

## **CSR Brief on Integrated Coastal Management (ICM) Scaling up in the Manila Bay Area**

### **Background**

Executive Order 533 (EO 533) was issued by the President of the Philippines on 7 June 2006, adopting ICM as the national strategy to ensure the sustainable development of the country's coastal and marine resources and environment. EO 533 mandates the setting of national ICM targets and creating a national coordinating mechanism to oversee ICM implementation at the national and local levels.

The Provinces of Bataan and Cavite, which are located in the Manila Bay Area, have developed and implemented ICM programs with technical the assistance from PEMSEA since 2000 and 2004, respectively. Key outcomes of the demonstration project included: a functional inter-agency and multi-stakeholder coordinating and management mechanism, local government adoption of a strategic framework and action plan for the sustainable development of marine and coastal resources and coastal areas within its jurisdiction, and the operationalization of the strategic action plan by a core technical team comprised of local government agencies, community groups, corporate sector/business communities, non-government stakeholders, and scientific and technical institutions.

In support of the development of a National ICM Program, replicating the experiences and achievements of Bataan and Cavite on ICM implementation in the Provinces of Bulacan and Pampanga and in the coastal cities of the National Capital Region (NCR) that fringe the Manila Bay Area will be the focus of this project. Bataan and Cavite will proceed with the implementation of the second cycle ICM while efforts will be made to initiate the development of ICM programs in Bulacan, Pampanga and in the coastal cities of NCR, in coordination with the Parks and Wildlife Bureau (PAWB) and the Coastal and Marine Management Office (CMMO) of the DENR.

### **Objectives**

One of the major areas of concern in the Operational Plan for Manila Bay Coastal Strategy (OPMBCS) is Partnership and Governance. The main objective is to develop set-up and operationalize an ICM covering 100% of the Manila Bay coastline by 2010. In relation to this main objective, the specific focus is to strengthen institutional arrangements and capacities of concerned local government units to rehabilitate and manage marine and coastal resources in a sustainable manner.

### **Programmed Activities 2009-2011**

To address the goals and objectives defined in the Operational Plan for Manila Bay Coastal Strategy (OPMBCS) the programmed activities for 2009-2011 include setting-up and implementing ICM programs in provinces of Pampanga and Bulacan as well as local government units in NCR.

**CSR Opportunities:**

The ICM Scaling up in the Manila Bay area provides an opportunity to the corporate sector to work with the local governments in implementing various CSR programs in the provinces of Bulacan, Pampanga and the NCR as well as Cavite and Bataan. The following specific CSR opportunities are submitted for consideration and possible follow-up action:

1. Integrated Coastal Management (ICM) Scaling up in the Manila Bay Area (Annex 1)
2. Adoption of Esteros, Creeks, Rivers and Waterways (Annex 2)
3. Water Conservation and Watershed Management (Annex 3)
4. Solid Waste Management and Wastewater Treatment (Annex 4)
5. Alternative Livelihood (Annex 5)

**Potential Partners:**

1. Corporate Sector
2. Local Government Units
3. Department of Environment and Natural Resources (DENR)
4. Partnership in Environmental Management for the Seas of East Asia (PEMSEA)
5. Non-government Organizations (NGOs) and Peoples Organization (PO)
6. Science Institutions and Universities

## **Annex 1: CSR Opportunity Brief for Integrated Coastal Management (ICM) Scaling up in the Manila Bay Area**

### **Project Description**

In support of the Operational Plan for Manila Bay Coastal Strategy (OPMBCS) replicating the public private partnership experiences and achievements of Bataan and Cavite on ICM implementation in the Provinces of Bulacan and Pampanga and in the coastal cities of the National Capital Region (NCR) that fringe the Manila Bay Area will be the focus of this initiative. Efforts will be made to partner the corporate sector as a major stakeholder in the development and implementation of ICM programs in Bulacan, Pampanga and in the coastal cities of NCR, in coordination with the Parks and Wildlife Bureau (PAWB) and the Coastal and Marine Management Office (CMMO) of the DENR.

### **Project Objectives**

The project aims scale up ICM in the Manila Bay Area.

Specifically, the project aims to strengthen institutional arrangements and capacities among concerned local government units for the development and implementation of ICM programs in the Manila Bay Area;

- a. Consolidate the experiences and strengthen the ICM programs in Bataan and Cavite; and
- b. Initiate the development of ICM programs in Bulacan, Pampanga and NCR;

### **Project Activities**

Project activities at each site will include:

1. Setting up ICM program based on good practices and lessons learned in the provinces of Cavite and Bataan, as well as other PEMSEA ICM sites in the East Asian Seas region;
2. Conduct of capacity development training program in ICM;
3. Identification and development of partnership arrangements with the corporate sector and other stakeholders;
4. Initiation of ICM program;
5. Formulation of a Coastal Use Zoning Plan;
6. Implementation of a monitoring program to evaluate progress and impacts.

## **Project Outputs**

The following outputs will be achieved as a result of the program:

- a. ICM programs initiated in each of the coastal provinces and the NCR by 2011;
- b. Partnership arrangements between corporate sector and individual local government units established;
- c. ICM capacity development program for local government units planned and implemented;
- d. State of the Coast reports prepared by local governments.

## **Project Budget**

The project budget varies depending on the scope of ICM program adopted by the concerned local government.

## **Project Start-up**

The project will commence in January 2010.

## **Potential Partners:**

Corporate sector, local governments, DENR, NGOs, universities, donors and PEMSEA

## **Partners Roles and Responsibilities:**

### **Corporate Sector:**

Partner with local government units to develop and implement ICM using best practices from public-private partnership (PPP) programs in Bataan, Cavite and Batangas.

### **Department of Environment and Natural Resources**

Coordinate the scaling up of ICM among Local governments in the Manila Bay Area

### **Local Government**

Develop and implement ICM programs with technical assistance from DENR and PEMSEA.

### **PEMSEA**

Implement capacity development program for local governments in Manila Bay.

## **Proposed Management Arrangements**

The project will be managed by a multi-sectoral coordinating mechanism established for each participating local government, chaired by the respective Local Chief Executives. The day-to-day coordination of the projects will be the responsibility of the teams of trained local government personnel.

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## **Annex 2: CSR Opportunity Brief on Adoption of Esteros, Creeks, Rivers and Waterways**

### **Background**

Many of the esteros, creeks, rivers and other waterways in Metro Manila are in a deteriorating state and some have become so polluted that they have become biologically dead. These bodies of water have become the receptacle of many types of waste coming from domestic, industrial or commercial sources. The volume of waste found in these esteros accrue up to the pollution that goes to Manila Bay. Thus pollution reduction efforts intended to clean these esteros will also lead to the eventual clean-up of Manila Bay. Adopting a estero, creek, river or any kind of waterway that serve as a tributary to Manila Bay will greatly enhance the pollution reduction efforts for Manila Bay.

This opportunity is specially intended for corporations whose facilities are located near a estero, creek, river or any waterway that serve as tributaries to the Manila Bay. Adoption of Esteros mean that a corporation or a group of companies will commit to a set of activities to be undertaken with the ultimate objective of maintaining a particular estero, creek, river or any waterway. The project can also involve coastal clean-ups and other activities that would address the problem of pollution at source.

### **Project Objectives**

Adoption of esteros, creeks, rivers and other waterways are meant to achieve the following:

- Address the pollution in a particular estero, creek, river or any waterway that serve as tributaries to the Manila Bay with the ultimate objective of improving the quality of its waters.
- Develop and implement a plan on how to maintain and preserve its cleanliness and overall health.
- Engage stakeholders to participate in the estero, river or coastal clean-up and other activities that would be undertaken.

