

<i>Project ID:</i> P059933	<i>Project Name:</i> PH - COASTAL MARINE
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<i>ICR Type:</i> Core ICR	<i>Report Date:</i> June 30, 2006

1. Project Data

Name: PH - COASTAL MARINE *L/C/TF Number:* TF-23302
Country/Department: PHILIPPINES *Region:* East Asia and Pacific Region

Sector/subsector: Roads and highways (47%); Irrigation and drainage (25%); Sub-national government administration (18%); Water supply (7%); Micro- and SME finance (3%)
Theme: Rural services and infrastructure (P); Decentralization (P)

KEY DATES	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 08/12/1998	<i>Effective:</i> 03/13/2000	03/13/2000
<i>Appraisal:</i> 07/05/1999	<i>MTR:</i> 09/16/2002	04/12/2004
<i>Approval:</i> 12/02/1999	<i>Closing:</i> 12/31/2002	12/31/2005

Borrower/Implementing Agency: Republic of the Philippines/Department of Environment and Natural Resources
Other Partners: Bureau of Fisheries and Aquatic Resources
Department of Agriculture and Fisheries-ARMM

STAFF	Current	At Appraisal
<i>Vice President:</i>	Jeffrey S. Gutman (Acting)	Jean Michel Severino
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2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: S
Sustainability: L
Institutional Development Impact: SU
Bank Performance: S
Borrower Performance: S

Quality at Entry: QAG (if available) ICR
S
Project at Risk at Any Time:

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

This Implementation Completion Report (ICR) describes the implementation experience of the Coastal and Marine Biodiversity Conservation (CMBC) Component of the Mindanao Rural Development Project (MRDP) which was supported by the GEF grant that closed on December 31, 2005. The ICR for the overall project, supported by the Bank loan that closed on December 31, 2004, is Report No. 32660 of June 28, 2005.

The main objective of the component was to mainstream marine and coastal biodiversity conservation in coastal zone development by: (a) establishing community-based management of marine protected areas; (b) strengthening local capacity to address marine ecosystem management issues; (c) enhancing the knowledge base for sound eco-system management; and (d) developing policy and action plans for marine biodiversity conservation and mainstreaming it into coastal development plans.

The global environmental objectives of the component were to conserve and restore globally important coastal habitats and related marine biodiversity in Mindanao by mainstreaming biodiversity and marine ecosystem conservation in community development and in the coastal fisheries sector. Many coastal regions of Mindanao have received little international, national or local attention to conserving natural marine resources. The GEF-assisted component was designed to further assist in creating sanctuaries and protected habitats for endangered species found in the area, including species of dugong and sea turtle. This component was designed to help to advance a model with broader applicability for mainstreaming biodiversity considerations in a sector with crucial social, economic and environmental dimensions throughout Mindanao (including the Autonomous Region of Muslim Mindano - ARMM), the Philippines and tropical regions in general. Through the implementation of the MRDP, the lessons learned from first phase activities would be applied to arrest degradation and restore coastal and marine biodiversity in subsequent phases. The subsequent phases would expand project implementation to include additional qualifying sites in the coastal provinces of Mindanao included in the project.

Assessment of Objectives

The Bank's over-arching mission is to help the Philippines in: (a) sustaining economic growth through sound macroeconomic policies; (b) strengthening public sector management; (c) strengthening infrastructure and facilitating private sector participation; (d) alleviating poverty and upgrading basic social services; and (e) supporting sustainable natural resource management. The linkages between marine biodiversity conservation, sustainable fisheries management and poverty alleviation are fully supportive of CAS objectives and are the foundation for all proposed project investments and GEF grant assistance. The objective of the GEF-assisted component, to foster community-based marine and coastal biodiversity conservation, was directly relevant and consistent with the Philippine's agenda that emphasizes natural resource conservation and sustainable management and it also fits with the Bank's mission to assist the country in meeting that objective.

