and technical resources, among others, to support the implementation of the SSME Conservation Plan.

SEC. 6. Repeal. All executive orders, rules and regulations and other issuances or parts thereof, which are inconsistent with this Executive Order, are hereby revoked, amended, or modified accordingly.

SEC. 7. Separability. Any portion or provision of this Executive Order that maybe declared unconstitutional shall not have the effect of nullifying its other portions or provisions, as long as such remaining portions can still be given effect.

SEC. 8. Effectivity. This Executive Order shall take effect fifteen (15) days its publication in a national newspaper of general circulation.

DONE in the City of Manila, this 8th day of November in the year of Our Lord, Two Thousand and Six.

(SGD) GLORIA MACAPAGAL-ARROYO

By the President:

(SGD) EDUARDO R. ERMITA
Executive Secretary

Published in Malaya Newspaper on November 14, 2006

PRESIDENTIAL COMMISSION FOR THE INTEGRATED CONSERVATION AND DEVELOPMENT OF THE SULU AND CELEBES SEAS (PCICDSCS)

Resolution No. 2007-02

APPROVING THE VERDE ISLAND PASSAGE MANAGEMENT PLAN FRAMEWORK

WHEREAS, the Sulu and Celebes Seas represent a large marine ecosystem with outstanding and universal values on marine biodiversity, harboring an extremely rich biodiversity of corals, reef fishes, sea birds, large pelagic and marine wildlife species such as dugongs, marine turtles, whales and dolphins;

WHEREAS, the Sulu Sulawesi Marine Eco-Region (SSME) is situated at the apex of the coral triangle which is recognized as having the highest coral diversity in the world, and is commonly shared by the Philippines, Malaysia and Indonesia;

WHEREAS, the Verde Island Passage Marine Corridor, within the SSME and inside the Philippine territory covering the Provinces of Batangas, Mindoro Occidental, Mindoro Oriental, Marinduque and Romblon, has been identified by scientists as the Center of the Center of Marine Shorefish Diversity in the world;

WHEREAS, Executive Order No. 578, entitled ***"Establishing the National Policy on Biological Diversity, Prescribing its Implementation Throughout the Country, Particularly in the Sulu Sulawesi Marine Ecosystem and the Verde Island Passage Marine Corridor"***, was signed by Her Excellency, President Gloria Macapagal Arroyo on 08 November 2006;

WHEREAS, Section 4 of E.O. No. 578 provides, among others, for the PCICDSCS to create and organize a Task Force on Verde Island Passage to ensure protection, conservation and sustainable use of biological diversity in the Verde Island Passage Marine Corridor;

WHEREAS, the Task Force on Verde Island Passage was created by virtue of Resolution No. 2007-01 passed by the Commission on 24 February 2007, composed of representatives from the Departments of Environment and Natural Resources (DENR), Tourism (DOT), Science and Technology (DOST), Agriculture (DA), Health (DOH), Energy (DOE), Transportation and Communication (DOTC), Foreign Affairs (DFA), Trade and Industry (DTI), National Defense (DND), Interior and Local Government (DILG), National Economic Development Authority (NEDA), Conservation International-Philippines (CI-P), World Wildlife Fund – Philippines (WWF-Phil.) and all concerned Local Government Units;

WHEREAS, the Task Force was convened and series of consultative meetings and workshops were conducted to come up with the Verde Island Passage Management Plan Framework;

WHEREAS, in the course of consultations and workshops, the Task Force realized that the one hundred and twenty day (120) time frame provided for under E.O. 578 is not sufficient to come up with a comprehensive management plan for the area;

WHEREAS, due to the time limitation, the Task Force decided to develop the Management Plan Framework which would be the guide in formulating the detailed management plan of the Verde Island Passage Marine Corridor;

WHEREAS, the Task Force finally met on 17 October 2007 in Visayas Avenue, Diliman, Quezon City, and unanimously endorsed the Management Plan Framework for the Verde Island Passage Marine Corridor for the approval of the PCICDSCS;

RESOLVED, as hereby done, the Verde Island Passage Marine Corridor Management Plan Framework, as endorsed/recommended by the Verde Island-Task Force, is hereby **APPROVED**;

RESOLVED, further, that copy of this Resolution shall be forwarded to all members of the Commission and other concerned bodies for their information, reference and guidance.

RESOLVED, finally, that a copy of the Verde Island Passage Marine Corridor Management Plan Framework shall be submitted to Her Excellency, the President in compliance to Executive Order 578.

UNANIMOUSLY APPROVED ON __ DECEMBER 2007.

Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
IN REPLYING, PLS CITE
SENR-021075

JOSE L. ATIENZA, JR.
Chairman, PCICDSCS

DEPARTMENT OF AGRICULTURE
In replying pls cite this note
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PCICDSCS Res.2007-02
draft revised 12-26-07