### **Project Activities**

1. Identification of a project location and the issues and concerns surrounding it.
2. Development of a project plan detailing the activities to be undertaken.
3. Forging a partnership among concerned stakeholders.
4. Conduct of an information and education campaign to increase the level of public awareness.

**Potential Partners:**

DENR, local governments, NGOs, universities, development banks, donors, corporate sector, PEMSEA

**Partners Roles and Responsibilities:**

The **local government** will identify esteros and waterway and assign personnel to coordinate the project planning and implementation.

The **Department of Environment and Natural Resources** will continue to enforce environmental laws concerning the environment of esteros, creek, rivers, and waterways. It will also exercise its mandate to prevent further pollution of these waterbodies.

The **corporate sector** can adopt esteros, creek or rivers and develop a CSR program that would rehabilitate and maintain the water quality of these waterbodies.

**PEMSEA** will provide a capacity building program to facilitate ICM scaling up in Manila Bay and within available resources, technical advice in identifying possible locations and partners for CSR programs.

## **CSR Projects on the Adoption of Esteros, Creeks, Rivers and other Waterways: The Case of Unilever Philippines and Land Bank of the Philippines**

### **UNILEVER PHILIPPINES**

Since 1993, Unilever Philippines has been a key partner in the implementation of the multi-sector Pasig River Development Plan, which has the primary objective of cleaning up and rehabilitating the severely polluted river. One of the key contributions of Unilever Philippines in the project was the establishment of an onsite domestic water treatment plant in its factory, which straddles a small tributary of the Pasig River. This has ensured that its business operations do not contribute to the further pollution of the river. Treated water from the plant flows through a fish pond before entering a tributary of the Pasig River.

Unilever also set up partnership programmes to help neighbors not to pollute the Pasig River by organizing solid waste management workshops for the local traders. In addition, working with the NGOs and civic associations, Unilever has run public awareness campaigns in schools and the community to encourage the establishment of Clean River Zones.

### **LAND BANK OF THE PHILIPPINES**

Land Bank of the Philippines, in cooperation with the DENR and the city government of Manila, spearheaded a CSR project to conduct a regular clean-up of the Manila Bay. It signed a Memorandum of Agreement with DENR, the 101<sup>st</sup> Squadron of the Philippine Coast Guard Auxiliary, the Manila Yacht Club (MYC), the City of Manila, Manila Ocean Park, Manila Broadcasting Company, Hyatt Hotel and Casino Manila, PAGCOR, Manila Yacht Club, Diamond Hotel, Harrison Plaza and the Bangko Sentral ng Pilipinas that will support the rehabilitation of Manila Bay. The MOA was titled Manila Bay Socially Responsible and United in Nurturing and Sustaining the Environment Together (S.U.N.S.E.T.) Partnership and has the following objectives:

- To improve the quality of the water and marine resources of the Manila Bay thru implementation of appropriate, updated and sustainable approach in cleaning and protecting the bay;
- To increase the level of commitments of the establishments and LGUs in the Manila Bay area in protecting the bay thru volunteerism and sustained partnership; and
- To increase public awareness on the importance and current state of the Manila Bay and the programs to clean up and protect it.

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## **Annex 3: CSR Opportunity Brief on Water Conservation and Watershed Management**

### **Background**

Water conservation efforts are mainly inside the fence line CSR activities that are meant to manage the volume of water used in business operations. On the other hand, watershed management entails the assessment of water resources of a watershed area where a company is located and identifying the threats to its sustainability. Watershed management seeks to address these threats by creating a long term action plan that would ensure the optimal use of available water resources and mitigating risks that would further endanger its sustainability.

Watersheds are sources of water for domestic and industrial use. By implementing watershed management programs, corporations are working towards the long term viability of its business operations at the same time helping the communities where it has environmental impact. Water conservation activities within the fence line of business operations provide the same dual benefits, it helps reduces the cost of operations while preserving the resources of the surrounding community where it is located.

### **Project Objectives**

Water conservation efforts and watershed management programs will also contribute to the achievement of the goals and objectives of the Operational Plan for the Manila Bay Coastal Strategy. It will address the issue on the overexploitation of natural resources and the degradation of natural habitats with the goal of ensuring the protection, restoration and sustainable development of resources, habitats, natural areas, and historical, cultural, religious and archeological sites that are essential in achieving the ecological, social, and economic well-being of communities and stakeholders in the Manila Bay Region. Indirectly, water conservation and watershed management programs can also contribute in addressing water pollution as one of three major areas of concern in the OPMBCS. The goal is to protect the waters in Manila Bay and its tributaries (rivers and lake) and ensure that they are safe for various uses (*e.g., recreation, source of potable water, transportation, irrigation, fisheries and other living resources*).

On a general context, water conservation activities and watershed management programs can reduce the cost of operations for the business, create a culture of environmental conservation in the company, provide an assessment of the available resources in the community and come up with an action plan for its sustainability and improve the relationship of the company with the community.

## **Project Activities**

To address the development and implementation of water conservation projects and watershed management programs the following activities are proposed:

1. Developing an awareness program that aims to introduce a water saving and efficient culture among workers and the community stakeholders;
2. Development of tools and detailed guidance on the process for assessing a facility's specific water uses/needs in comparison to the availability of water in the community and for determining the impacts of business operations on available water resources;
3. Development of water management plans in manufacturing plants to improve operational performance;
4. Development of a watershed stewardship program that would provide a tool to communicate and recognize responsible water users through the development of a common framework for assessing, implementing and communicating sustainable water management,
5. Engaging stakeholders for the purpose of building relationships that generate mutually beneficial outcomes;
6. Formation of a CSR group that would look into the water-related problems and issues of a particular river basin or watershed;
7. Providing financial and non-monetary support to current programs and initiatives on water conservation and water stewardship implemented by NGOs, POs and other development organizations;
8. Information dissemination and sharing of best practices through corporate websites or newsletters or through industry associations and conferences.

## **Potential Partners:**

DENR, local governments, NGOs, universities, development banks, donors, corporate sector, PEMSEA

## **Partners Roles and Responsibilities:**

The **Department of Environment and Natural Resources** and other concerned government agencies can continue to exercise their mandate in ensuring the promotion and enforcement of government regulations that could enhance water conservation efforts and watershed management in the business sector.

The **corporate sector** can develop and implement water conservation and watershed management projects in line with the government programs outlined in the OPMBCS and come up with their own set of CSR projects that would promote water conservation and watershed management within their business operations and in partnerships with communities.

**Development banks, donors and investors** can provide sources of financing for environmental projects that promote water conservation and watershed management in the Manila Bay area.

**PEMSEA** will provide a capacity building program to facilitate ICM scaling up in Manila Bay and within available resources, technical advice in identifying possible locations and partners for CSR programs.

## **Water Conservation and Watershed Management as a CSR Project: The Case of Coca Cola Foundation**

Coca Cola's water related CSR activities is part of an overall global corporate strategy wherein the organization's CSR activities have been categorized in terms of their impact on four areas:

- *Workplace*: Fostering an open and inclusive environment based on recognized workplace human rights, where a highly motivated, productive and committed workforce drives business success through superior execution.
- *Marketplace*: Providing products and services that meet the beverage needs of its consumers, while providing sound and rewarding business opportunities and benefits for its customers, suppliers, distributors and local communities.
- *Environment*: Conducting business in ways that protect and preserve the environment and integrate principles of environmental stewardship and sustainable development into its business decisions and processes.
- *Community*: Investing time, expertise and resources to provide economic opportunity, improve the quality of life, and foster good will in communities where it operates, through locally relevant initiatives.