The component was also consistent with the GEF Operational Strategy for Biodiversity and addressed GEF Operational Program Number 2 (Coastal, Marine, and Freshwater Ecosystems). It directly addressed

Operational Policy (OP) objectives (conservation and sustainable use), including *in situ* protection and sustainable use in vulnerable and threatened habitats. The component was consistent with the Conference of Parties for the Convention on Biodiversity (COP) guidance and the Jakarta Mandate in that it promoted conservation and sustainable use of vulnerable marine habitats and species by promoting community management and access to alternative livelihoods. It tested new models for conservation and management of marine areas in a region recognized as having some of the richest marine biodiversity in the world. The component responded to COP3 and COP4 guidance through capacity building of local institutions and communities and an eco-system approach to coastal management. It also focused on sectoral integration and economic incentives by linking conservation practices to development opportunities under the associated MRDP financing. The component attempted to mainstream coastal conservation into regional development by demonstrating that sound management practices will lead to restoration and recovery of marine habitats and species. It was expected that lessons learned would be replicated in other coastal areas in Mindanao in later phases of the MRDP project.

Coastal Resource Management (CRM) in the Philippines is guided by the principles embodied in the Constitution, the Medium-Term Development Plan (MTDP), the National Marine Policy and Agenda 21 prepared by the Philippine Council for Sustainable Development. Likewise, CRM projects must be consistent with the government commitments to international treaties and agreements such as the United Nations Convention on Environment and Development (UNCED), the Basel Convention, the Montreal Protocol, the United Nations Convention on the Law of the Sea (UNCLOS), the Convention on Biological Diversity (CBD) and the Convention on International Trade of Endangered Species (CITES). The country also has the National Biodiversity Strategy and Action Plan (NBSAP) and the Philippine Biodiversity Conservation Priorities (PBCP) which present the basis for the sites selected and the appropriateness of the approach applied.

3.2 Revised Objective:

The objectives of the component were unchanged throughout implementation.

3.3 Original Components:

The component had six sub-components. The estimated costs at appraisal included contingency provisions.

1. Resource Assessment Survey of Selected Conservation Sites (Total Cost US\$ 0.87 million; GEF US\$0.66 million):

The resource assessment survey was designed to collect and compile all relevant information on the biophysical features of the area, to compile inventories of flora and fauna, and to determine the endangered and threatened species that would serve as the basis for the initial protected area management plan.

2. Application of a Participatory Planning and Management Process for Identification and Development of Protected Areas (Total Cost US\$0.06 million; GEF US\$0.6 million):

Identification, selection, development and management of the protected areas were to be carried out through continued community participation.

3. Strengthening of Local Marine Resources Surveillance by Coastal Communities Linked to Existing Enforcement Agencies (Total Cost US\$0.09 million; GEF US\$0.09 million):

Stakeholders were to be trained on community-based surveillance in coordination with existing enforcement agencies, provided with communications equipment and boats, and oriented on the National Integrated Protected Areas System (NIPAS), the Local Government Code and the Fisheries Code.

4. Resource Monitoring and Evaluation Program (Total Cost US\$0.38 million; GEF US\$0.38 million):

Basic key indicators were to be identified and data collected to monitor, annually, the progress of biodiversity conservation, the recovery of damaged habitat, the effect of livelihood activities and the social impact of the project.

5. Assistance to the Development of Alternative Income Generating (AIG) Activities (Total Cost US\$0.10 million; GEF US\$0.10 million):

An non-governmental organization (NGO) was to be selected in close consultation with the concerned communities and local government units (LGUs) to help fishing communities in the identification and development of mostly water-based alternative livelihood activities that would encourage poor coastal fishers to refrain from using destructive fishing methods.

6. Training of Department of Natural Resources/Bureau of Fisheries and Aquatic Resources (DENR/BFAR) officers, LGU/NGO/PO staff and schoolteachers as trainers in sustainable marine and fisheries management (Total Cost US\$0.15 million; GEF US\$0.15 million).

Every level/sector of the community was to be educated on the benefits of marine biodiversity conservation, sustainable fisheries and optimal marine resource use. The training of the trainers was designed to include on-site investigations including diving at the project sites.

3.4 Revised Components:

The sub-components remained unchanged during the life of the project.

3.5 Quality at Entry:

Quality at Entry is rated as having been Satisfactory, based on the following: (a) the project objectives were consistent with the government's strategic plan for rural development, which aims to adopt a holistic and sustainable approach to rural development and natural resources management; (b) the objectives are closely aligned with the Bank's CAS (1996) which emphasized sustainable development and poverty reduction through sound natural resource management and environmental improvement; (c) project design incorporated lessons learned from other coastal resources management projects financed by the Bank. A community-based approach was adopted in the project design; (d) project preparation involved both inter-agency consultations for policy and planning and community participation; and (e) the design of the project was simple, flexible, technically sound and focused on two specific project sites where the stakeholders are provided assistance to manage the coastal resources, and fully addressed the Bank's safeguard policies.