LIST OF ACRONYMS AND ABBREVIATIONS

BAS	Bureau of Agricultural Statistics
BBDP	Batangas Bay Demonstration Project
BBREPC	Batangas Bay Region Environmental Protection Council
BFAR	Bureau of Fisheries and Aquatic Resources
CALABARZON	Cavite-Laguna-Batangas-Rizal-Quezon
CBCRM	Community-based Coastal Resource Management
CBD	Convention on Biological Diversity
CI-P	Conservation International-Philippines
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CLC	International Convention on Civil Liability for Oil Pollution Damage
CLUP	Comprehensive Land Use Plan
CRFC	Coastal Resources and Fisheries Conservation
CRM	Coastal Resource Management
CRMP	Coastal Resource Management Project
DA	Department of Agriculture
DAO	DENR Administrative Order
DepEd	Department of Education
DENR	Department of Environment and Natural Resources
DENR-ERDB	DENR-Ecosystem Research and Development Bureau
DFA	Department of Foreign Affairs
DILG	Department of Interior and Local Government
DND	Department of National Defense
DOE	Department of Energy
DOH	Department of Health
DOST	Department of Science and Technology
DOT	Department of Tourism
DOTC	Department of Transportation and Communication
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
EBM	Ecosystem Based Management
ECC	Environmental Compliance Certificate
ECP	Ecoregion Conservation Plan
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FAO	Fisheries Administrative Order
FARMC	Fisheries and Aquatic Resources Management Council
FLA	Foreshore Lease Agreement
FPCI	First Philippines Conservation, Inc.
First Gen	First Generation Corporation
FUND	International Convention on the Establishment of an International Fund of Compensation for Oil Pollution Damage
GEF	Global Environment Facility
HDI	Human Development Index
ICDP	Integrated conservation and development program
ICM	Integrated Coastal Management
IEC	Information, Education Campaign
IMO	International Maritime Organization
INTERVENTION	International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties
IPRA	Indigenous Peoples' Rights Act
IUCN	International Union for the Conservation of Nature and Natural Resources (The World Conservation Union)
LDC	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention)

LGU	Local Government Unit
MARINA	Maritime Industry Authority
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
MIMAROPA	Mindoro-Marinduque-Romblon-Palawan
MPA	Marine Protected Area
MPP-EAS	Marine Pollution Prevention in the East Asian Seas
MTSFI	Marine Threatened Species Fisheries Interaction
NAECTAF	National Anti-Environment Crime Task Force
NBSAP	National Biodiversity Strategic Action Plan
NDCC	National Disaster Coordinating Council
NEDC	National Ecotourism Development Council
NCIP	National Commission on Indigenous Peoples
NEDA	National Economic Development Authority
NFRDI	National Fisheries Research and Development Institute
NGO	Non-government organization
NIPAS	National Integrated Protected Areas System
NSCB	National Statistical Coordination Board
NSO	National Statistics Office
NUCLEAR	Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Materials
OCD	Office of Civil Defense
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
PAO	Provincial Agriculturist Office
PAWB	Protected Areas and Wildlife Bureau
PCICDSCS	Presidential Commission for the Integrated Conservation and Development of the Sulu and Celebes Seas
PCAMRD	Philippine Council for Aquatic and Marine Resources Development
PCG	Philippine Coast Guard
PCP	Pawikan Conservation Project
PCRA	Participatory Coastal Resource Assessment
P.D.	Presidential Decree
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PG-ENRO	Provincial Government- Environment and Natural Resources Officer
PIA	Philippine Information Agency
PNP-MARIG	Philippine National Police-Maritime Group
PO	People's organization
PPA	Philippine Ports Authority
PPDO	Provincial Planning and Development Office
R.A.	Republic Act
SDS-SEA	Sustainable Development Strategy for Seas of East Asia
SEP	Strategic Environmental Plan
SP	Sangguniang Panlalawigan
SOLAS	International Convention for the Safety of Life at Sea
SSME	Sulu-Sulawesi Marine Ecoregion
SSS	Sulu-Sulawesi Seascape
TMRC	Tropical Marine Research for Conservation
TWG	Technical Working Group
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UP-MSI	University of the Philippines – Marine Science Institute
UPV	University of the Philippines Visayas
USAID	US Agency for International Development
VIPMC	Verde Island Passage Marine Corridor
WWF-Phils.	World Wide Fund for Nature-Philippines

ACKNOWLEDGMENT

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Task Force on Verde Island Passage Marine Corridor:
Departments of Environment and Natural Resources (DENR) (Chair), Tourism (DOT), Science and Technology (DOST), Agriculture (DA), Health (DOH), Energy (DOE), Transportation and Communications (DOTC), Foreign Affairs (DFA), Justice (DOJ), Trade and Industry (DTI), National Defense (DND), and Interior and Local Government (DILG), the National Economic Development Authority (NEDA), the Conservation International - Philippines (CI-P) and World Wide Fund for Nature – Philippines (WWF-P) and the Provincial Governments of Batangas, Marinduque, Oriental and Occidental Mindoro, and Romblon.

Invited Agencies:
Maritime Industry Authority (MARINA), Philippine Coast Guard (PCG), Philippine Navy (PN), Philippine Council for Aquatic and Marine Research and Development (PCAMRD), Bureau of Fisheries and Aquatic Resources (BFAR), Department of Public Works and Highways (DPWH), Department of Education (DepEd), First Philippines Conservation Incorporated (FPCI) and First Gen Corporation (First Gen)

Verde Technical Working Group/Drafting Committee:
Dr. Theresa Mundita Lim, Chair (Protected Areas and Wildlife Bureau), Ms. Sandra Arcamo, Co-Chair (DA-BFAR), Mr. Romeo Trono, Dr. Sheila Vergara, and Mr. Jose Ricky Biyo (CI-P), Ms. Sheila Marie Encabo and Ms. Andressa Gutierrez (NEDA), Ms. Esther Zaragosa, (PCAMRD), Atty. Rodolfo Ferdinand Quicho, Jr. (FPCI), Mr. Jose Ma. Lorenzo Tan and Mr. Ricardo Sandalo (WWF–Philippines), Mr. Rey Laguda and Mr. Vincent Magtibay (First Gen)

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