The basic environmental policy of Coca-Cola is to return to communities and to nature an amount of water equivalent to what it is using in all of its beverages and their production. This means reducing the amount of water used to produce its beverages, recycling water used for manufacturing processes so it can be returned safely to the environment, and replenishing water in communities and nature through locally relevant projects. Coca-Cola have partnered with its bottlers in establishing a water-sustainable business on a global scale. It follows a strategy of building on a comprehensive risk analysis of water resources in the Coca-Cola system -- an analysis that provides a clear understanding of its water risks on a global and local scale, enables business units to define and prioritize ways to reduce water risks, and allows the corporation to track progress in water stewardship.

In the Philippines, the Santa Rosa Basin was chosen as one of the project site of Coca-Cola's watershed stewardship program. Based on a report of WWF Philippines, groundwater studies have shown that the rate of water use in the Sta. Rosa Basin will exceed the production by 2023. This was attributed to rapid population growth, intensive land development and unmitigated urbanization. In addition, WWF reported that water in many shallow wells in lakeside communities have been depleted, heavily polluted and were deemed unfit for human consumption. Likewise, septage and untreated wastes are polluting shallow aquifers and canals feeding the Laguna Lake. There were also reports that widespread deforestation in the areas surrounding the Santa Rosa River have led to soil erosion.

In line with its global objective on water stewardship, the Sta. Rosa Watershed Study is a 5-year programme with the objective of reviving crucial ecosystems in Sta. Rosa water basin thereby benefiting thousands of people in communities which depend on it for food and livelihood. Indirectly, it also seeks to develop pragmatic solutions to address some of the environmental problems affecting the watershed.



## **Annex 4: CSR Opportunity Brief on Solid Waste Management and Wastewater Treatment**

### **Background**

One of the perennial and increasingly rampant environmental problems in the Manila Bay area is pollution caused by ineffective solid waste management and the lack of sewage treatment facilities. Solid wastes and sewage generated by domestic, commercial, and industrial sources enter Manila Bay either directly, through its water tributaries or through the drainage systems, which could sometimes result into clogging that can further lead to flooding. Solid wastes and sewage are capable of impairing ecosystems, blanketing habitats, degrading aesthetics, and posing public health risks. Conducting regular clean-ups may help but is not a long term solution. What is needed is a concerted effort to make waste collection more efficient and appropriate disposal of municipal garbage and ship waste.

Solid waste management and wastewater treatment are some of the most common environmental programs that a corporation can undertake within the boundaries of its business operations. In some cases, these projects can also be extended at the community level wherein a corporation would partner with the community stakeholders in managing wastes. Companies engaged in the production of consumer goods are well positioned to undertake solid waste management and wastewater treatment projects.

### **Project Objectives**

CSR activities in solid waste management or the putting-up of sewage/wastewater treatment plants contribute to the Water Pollution area of concern in the OPMBCS. In particular, they contribute to Objective 1 - Reduce by 50% the discharges of raw sewage, septage and untreated and inadequately treated wastewater (from commercial, industrial, agricultural, and fisheries/aquaculture) by 2015 and Objective 2 - Establish integrated solid waste management programs in all LGUs by 2007. The main goal is to *“Protect” the waters in Manila Bay and its tributaries (rivers and lakes) and ensure that they are safe for various uses (e.g., recreation, irrigation, transportation, fisheries and other living resources, source of potable water.*

In general, they are intended to achieve the following objectives:

- Reduction of health and environmental costs related to lack of waste collection and proper disposal system.
- Greater engagement with the community to establish partnerships for more effective and sustainable waste management.
- Increase public awareness
- Promotion of waste reduction, re-use, recycling and composting in business operations.

## **Project Activities**

To address the concern solid waste management and wastewater treatment the following activities are proposed:

1. Implementation of a waste segregation and recycling program
2. Composting of waste
3. Promote the reduction on the use of raw materials, reuse, recycling and recovery.
4. Treatment of waste that cannot be reused/recycled ( including the Installation of sewage treatment plants )
5. Improve packaging materials
6. Promotion of public awareness and conduct of Information Education Campaigns (IEC)
7. Development of new technology and products (high value-added products)
8. Find ways to measure the impact of waste management practices to the community
9. Examination of a possibility of capital investments

## **Partners Roles and Responsibilities:**

The **Department of Environment and Natural Resources** and other concerned government agencies can continue to exercise their mandate in ensuring the conduct of proper solid waste management and wastewater treatment.

The **corporate sector** can develop and implement solid waste management and waste treatment projects in line with the government programs outlined in the OPMBCS and come up with a set of CSR projects that would promote solid waste management and wastewater treatment within their business operations and in partnerships with communities.

**Development banks, donors and investors** can provide sources of financing for environmental projects that promote solid waste management and wastewater treatment.

**PEMSEA** will provide a capacity building program to facilitate ICM scaling up in Manila Bay and within available resources, technical advice in identifying possible locations and partners for CSR programs.

## **CSR Projects on Solid Waste Management and Wastewater Treatment : The Case of Unilever Philippines and San Miguel Corporation**

### **UNILEVER PHILIPPINES**

Unilever Philippines has developed and undertaken a project on solid waste management in its factory in Paco, Manila. It the company's policy that the factory adheres to environmentally compliant and ISO certified processes to ensure that no harmful wastes come out of Unilever's plants. As such, Unilever created Project Eliminate with the target of having ZERO LANDFILL by end of year 2004.

The Project Eliminate team therefore concentrated on the following goals:

- Reduce / Avoid waste as much as possible
- Sort all recyclables which cannot be avoided
- Develop processes to treat (instead of disposing to landfill) the waste that cannot be recycled

### **SAN MIGUEL CORPORATION**

San Miguel has implemented a within the fenceline solid waste management program called "Linis Ofis". Translated as "clean office", this internal program is an integrated approach to solid waste management in support of Ecological Solid Waste Management Act (RA 9003). It deals with waste segregation by instilling in SMC employees the 4R discipline – Reduce, Reuse, Recycle and Recover. It aims to educate its workers to value their environment by practicing segregation, collection, reuse and recycling of disposable waste in the workplace.

SMC's Head Office Complex located in the Ortigas Center hub provided three waste receptacles placed in strategic spots for food scraps or compostable waste, recyclable items (such as plastic bottles and aluminum cans), and nonrecyclable items or disposable waste (such as plastic and tetra-pak containers). This is also being implemented in SMC's other facilities nationwide. A separate chest of drawers is provided in each department for solid waste with market value, such as used bond paper, magazines, newspapers and empty ink cartridges.

The program generated P26,000 from the sale of recyclable materials on its first month, and an average of P12,000 per month. It has also helped in reducing the amount of solid waste, which normally finds its way to landfills and dumpsites, and easing up on manpower in the collection of waste.

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## **Annex 5: CSR Opportunity Brief on Alternative Livelihood**

### **Background**

Alternative livelihood projects are meant to encourage people to move away from the harmful exploitation and degradation of natural resources. Alternative livelihood programs directly benefit the poor by providing them sources of income with the ultimate goal of making them self reliant. It also contributes to the preservation and rehabilitation of the environment by promoting sustainable practices in microenterprises.

In coastal and upland areas, alternative livelihood is important since the people who depend on marine and forest resources for their livelihoods are increasingly faced with problems regarding access to ecosystem services, conflicts over access rights and other adverse effects brought about by the general degradation of the coastal and upland environments. Oftentimes, upland and coastal dwellers are not able to respond well to these changes, and many are becoming isolated from the activities that have been part of their livelihoods and culture for generations.