The design of the sub-components under GEF financing for the first phase of the project was to focus on assisting activities in two provinces in Mindanao, Sultan Kudarat and Maguindanao, where the MRDP activities would also be implemented and could support coastal management. The first phase of the project

would also be used to work with communities at two sites that were selected *via* consultation during preparation of the component to formulate management plans for the protected areas.

Sub-Component	Cost	Rating
Resource Assessment Surveys	682,400.00	S
Community Organization	90,700.00	S
Strengthening Marine Surveillance	65,100.00	S
Monitoring and Evaluation	101,200.00	S
Assistance for AIG Activities	146,200.00	S
Training	132,500.00	S
Implementation Support	514,700.00	NR

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

The overall outcome of the component in achieving its objectives is rated as having been Satisfactory.

The CMBC component was able to meet its global objective of conserving and restoring globally important coastal habitats and related marine biodiversity in Mindanao by mainstreaming biodiversity and marine ecosystem conservation in community development and in the coastal fisheries sector as manifested by the following:

1. Participatory Establishment and Management of Marine Protected Areas (MPAs)

In Bongo Island, the MPA was established in record time following the process prescribed in the Fisheries Code. In Paril - Sangay, the MPA was declared by the LGU following the Local Government Code and has been endorsed by the RDC to DENR for its proclamation under NIPAS. Its official proclamation under NIPAS is taking time due to the long process involved and mid-stream changes in the approval/endorsement process. Both sites have formulated their MPAs through participatory processes, signifying the commitment of stakeholders to secure their rights to manage their resources. The contrasting experiences in the two sites show that the MPA establishment process in the Fisheries Code is less cumbersome and bureaucratic than that prescribed in the NIPAS.

2. Enhanced Community Resource Surveillance Linked with Enforcement Agencies

In Paril-Sangay, there is a strong acknowledgment, through a Memorandum of Agreement (MOA), by the Municipal Coordinating Teams (MCT), the Information and Education Campaign (IEC) Task Force, the Bantay Dagat/Maritime Police group/network, the People's Organizations (POs) and the Alliance of POs of their roles and responsibilities. A core group of volunteers has been provided basic training by the project in habitat assessment can be further trained and developed as a team that can be called upon to conduct regular monitoring and assessment of the MPAs. In Bongo Island, the MCT is functional and has established additional support systems with relevant stakeholders. Scientists and researchers provide information and evaluation assistance in both sites with greater engagements in Paril/Sangay. Some Bantay Dagat groups are operational and work in tandem with POs and barangay leadership in increasing participation and engagement in CMBC activities.

Community-based protection groups such as the Bantay-Dagat (fisheries wardens) and the Maritime Police are now actively patrolling and protecting the marine protected area, especially the “No-Take Zones” (NTZs). The local government through the Barangay Councils provides minimal logistic support, particularly gasoline and some necessities.

3. Increased Awareness and Mainstreaming of Marine Conservation into LGU Plans

Allocations have been made by the LGU for their counterpart support to the component and this is expected to continue after the GEF assistance has terminated. The proposed LGU allocation for the monitoring of project activities, protection of the MPA, and other CRM related activities has increased. The Kalamansig LGU has been actively negotiating with the United States Agency for International Development-funded Environmental Governance Project for its small grants in order to increase further the equity of the fishing and farming sectors in the municipality.

The Municipal Environment and Natural Resource Office (MENRO) has been created in Kalamansig which will be responsible for coastal resource management, solid waste management and forest management. The municipality of Parang has plans to set up the Coastal Resource Management Office.

At the start of the component, and based on social assessment survey, only 72 percent of people in Paril-Sangay and 42 percent in Bongo Island were aware of and appreciated the essence of biodiversity conservation. Towards the end of its life, based on a follow-up survey, these increased to around 91 percent and 93 percent, respectively.

4.2 Outputs by components:

The component is rated as having been Satisfactory.