### **Project Objectives**

In the Operational Plan for Manila Bay Coastal Strategy, the provision of alternative livelihood opportunities (e.g., tourism and recreation projects; resource management) for upland and coastal dwellers is considered a mitigating strategy intended to prevent illegal intrusion / encroachment and human settlements along waterways.

It can also address multiple use conflicts and contributes to the strengthening of partnerships and governance among Manila Bay stakeholders and government agencies.

In addition, the provision of alternative livelihood programs also contributes to the objective of achieving sustainable and ecologically-sound aquaculture and mariculture production in Manila Bay Region.

It is also one of the activities planned out to implement the Integrated Forestry Development and Management Plan (IFDMP).

### **Project Activities**

Developing alternative livelihood projects entails the undertaking of the following:

1. Identification of beneficiaries.
2. Identification of market demand for the products and services produced by the project.
3. Preparation of a business plan (including marketing and financial plans).
4. Implementation of the Business plan.
5. Monitoring and evaluation.

### **Partners Roles and Responsibilities:**

The **Department of Environment and Natural Resources** and other concerned government agencies can continue to exercise their mandate in ensuring the availability of economic opportunities for the marginalized sectors.

The **corporate sector** can develop and implement alternative livelihood projects in line with the government programs outlined in the OPMBCS and come up with their own set of CSR projects that would enhance the economic opportunities of people living in vulnerable environments such as the upland and coastal areas.

**Development banks, donors and investors** can provide sources of financing for alternative livelihood projects.

**PEMSEA** will provide a capacity building program to facilitate ICM scaling up in Manila Bay and within available resources, technical advice in identifying possible locations and partners for CSR programs.

#### **CSR Project on Alternative Livelihood: The Case of Philippine Business for Social Progress**

The Philippine Business for Social Progress (PBSP) is one of the three industry associations who signed the Manila Bay Declaration in 2001. PBSP is the largest corporate-led, non-profit social development foundation in the Philippines. PBSP is at the forefront in the fight against poverty through trailblazing corporate citizenship programs developed and implemented with the strategic commitment of more than 240 PBSP member-companies. PBSP's programs are focused on its "four pillars" – Poverty Alleviation, Information Technology, Corporate Citizenship and Leadership in CSR.

In terms of CSR for Manila Bay, PBSP has a portfolio of enterprise development projects in various locations in the National Capital Region. The project is called the Strategic Private Sector Partnerships for Urban Poverty Reduction in Metro Manila (STEP-UP) Program with the objective of improving the lives of 5,823 urban poor households from 23 selected communities in 9 cities in Metro Manila.

Philippine Business for Social Progress (PBSP) is implementing STEP-UP through its National Capital Region-Area Resource Management Program and is responsible for harnessing private sector participation to complement the financial grant of Japan Fund for Poverty Reduction (JFPR) being administered by the Asian Development Bank (ADB). Major partners of the program are the Department of Finance, Housing and Urban Development Coordinating Council--as the Executing Agency of the program, local government units, business sectors, homeowners associations, non-government organizations, and government line agencies.

The distinct character of this three-year project is the strategic and focused participation of the private sector, whose contribution will match that of JFPR, and a pronounced risk-management component to help the urban poor cope with, if not, prevent common disasters affecting them, especially fire and flooding.

## CSR Brief on Habitat Rehabilitation and Management

### Background

The natural environment of the Manila Bay area is facing various threats from different factors: overexploitation of natural resources, pollution discharges from land-based and sea-based sources, over-fishing, uncontrolled human development and habitat destruction and degradation. In particular, physical habitats provided by the mangrove forests, coral reefs, mudflats and seagrass beds are important refuges and nursery grounds for commercial and non-commercial fish and shellfish. Habitat, mangroves in particular, also protect the shoreline from storm surges and salt water intrusion. However, the habitats in the Manila Bay area are experiencing serious degradation. In the case of mangrove forests, for instance, from an estimated area of 54,000 hectares in 1890, the total area occupied by mangrove stands has been greatly reduced to about 414 hectares, based on 2005 survey conducted through the Environmental and Resource Valuation Component activity of the Manila Bay Environmental Management Project (MBEMP).

Destruction of mangroves, coral reefs, and seagrass will have large ecological consequences due to the loss of their ecological functions as breeding, spawning and nursery grounds for various marine life. The Operational Plan for the Manila Bay Coastal Strategy specifies habitat restoration and management as one of the major focus areas for the rehabilitation of Manila Bay.

### Objectives

One of the main goals of the Operational Plan for Manila Bay Coastal Strategy (OPMBCS) is to ensure protection, restoration and sustainable development of resources, habitat, natural areas, and historical, cultural, religious and archeological sites that are essential in achieving ecological, social, and economic well-being of communities and **stakeholders** in the Manila Bay region. In relation to this goal; three objectives are identified, namely:

1. Set-up sustainable institutional arrangements and management programs in all declared Protected Areas (PAs) and Critical Habitats in Manila Bay Region;
2. Implement a no net loss policy for existing mangroves, mudflats, shorelines, beaches and sandy shores by 2010; and
3. Increase by 80% the forest cover in the entire Manila Bay watershed area by 2015.

### Programmed Activities 2009-2011

To address the goals and objectives defined in the Operational Plan for Manila Bay Coastal Strategy (OPMBCS) the following activities are proposed/planned:

1. Preparation of a comprehensive habitat rehabilitation plan for the Manila Bay area;
2. Development of a bay-wide assessment on the potential impacts of climate change on coastal resources, communities, stakeholders and infrastructure;
3. Formulation of a strategic bay-wide Coastal Use Zoning Plan;
4. Delineation of highly vulnerable / priority locations for habitat rehabilitation and management;
5. Identification of partners to participate in the rehabilitation efforts;
6. Initiation of the management plan; and
7. Implementation of a monitoring program to evaluate the progress and impacts.

### **CSR Opportunities:**

Since most of the corporations' facilities and offices are located in the Manila Bay area, the corporate sector is one of the major stakeholders in the rehabilitation of habitats in the Manila Bay area. The following CSR opportunities are submitted for consideration and possible follow-up action:

1. Habitat Rehabilitation and Management Plan for the Manila Bay Area (Annex 1)
2. Mangrove Reforestation and Nursery Establishment in Orion, Bataan (Annex 2)
3. Mangrove Rehabilitation in Sasmuan, Pampanga (Annex 3)
4. Mangrove Rehabilitation in Bulacan (Annex 4)
5. Upland Reforestation in Barangay Sapang, Ternate, Cavite (Annex 5)

### **Potential Partners:**

1. Corporate Sector
2. Local Government Units
3. Department of Environment and Natural Resources (DENR)
4. Partnership in Environmental Management for the Seas of East Asia (PEMSEA)
5. Non-government Organizations (NGOs) and Peoples Organization (PO)
6. Science Institutions and Universities

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## **Annex 1: CSR Opportunity Brief for Rehabilitation of Manila Bay: Habitat Rehabilitation and Management**

### **Project Description**

In April 2002, the Parties to the Convention on Biodiversity committed themselves **to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth.**

The target was subsequently endorsed by the World Summit on Sustainable Development and the United Nations General Assembly and was incorporated as a new target under the Millennium Development Goals.

This CSR Opportunity Brief focuses on the restoration and rehabilitation of priority habitats in the Manila Bay area as a contribution to the aforementioned international targets, as well as to the recovery of the Manila Bay ecosystem. Priority habitats in Manila Bay include forest areas, mangroves, riverbanks, mudflats, sandy beaches, and seagrass. In addition the Manila Bay Coastal Strategy refers to restoration and maintenance of important historical and cultural sites as part of this objective.