The CMBC component was designed to support the development of mostly marine-based AIG sub-projects. This shifted to land-based AIG sub-projects during implementation because of the direction that the community-driven development (CDD) process took. The CDD process required intensive and sustained capacity-building in a "learning-by-doing" mode which the component was not able fully to provide. The AIG sub-component was expected to result in a list of viable and environment-friendly income-generating sub-projects that would address the poverty and natural resource degradation issues. This list included value-addition options, such as fish processing and eco-tourism. The approval and implementation of these sub-projects was based on the outcome of a thorough and transparent review process that would include an environmental analysis by the DENR and a selected NGO. The latter would also enable the targeted communities to develop proposals for grant support from the Community Funds for Agricultural Development (CFAD) component of the MRDP.

In terms of outputs, the component was able to achieve most of what had been targeted. The sub-components, activities and corresponding outputs produced were as follows:

1. Resource Assessment Survey of Selected Conservation Sites

This sub-component is rated as having been Satisfactory.

Expected major outputs in this sub-component included a resource inventory of the two sites and initial protected area management plans indicating the boundaries of the MPA and delineating the management zones with corresponding recommended management and conservation measures (e.g., imposition of closed

fishing periods for certain fish species, particularly during spawning season, the adjustments/replacement of certain fishing gears, and/or fishing techniques to conform to environmentally-friendly fishing strategies, and identification of additional sites for mangrove reforestation).

A participatory approach involving the communities and the LGUs was adopted in resource assessment surveys to provide on-the-job training to local stakeholders on the methods and techniques of resource assessment. Research and social assessment activities (RSA) were carried out in partnership with community resource groups and volunteers. The RSA was conducted by the TA Team, supported by DENR, Department of Agriculture (DA) institutions as well as concerned LGUs and communities. Through their active participation in the various studies, assessments, inventories and consultations conducted, identified representatives of the various communities have acquired more technical knowledge, information and confidence, enabling them to influence and draw more community members into CMBC. The *in situ* activities made them realize the importance of their active and positive involvement in the management of the natural resources in their area.

Through massive IEC, the project was able to foster, within the local communities, an appreciation of the importance of biodiversity conservation and protection. Results of the RSA were used as IEC materials that were translated into local dialects and presented to the wider community for better appreciation of the existing resource and social conditions and their implication.

The management plans for both sites were prepared in a highly participatory manner involving the local communities in all eight barangays covered by the component. The draft management plans for both sites were presented to various stakeholders for review and comments. Based on comments generated, adjustments were made on the delineation of the NTZs and some program components. Operational plans were formulated for both sites to translate the Management Plans into more detailed annual action plans.

2. Application of a Participatory Planning and Management Process for Identification and Development of Protected Areas

This sub-component is rated as having been Satisfactory.

The original plan was to recruit a local NGO, in consultation with communities and LGUs, to build awareness on marine biodiversity conservation in the communities and build their capacity to participate in the identification, development and management of protected areas. Sharing of experiences through cross visits was to be undertaken with sites where successful coastal marine management and marine protected area experience has led to improved biodiversity conservation and greater returns from fishing.

Paril-Sangay opted to adopt Republic Act 7586, otherwise known as the NIPAS Act of 1991, because it was a priority area for protection identified by DENR. Nine of the thirteen steps stipulated in the NIPAS Act leading to the proclamation of the proposed Paril-Sangay Protected Seascape were accomplished. At the start of CMBC implementation, Paril-Sangay was already at the sixth step of the NIPAS process. The Integrated Protected Area Plan (IPAP) was presented to the Regional Development Council (RDC-12) and was endorsed by majority vote. The draft proclamation was subsequently endorsed to the DENR Secretary through the Protected Areas and Wildlife Bureau for processing and national review. To strengthen the protection of the proposed MPA and to justify the demarcation of the NTZs and the establishment of buoys/markers and signages, the Municipal Council of Kalamansig has proclaimed the area as a Protected Seascape by virtue of Municipal Ordinance No. 4, Series of 2004 adopting the provisions of Republic Act 7160, the Local Government Code of 1991. The ordinance, however, still has to be signed by the mayor to become effective.

Bongo Island, covering six barangays, was proclaimed as a Marine Protected Area by virtue of a Municipal Ordinance adopting the provisions of Republic Act 8550, the Fisheries Code, and ratified by the Provincial Government of Maguindanao. For purposes of delineation as well as to strengthen protective mechanisms for the six fish sanctuaries/MPAs, buoys and signages were installed.