The short-term target for Manila Bay is the **implementation of a “no-net loss” policy** for habitats by 2010. In the longer term, objectives and targets of habitat restoration and management in the Manila Bay area will require a more strategic approach, in the face of related objectives, including improving coastal fisheries and livelihoods, food safety and security, poverty reduction and protection of coastal amenities and communities from the impacts of climate change.

### **Project Objectives**

The project objectives are:

1. To develop a comprehensive bay-wide habitat restoration and management plan for Manila Bay;
2. To initiate the implementation of the management plan for priority sites and habitats; and
3. To facilitate longer-term partnership arrangements between national government agencies, local governments, the corporate sector and other stakeholders for the implementation of the management plan.

### **Project Activities**

Project activities will include:

1. Assess the current situation and develop a comprehensive habitat rehabilitation and management plan:
  - b. Update of the inventory of existing habitats and their status in the Manila Bay watershed;

- c. Review of ongoing programs and initiatives being undertaken by government and non-government sectors to restore and rehabilitate the identified habitats in the Manila Bay region, including objectives and targets;
  - d. Identification of gaps and constraints of existing programs, including scenarios requiring further consideration in restoration/rehabilitation management programs (e.g., climate change; sea level rise; coastal fisheries/livelihoods);
  - e. Delineation of strategic locations in the Manila Bay area for habitat restoration and management in collaboration with concerned stakeholders in the public and private sectors and civil society;
  - f. Development of objectives, targets, activities, and performance criteria/indicators for the implementation of the management plan, including timeframe, financing and responsibility centers.
  - g. Identification of potential partners or sources of funding to support the rehabilitation efforts;
  - h. Development of strategies to address constraints including public awareness and capacity development.
2. Conduct a consultation process/series of workshops around the Bay to review and finalize the management plan, including submission to the Manila Bay Coordinating Committee;
  3. Conduct pre-monitoring and evaluation of priority selected areas/habitats prior to program implementation;
  4. Forge the partnership arrangements among the concerned stakeholders for the start-up and implementation of the management plan, including organizational arrangements and the implementation of a monitoring and reporting system;
  5. Initiate the implementation of the habitat restoration and management plan in partnership with government and non-government stakeholders in selected priority areas/habitats;
  6. Monitor and assess the progress and impact of the rehabilitation project(s) in the Manila Bay area, and disseminate the results, including submission to the Manila Bay Coordinating Committee.

### **Project Outputs**

The following outputs will be achieved as a result of the identified project:

- a. Habitat rehabilitation and management plan developed and initiated at priority sites;
- b. Partnership arrangements established and effectively functioning, involving government, corporate sector, NGOs and other stakeholders;
- c. Progress reports submitted to MBCC

## **Project Budget**

To facilitate the development of the management plan, the total budget is estimated to be Php 5 million, including Php 3 million for the assessment of the current situation and the formulation of a draft plan, and Php 2 million for the consultation process, finalization of the plan and the formalization of the partnership arrangement.

## **Project Start-up and Duration**

The project will commence in January 2010, and be completed by December 2010.

## **Potential Partners:**

DENR, local governments, NGOs, universities, development banks, donors, corporate sector, PEMSEA

## **Proposed Management Arrangements**

The project will be managed by project team comprised of government (national and local) and non-government representatives and will report their progress and outputs to the Manila Bay Coordinating Committee. The team will be chaired by the DENR/RBCO.

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## Annex 2: CSR Opportunity Brief on Mangrove Reforestation in Bataan

### Project Name:

Mangrove Reforestation and Nursery Establishment in Orion, Bataan

### Project Location:

The mangrove sites are located Brgy. Balut and Daan Pare Municipality of Orion, Bataan:

### Project Objectives:

#### *General Objective:*

The mangrove reforestation project aims to rehabilitate, protect, preserve and properly manage the marine resources and coastal areas of Bataan in line with the Bataan Sustainable Development Strategy (BSDS). The BSDS was developed through a multi-stakeholder consultation in the province. It has been adopted as a blueprint for coastal and marine management. With the increase in the mangrove area an increase in fish stocks is anticipated, thereby improving fish catch level of the fisherfolk.



**Mangrove reforestation undertaken by SUGPO in Brgy. Sta. Elena, Orion, Bataan**

#### *Specific Objectives:*

1. To improve the existing condition of the mangrove areas in the Municipality of Orion through mangrove reforestation.
2. To increase fish stocks and fish catch of individual members of the organization and other fisherfolks of the province.
3. To provide reliable supply of seedlings / planting materials for continuous mangrove rehabilitation, enrichment and reforestation along the coastal areas of Bataan through the establishment of mangrove nursery.

### Project Details:

This project will reforest about **“6 hectares of selected coastal areas in Orion”**. Approximately 60,000 seedlings (10,000 seedlings per hectare) will be used for the mangrove reforestation project, which will come from a mangrove nursery in Barangay Balut.

#### **Mangrove nursery in Brgy. Balut, Bataan**



Using the propagules from the nursery, about four (4) ha of mangrove areas will be reforested in the coastal areas of Barangay Balut and two (2) ha of in Barangay Daan Pare. About 60,000 seedlings are targeted to be planted in the two identified sites for 1 whole year.

The nursery will be established in a 5,000 sq. meter area in Barangay Balut, Orion. The source of propagules will be taken from a nearby Barangays of Daang Pare, Camachile and Sto. Domingo. The nursery will have a fence made of bamboo and nylon mesh. A small guardhouse made of bamboo and nipa will be constructed .

*Sustainability*

To ensure the suitability of mangroves that will be planted, a survey of species growing in the target reforestation areas will be done. Native mangrove species in Bataan include the pagatpat ( *Sonneratia Alba* ), the Bakauan Lalaki ( *Rhizophora apiculata* ) and the Bakauan Babae ( *Rhizophora muamunata* ).

The mangrove reforestation activities in these sites will be initial activities only until such time that the proposed nursery had been established to support the continuing mangrove reforestation program of the province’s coastal areas. Communities, including students and other community will be mobilized to conduct the reforestation initiatives. This will also serve as an information and public awareness to increase the level of involvement in the protection and the rehabilitation of marine and coastal resources.

Protective fence made of bamboo and nets will be put up for the protection of newly-planted mangrove seedlings.

**Project Cost:**

The following table presents the projected costs of the reforestation and nursery project:

Item	Cost (PhP)
<b>A. Mangrove nursery</b>	
1. Propagules (Including agri Bags)	P 360,000.00
2. Fencing	42,200.00
3. Guard House (Nipa and Bamboo)	20,000.00
4. Hauling and transportation Expense	10,000.00
5. Initial field survey of the reforestation areas and mobilization cost for reforestation.	100,000.00
6. Honorarium for caretakers (1,500 x2pax x 24 months)	72,000.00
<b>TOTAL</b>	<b>P 604,200.00</b>
<b>B. Mangrove Reforestation</b>	
1. Seedlings	P480,000.00
2. Fencing of the area	60,000.00
3. Labor (200/day x 10 mandays x 5days/ha x 6 ha	60,000.00
<b>TOTAL</b>	<b>P 600,000.00</b>
<b>GRAND TOTAL</b>	<b>P 1,204,200.00</b>

## **Partners Roles and Responsibilities:**

### **The Municipality of Orion will provide the following services as counterpart resources:**

- Identify the areas to be reforested as well as the organized community to be tapped in the implementation of the reforestation project.
- Assist in the identification of seed sources and/or seedlings within the subject watershed area, in consultation with the affected communities.
- Ensure the safety and security of all parties involved in the project especially while within the target project areas.
- Assign personnel to coordinate the project planning and implementation.