Protected area establishment under NIPAS is a time-consuming and tedious process that starts with community consultations and includes resource profiling and protected area suitability assessment, mapping and boundary delineation, census and registration of occupants, LGU and inter-agency endorsements, and initial protected area planning, and culminates in a Presidential Proclamation and Congressional legislation. RA 7160 and 8550 empower LGUs to establish fishery refuges and sanctuaries in municipal waters within their jurisdiction through local legislation employing the best available scientific data in consultation with concerned agencies and communities.

To sustain the protection and proper management of the MPAs, intensive IEC initiatives were undertaken by the component. Radio programs/plugs were sponsored to promote the component and biodiversity conservation in the area. IEC materials such as newsletters were printed and disseminated. Activities such as poster making and essay-writing contests were conducted in schools targeting elementary and high school children to inculcate the value of biodiversity. The sub-component also assisted the enhancement of the school curriculum to include environmental/coastal resource awareness.

With regard to the management and coordination process, MCTs were created in both sites to oversee site-level project implementation. The MCT for Bongo Island is chaired by the Municipal Planning and Development Officer and is composed of the Municipal Administrator, representatives from BFAR-ARMM, research institutions, NGOs/POs and the chairmen of the six barangays of Bongo Island. The mayor usually attends the MCT meetings to hasten the implementation of agreements reached. The MCT for Paril-Sangay is chaired by a Senior Agriculturalist from the Municipal Agricultural Office and is composed of the Municipal Environment and Natural Resources Officer, Municipal Budget Officer, Municipal Treasurer, Municipal Accountant and representatives from the DENR-CENRO XII-5B, research institutions, NGOs/POs and the chairmen of Barangay Paril and Sangay of Kalamansig. Although not a member of the MCT, the incumbent Municipal Mayor oversees the operations of the team.

3. Strengthening of Local Marine Resources Surveillance by Coastal Communities linked to Existing Enforcement Agencies

This sub-component is rated as having been Satisfactory.

Two major activities were planned under this sub-component: the training of stakeholders in community-based surveillance to complement existing agencies and the reorientation of the existing enforcement agencies on relevant laws (NIPAS, the Local Government Code, the Fisheries Code, etc.) and regulations. Strengthening the capabilities of enforcement agencies was expected with the installation of a community-based radio communications network in the protected area and the procurement of a boat to guard each of the two selected areas.

Local-level groups such as the Bureau of Fisheries and Aquatic Resources (BFARMCs), the Bantay Dagat Task Force, the MCT, the Inter-Agency Task Forces, and the Community-Based Intelligence Network were deputized and strengthened to undertake coastal protection and assist in the enforcement of laws and

regulations in the two sites. Members of the protection groups were either deputized as fish wardens, Bantay-Dagats and Community-based Intelligence Network by BFAR by virtue of RA 8550, LGU issuances, and Philippines National Police (PNP) accommodations. Training, provision of equipment (such as boats and communication facilities), and linking with the PNP, particularly the Maritime Group, operating in these areas have further enabled and given confidence to the local groups responsible for environmental protection and law enforcement. Agreements were forged with the Maritime Police covering both sites, establishing operating mechanisms in the protection of the MPAs.

Surveillance activities have led to the apprehension of illegal fishers, confiscation of gear, and filing of cases against violators. The Bantay Dagat groups in both sites are actively involved in the monitoring of blast fishing and other violations, particularly in the NTZs. Blast fishing and compressor fishing have been eliminated in the Paril/Sangay MPA and considerably reduced in Bongo Island from 10 blasts (in the baseline) to 3-5 per day. Bantay Dagat groups are also involved in the deployment of buoys, information drives, crown of thorns (COT) collection, clean-up activities and resource monitoring. There has been no recorded poaching of giant clams or turtle eggs and no reported large-scale cutting of mangrove, as a result of protection activities. The use of fine mesh nets in Paril/Sangay has been regulated by an ordinance limiting their use to a specific season.

4. Resource Monitoring and Evaluation Program

This sub-component is rated as having been Satisfactory.

Under this sub-component, basic key indicators were identified and data collected to monitor the progress of the conservation area in terms of biodiversity and the recovery of damaged habitat. Also, during the latter part of Phase 1, monitoring of other livelihood components, like mariculture of seaweeds, shellfish, and cage fish culture (independently or in combination), were undertaken to determine their impacts upon water quality.