### **The NGO/PO shall perform the following tasks:**

- Assist the Corporate Sector Partner(s) and LGU in the identification of target areas to be reforested;
- Assist in the identification of seed sources and/or seedlings within the subject watershed and adjacent areas;
- Implement reforestation activities, as approved by the LGUs and the Corporate Sector Partner(s) taking all the necessary means to ensure a reasonably high survival rate of the planted seedlings;
- Hold regular general monthly meetings to discuss the progress of the project, and or the details and schedule of subsequent activities and to update its members and officers including the Corporate Sector Partner(s), regarding the project.
- Assign a representative for project planning and implementation.

### **The Bataan ICM Project Management Office shall undertake the following activities:**

- Provide the necessary support in the formulation of a Memorandum of Agreement (MOA) to facilitate the mangrove rehabilitation between concerned parties (including the Municipality of Orion, Corporate Sector Partner(s) and the local Non Governmental Organization (NGO) that would monitor the project.
- Spearhead the conduct of Information and Education Campaign (IEC) in the area, including community organizing activities such as social preparation.
- Provide support mechanism for the organized communities/people's organization (PO) especially in their linkages with other government agencies specially on other livelihood opportunities complementary to the project.
- Provide logistical support for all personnel involved relative to the project, including staff from the corporate sector.
- Assist the Corporate Sector Partner(s)'s representative who may conduct area inspection/visit/ monitoring and/or meeting with the officers and members of the people's organization.
- Prepare and provide the Corporate Sector Partner(s) quarterly project's status report to include highlights of physical accomplishments, issues and concerns affecting project implementation and recommended sources of action.
- Assign a representative for project planning and implementation.

**The Corporate Sector Partner(s) shall provide the following:**

- Collaborate with the LGU in project planning including the development of project design based on existing site conditions in consultation with LGU and the People's Organization.
- Assist the LGU in the identification of target areas to be reforested.
- Provide planning materials needed for the project.
- Jointly implement with LGUs reforestation activities, in consultation/coordination with the affected communities.
- Assign a personnel for project planning and implementation.
- Provide financial support for the reforestation project and ensure the appropriation of project fund/budget based on the approved project proposal and subsequent project accomplishment.

**Contact Persons:**

**Mr. Alexander Baluyot**

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**Mr. Laudico Perez**

SUGPO President  
Tel Nos. 0927.422.69.31 (phone number of Mr. Alfredo Hernandez, PO  
Adviser)  
0919.586.84.10 (phone number of Mr. Noel Gloria, Adviser, SUGPO)

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### Annex 3: CSR Opportunity Brief on Mangrove Reforestation in Pampanga

#### Project Name:

Mangrove Rehabilitation in Sasmuan, Pampanga

#### Project Location:

The Project is located in Barangay Batang II, Sasmuan, Pampanga.

#### Project Objectives:

##### *General Objective:*

The mangrove reforestation project aims to rehabilitate, protect, preserve and properly manage the marine resources and coastal areas of Pampanga and the Municipality of Sasmuan in particular. It is necessary to avert the declining mangrove forest of the country and bring back the important economic and ecological function of mangrove resources.

##### *Specific Objectives:*

1. To provide a life support mechanism for marine species thus increasing fish stocks and fish catch of fisher folks of the Province.
2. To increase fish stocks and fish catch of individual members of the organization and other fisherfolks of the province.

#### Project Details:

The project will reforest portion of the vast open coastal areas of the Municipality of Sasmuan, Pampanga. An **approximated area of 100 has.** was initially surveyed.

With a spacing of 1 m x 1 m, the project needs 10,000 seedlings per hectare. The source of propagules shall be procured from other provinces like Bataan and Pangasinan.

The planting stock will be raised in a nursery until the desired height has been attained. The nursery will be established preferably adjacent to the planting site to reduce high cost of transportation from the nursery to the planting site.



**Mangrove nursery in Macabebe, Pampanga**

To ensure high survival rate, species to be planted shall be of the same species that grow in the area. Native mangrove species in the area include the Pagatpat ( *Sonneratia alba* ), the Bakauan Lalaki (*Rhizophora apiculata*) and the Bakauan Babae (*Rhizophora muamunata*).

Protective fence made of bamboo poles and plastic nets will be put up along the perimeter of the plantation for the protection of newly planted mangrove seedlings.



**Mangrove Forest in Batang II,asmuan, Pampanga**

**Project Cost:**

The following table shows the projected costs per hectare:

Item	Cost (PhP)
<b>A. Nursery Operation</b>	
1. Seedlings procurement (including freight and agri-bags)	P 13,200.00
2. Potting	8,000.00
3. Watering (labor) P200/day x 100 days	20,000.00
<b>B. Actual Planting</b>	
1. Hauling and transportation expense for seedlings	P 6,000.00
2. Outplanting	10,000.00
<b>C. Fencing</b>	P 11,840.00
<b>TOTAL/ha</b>	<b>P 69,040.00</b>

**Partners Roles and Responsibilities:**

**The Municipality of Sasmuan shall:**

- Identify the area to be reforested as well as the organized community to be tapped in the implementation of the reforestation project.
- Ensure the safety and security of all parties involved in the project especially while within the target project areas.
- Assign personnel to coordinate the project planning and implementation.

**The NGO/PO shall perform the following tasks:**

- Implement reforestation activities, as approved by the Corporate Sector Partner(s) taking all the necessary means to ensure a reasonably high survival rate of the planted seedlings;
- Hold regular general monthly meetings to discuss the progress of the project, and or the details and schedule of subsequent activities and to update its members and officers including the Corporate Sector Partner(s), regarding the project.
- In collaboration with concerned Parties shall conduct final assessment/evaluation of the Project site
- Assign a representative for project planning and implementation.

**The DENR CENRO/PENRO shall undertake the following activities:**

- Provide necessary technical assistance in all activities related to the Project.
- Spearhead the conduct of Information and Education Campaign (IEC) in the area, on matters related to coastal management.
- Provide support mechanism for the organized communities/people's organization (PO) especially in their linkages with other government agencies specially on other livelihood opportunities complementary to the project.
- In coordination with concerned Parties conduct the survey of the Project site.
- Assign a representative for project planning and implementation.

**The Corporate Sector Partner(s) shall provide the following:**

- Provide financial support for the reforestation project and ensure the appropriation of project fund/budget based on the approved project proposal and subsequent project accomplishment.
- In collaboration with concerned Parties shall conduct final assessment/evaluation of the Project site.
- Jointly implement with concerned agencies reforestation activities, in consultation/coordination with the affected communities.
- Assign personnel for project planning and implementation.

**Contact persons / Agencies:**

**Mr. Rodrigo Luna**  
Barangay Captain  
Brgy. Batang 2, Sasmuan, Pampanga  
Contact # 09262579829

**Rev. Reynaldo M. Calalang**  
President, Good Seed Foundation  
Contact # 09152062238

**DENR-PENRO/CENRO, PAMPANGA**  
Contact # 961-18-53  
# 455-02-36

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## Annex 4: CSR Opportunity Brief on Mangrove Reforestation in Bulacan

### Project Name:

Mangrove Rehabilitation in Obando, Bulacan

### Project Location:

The Project is located in Barangay Salambao, Obando, Bulacan.

### Project Objectives:

#### *General Objective:*

The mangrove reforestation project aims to rehabilitate, protect, preserve and properly manage the marine resources and coastal areas of the Municipality of Obando. It is necessary to avert the declining mangrove forest of the country and bring back the important economic and ecological function of mangrove resources.

#### *Specific Objectives:*

3. To provide a life support mechanism for marine species thus increasing fish stocks and fish catch of fisher folks of the Province.
4. To increase fish stocks and fish catch of individual members of the organization and other fisherfolks of the province.

### Project Details:

The project will reforest portion of the vast open coastal areas of the Municipality of Obando, Bulacan. An **approximated area of 7 has.** was initially surveyed.

With a spacing of 1 m x 1 m, the project needs 10,000 seedlings per hectare. The source of propagules shall be procured from other provinces like Bataan and Pangasinan.

The planting stock will be raised in a nursery until the desired height has been attained. The nursery will be established preferably adjacent to the planting site to reduce high cost of transportation from the nursery to the planting site.



**Mangrove Forests in Barangay Salambao, Bulacan**

To ensure high survival rate, species to be planted shall be of the same species that grow in the area. Native mangrove species in the area include the Pagatpat ( *Sonneratia alba* ), the Bakauan Lalaki (*Rhizophora apiculata*) and the Bakauan Babae (*Rhizophora muamunata*).

Protective fence made of bamboo poles and plastic nets will be put up along the perimeter of the plantation for the protection of newly planted mangrove seedlings.

**Project Cost:**

The following table shows the projected costs per hectare:

Item	Cost (PhP)
<b>A. Nursery Operation</b>	
1. Seedlings procurement (including freight and agri-bags)	P 13,200.00
2. Potting	8,000.00
3. Watering (labor) P200/day x 100 days	20,000.00
<b>B. Actual Planting</b>	
1. Hauling and transportation expense for seedlings	P 6,000.00
2. Outplanting	10,000.00
<b>C. Fencing</b>	
	P 11,840.00
<b>TOTAL/ha</b>	<b>P 69,040.00</b>

**Partners Roles and Responsibilities:**

**The Municipality of Obando shall:**

- Identify the area to be reforested as well as the organized community to be tapped in the implementation of the reforestation project.
- Ensure the safety and security of all parties involved in the project especially while within the target project areas.
- Assign personnel to coordinate the project planning and implementation.

**The NGO/PO shall perform the following tasks:**

- Implement reforestation activities, as approved by the Corporate Sector Partner(s) taking all the necessary means to ensure a reasonably high survival rate of the planted seedlings;
- Hold regular general monthly meetings to discuss the progress of the project, and or the details and schedule of subsequent activities and to update its members and officers including the Corporate Sector Partner(s), regarding the project.

- In collaboration with concerned Parties shall conduct final assessment/evaluation of the Project site
- Assign a representative for project planning and implementation.

**The DENR CENRO/PENRO shall undertake the following activities:**

- Provide necessary technical assistance in all activities related to the Project.
- Spearhead the conduct of Information and Education Campaign (IEC) in the area, on matters related to coastal management.
- Provide support mechanism for the organized communities/people's organization (PO) especially in their linkages with other government agencies specially on other livelihood opportunities complementary to the project.
- In coordination with concerned Parties conduct the survey of the Project site.
- Assign a representative for project planning and implementation.

**The Corporate Sector Partner(s) shall provide the following:**

- Provide financial support for the reforestation project and ensure the appropriation of project fund/budget based on the approved project proposal and subsequent project accomplishment.
- In collaboration with concerned Parties shall conduct final assessment/evaluation of the Project site.
- Jointly implement with concerned agencies reforestation activities, in consultation/coordination with the affected communities.
- Assign personnel for project planning and implementation.

**Contact persons / Agencies:**

**Mr. Armando de Guzman**  
 Municipal Planning and Development Coordinator  
 Municipality of Obando, Bulacan  
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## **Annex 5: CSR Opportunity Brief on Upland Reforestation in Cavite**

### **Project Name:**

Mt. Palay-Palay Upland Reforestation Project .

### **Project Location:**

Sitio Malauyas, Barangay Sapang, Ternate Cavite

### **Project Objectives:**

#### *General Objective:*

The upland reforestation project aims to rehabilitate and re-plant trees to the most denuded area of the park which is located at Sitio Malauyas, Brgy. Sapang Ternate Cavite.

#### *Specific Objectives:*

1. To develop and implement a one year plan that envisioned the protection and rehabilitation of the project site;
2. To ensure that partnership between the ICM Ternate Council, PAMB and CSR of PEMSEA in terms of funding and monitoring aspects; and
3. To reforest at least 3 hectares of Sitio Malauyas with a total of 7,500 propagules of indigenous trees, to preserve the ecological balance of the park.

### **Project Details:**

#### **Rationale**

Mts. PalayPalay/Mataas na Gulod Protected Landscape is the largest area of lowland forest closest to Manila as well as the only remaining forest in Cavite. The protected area is still considered a biologically rich in old growth forest and hosts several interesting forest-dwelling endangered animals more specifically birds and raptors (example are kites and endemic Philippines Falconet). In 1976, Mts. Palaypalay/Mataas na Gulod was formerly declared as a National Park by virtue of Presidential Proclamation No. 1594 and a component of NIPAS under Republic Act 7586 approved on June 1, 1992 covering an area of 4,000 hectares. But in 2007, upon the recommendation of the Secretary of DENR the said area was re-proclaimed as a "Protected Landscape" by virtue of Presidential Proclamation No. 1315 pursuant to NIPAS Act of 1992 signed by President Gloria Arroyo. With its new declaration the present total land area is 3,973 hectares. The 27 hectares that were taken out from the original size of 4,000 hectares fall in the category of a seascape.

The Province of Cavite being the recipient of population overspill of Metro Manila and being highly urbanized and industrialized province poses a threat to the ecological balance of the park. Some of the reported activities in the area are: cattle grazing, upland farming, charcoal making, collection of minor forest products and illegal cutting of trees that resulted to park's denudation and vanishing of wildlife.

The MENRO of Ternate and the ICM Division of PG-ENRO decided to propose the 3 hectares tree planting project in the denuded area of Mts. PalayPalay/Mataas na Gulod working hand-in-hand with partner local and provincial civic and government organizations to plant at least 7,500 propagules of indigenous trees to mitigate the heavy flooding occurred in the municipalities of Ternate and Maragondon.

Ternate is one of the nine (9) towns of Cavite that lies along the Manila Bay area. It is one of the biggest tourism destinations of the province because of its world class beach resorts like Caylabne Beach Resort and Puerto Azul Beach and Golf Course. The proposed 3 hectares tree planting project is located in one of the sitios of the park, which is Sitio Malauyas, Barangay Sapang Ternate. It is about 60 kilometers southeast of Manila and can be reached either by land or by sea transportation.

Based on the Circa Resource Basic Information Inventory (RBI) DENR 90's, the forest cover of the area is characterized by a mixed species of Akle, Molave, Kamagong, Red and White Lauan, and Guijo with diameters of 50cm to 60cm diameter breast height (dbh).

Within the protected landscape, the total area occupied by open canopy, mature trees is 538 hectares with 50% cover and the rest of the area is mixed brushland and grassland including patches of cultivated plants. The existing land use of the protected landscape as a whole is a forest reserve and reforestation project with occasional exploitations like kaingin and grazing, while adjoining areas in this northern, western, and southern sides consist of non-contiguous blocks of alienable and disposal lands. To date, a total of 697 hectares denuded portions have been subjected to reforestation.

The tree planting project is one way to rehabilitate at least 2 percent of the total denuded area of the park that is left to regain the lost habitat and vanishing populations of endangered species of flora and fauna. Likewise, during the past typhoon Milenyo and Ondoy, the nearby municipalities (Ternate and Maragondon) experienced heavy flooding and overflowing of Maragondon River. In this way, the Ternate ICM Council believed that reforestation program will help mitigate the heavy flooding not only in their host municipality but as well as with other neaby municipalities.

## **Project Components**

### **A. Development of a one-year plan**

The ICM Ternate Council through the help of PG-ENRO and PENRO will develop a one-year plan for the proper reforestation and monitoring of the proposed 3 hectares denuded area. Indicated also in the plan is the capacity building to increase awareness on the importance of the forest and strengthening of the Council for a more effective and efficient monitoring aspect. In addition, management and distribution of the requested budget will be properly identified also in the plan.

**B. Partnership between the ICM Ternate Council, PAMB and Corporate Sector and PEMSEA**

The ICM Ternate Council will have a strong collaboration with PAMB in terms of the specific site location and permit to adopt the area for the council. Likewise, partnership with the corporate sector for project support (funding) specifically for the propagules of indigenous trees and expenses during the planting activity.

**C. Reforestation in a 3-hectare forest area of Sitio Malauyas with a total of 7,500 propagules of indigenous trees.**

One of the proposed species of trees to be planted in the project site is Narra with a 4 x 4 meters a part. The site preparation especially the digging of soil will be prepared by the volunteers coming from the provincial civic organizations and Ternate ICM Council. It is expected to have 200 volunteers who will participate during the actual planting which is proposed to be on November or December of 2009.

**Project Cost:**

**A. Development of a one-year plan**

<b>Items</b>	<b>Amount</b>
<b>1. Meeting</b>	
Materials	5,000
Food	10,000
<b>Sub-total</b>	<b>15,000.00</b>

**B. Actual Tree Planting**

<b>Items</b>	<b>Amount</b>
7,500 propagules of narra x P30.00 each	225,000
200 volunteers x P155.00 per head (food)	31,000
<b>Sub-Total</b>	<b>256,000</b>

**Total Expenditures: P271,000.00**

## **Partners Roles and Responsibilities:**

### **The Municipality of Ternate shall:**

- Identify the area to be reforested as well as the organized community to be tapped in the implementation of the reforestation project.
- Ensure the safety and security of all parties involved in the project especially while within the target project areas.
- Assign personnel to coordinate the project planning and implementation.

### **The NGO/PO shall perform the following tasks:**

- Implement reforestation activities, as approved by the Corporate Sector Partner(s) taking all the necessary means to ensure a reasonably high survival rate of the planted seedlings;
- Hold regular general monthly meetings to discuss the progress of the project, and or the details and schedule of subsequent activities and to update its members and officers including the Corporate Sector Partner(s), regarding the project.
- In collaboration with concerned Parties shall conduct final assessment/evaluation of the Project site
- Assign a representative for project planning and implementation.

### **The Corporate Sector Partner(s) shall provide the following:**

- In collaboration with concerned Parties shall conduct final assessment/evaluation of the Project site.
- Jointly implement with concerned agencies reforestation activities, in consultation/coordination with the affected communities.
- Assign personnel for project planning and implementation.
- Provide financial support for the reforestation project and ensure the appropriation of project fund/budget based on the approved project proposal and subsequent project accomplishment.

## **Project Arrangements:**

The Project Proponent is the Ternate ICM Council through MENRO ( Municipal Environment and Natural Resource Office ).

Partner Organizations include the Sagip Kalikasang Dagat, Cavite Westpoint College, Los Panteros, SK Ternate, Anak ng Dagat and other members of the ICM Ternate Council

Collaborating agencies include the Integrated Coastal Management Division (ICM) of the Provincial Government and Natural Resource Office (PG-ENRO). Protected Areas Management Board (PAMB)

## CSR Brief on Hazardous Waste Management

### Background

The quantity of hazardous waste generation in the Philippines is increasing over the years. It is conservatively estimated that there are more than 200,000 tonnes of hazardous waste being generated in the Metro Manila area alone.

For generators of hazardous waste, there is a need to consider options for both reducing the quantity of waste that is being produced, and for dealing with it in-house. Some of these improvements will produce commercial as well as environmental benefits. However, inevitably, there will remain limited quantities of wastes and residues that cannot be dealt with properly at source. At the present time, there is no centralized hazardous waste facility in the Metro Manila area that can adequately manage the volume of toxic and hazardous waste being generated. The implication is that these wastes are finding their way into the air, soil, ground water, rivers and streams in the Manila Bay area. The resulting social, environmental and economic impacts of the contamination have been studied (e.g., Metro-Manila Toxic and Hazardous Waste Management Study, 1997; Reduction of Mercury and Heavy Metals Contamination Resulting from Artisanal Gold Refining in the Meycauayan, Bulacan River System, 2009), but to date there is no concerted action to provide the necessary facilities to address the problem.

It is therefore incumbent on all waste generators to continue to pursue adequate and proper treatment, storage and disposal facilities for toxic and hazardous waste. The aforementioned 1997 study that was financed by the EU recommended the construction of a facility to serve toxic and hazardous waste generators in the Metro Manila area, having a capacity of 160,000 tonnes per year. The cost was estimated at between 1,300 and 1,400 million Peso. It was further recommended that the facility be developed through the active participation of the private sector, including financing and operating the facility as a commercial venture.

One of the three major areas of concerns in the Operational Plan for the Manila Bay Coastal Strategy is *Water Pollution*. In the Manila Bay area, land and sea based pollution are both contributing to the degradation of its water resources and polluting its environment. Investment in hazardous waste treatment facility will greatly enhance pollution management in the industrial and commercial sectors of the Manila Bay economy.

### Objectives

The preparation of a hazardous waste management feasibility study will contribute to one of the objectives of the OPMBCS under the *Water Pollution* area of concern, to develop and implement toxic and hazardous waste management system. The ultimate goal is to protect the waters in Manila Bay and its tributaries (rivers and lake) and to ensure that they are safe for various uses (e.g., recreation, source of potable water, irrigation, and fisheries).

## Activities

To address the issue of a centralized hazardous waste treatment facility, the following program of activities are proposed:

- Updating of information on the generation of toxic and hazardous waste in the Manila Bay area, and the extent of management efforts, including minimization, recycling, exchange/reuse, recovery and treatment and disposal of such wastes;
- Conduct a feasibility study to determine the business viability of establishing a centralized hazardous waste treatment facility for the Manila Bay area, including potential areas for siting such a facility;
- Promotion of the proposed facility to identify interested and potential investors/financiers for such a facility;
- Conduct of EIA and issuance of environmental approval/certificates;
- Implementation of procurement process;
- Selection of private sector proponent or partner, for project;
- Issuance of contract for project.

## Roles and Responsibilities of Partners

The **Department of Environment and Natural Resources** will continue to focus primarily on implementing and enforcing the relevant legislation, since without it the commercial incentive to develop and operate a centralized facility will not exist. The DENR would also play a key role in the establishment of the centralized facility, including the siting and leading in the implementation of a solicited BOT project at the identified site.

The **corporate sector** will need to express interest in such a project and be prepared to work closely with development banks/project developers during the feasibility study. This may imply giving commitments to use the facility once it is constructed, since without an established client base, the necessary investment capital is unlikely to be forthcoming

**Development banks, donors and investors** will need to buy into the project, in order to and finance the feasibility study, having confidence in the government and corporate sector commitment to a centralized toxic and hazardous waste facility.

**PEMSEA** will assist in identifying/accessing sources of funding for the conduct of the feasibility study, as well as provide technical advice and support for the development and conduct of the feasibility study, the promotion of private sector participation in the project, and the selection of a private proponent/partner.

**Project Cost:** to be determined

**Project Duration:** 2 years

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