Two annual resource impact assessments were undertaken separately for Paril/Sangay and Bongo Island for 2003 and 2004. These were conducted by the TA Team together with the stakeholders (community volunteers, Regional Project Management Offices (RPMOs), MCTs) using the results of the initial RSA as the baseline. In addition to the impact assessment studies conducted, water quality monitoring stations were installed to regularly assess water quality.

In Paril/Sangay, four resource monitoring activities were implemented at various times in 2004 concentrating on live coral cover survey, fish visual census, and seagrass/seaweeds in the NTZs. High school students from the Kalamansig High School in Sangay and other community resource volunteers participated in the activities. Aside from the monitoring of NTZs, a census of fishers and fishing practices was also conducted in October 2004 in preparation for the registry of fishers and gear as part of the Management Plan for the MPA. Catch per Unit Effort (CPUE) data is also regularly gathered from fishermen in both Paril and Sangay *barangays*. Special operations were conducted for the collection and eradication of the COT that have caused massive damage to coral in the MPA. Members of the MCT and community committed their time and resources to minimize the negative impact of these predatory starfishes to the coral reefs of the area. Turtle monitoring has identified Klid, Sangay as a turtle nesting site. Turtle tagging was initiated with one hawksbill and one green turtle tagged and released. Numerous sightings of marine turtles were monitored and recorded in the area. A video showing the "before" and "after" scenarios in the key sites was produced to be used by local schools, LGUs and research institutions.

Resource monitoring operations in Bongo Island consisted of intensive collection of COT in Barangay Limbayan and Tagudtungan, quantitative observations on the spawning and breeding periods of the Rabbit Fish, a survey of fishing gear and number of fishers, CPUE monitoring and intercept survey with community volunteers, marine turtle monitoring, regular coral and fish monitoring in two *barangays*, and follow-up training on seagrass and algae monitoring.

Despite the damage to corals by the COTs, fish in the NTZ and "take zones" (TZs) of both MPA sites showed an increasing trend with fish population increasing in density, species diversity and bio-mass, a promising sign of recovery and an expected response to protection. The CPUE for hook-and-line for demersal fish at the Paril-Sangay site has improved from 0.39 kg/man-hour in 2003 to 0.77 kg/man-hour in 2005, a 97.4 percent increase during the three-year period. In Bongo Island, the CPUE for hook-and-line for both demersal and pelagic fishes has been slowly increasing from 1.21 kg/man-hour in 2003 to 1.405 kg/man-hour in 2005. This means an increase in the fisherfolks' incomes from Php1,808.63 to Php3,570.88/fisherman/month and Php5,975.40 to Php6,538.88/fisherman/month for Paril-Sangay and Bongo Island, respectively. Although the CPUE data from the two sites are comparatively lower than in other MPAs, such as Apo Island, the significant increases display the positive effects of protection activities on livelihoods and incomes.

Data from 2003-2005 show that branching coral cover on the shallow areas (3 meter depth) of the NTZs at the Paril-Sangay site increased by 27 percent. However, in deeper areas (10 meter depth) a decrease by 47 percent from the baseline data of 14.25 percent was registered due to lack of equipment needed to collect COT at this depth. The same trend was observed at the NTZs in Bongo Island where branching coral cover in shallow areas showed an increase of 38 percent compared to the baseline data while in the deeper areas a decrease of 13 percent was registered.

5. Assistance in the Development of Alternative Income-Generating Activities

This sub-component is rated as having been Moderately Satisfactory.

The AIG sub-component was expected to result in a list of viable and environment-friendly income-generating sub-projects that would address the poverty and natural resource degradation issues. This list was expected to include value-addition options such as fish processing and eco-tourism. The approval and implementation of these sub-projects would be based on the outcome of a thorough and transparent review process that would include an environmental analysis by the DENR and a selected NGO. The latter would also enable the targeted communities to develop proposals for grant support from the Community Funds for Agricultural Development (CFAD) component of the MRDP.

The small number of AIG sub-projects being implemented (13 out of 30 proposals in both sites) consists of standard livelihood sub-projects (e.g., livestock raising, agricultural crop production, rice trading) that may not be sustainable because of low rates of return and a reduced opportunity for capital build-up. A majority of these were presented within three months of the project close *via* briefing during an supervision mission that then required subsequent review. There was a wide range of proposals, most of which had not had the proper analysis. The expected (and required) guidance and assistance from AIG experts was absent. Five of these AIG sub-projects (those in Bongo Island) are considered social projects (electrification using solar power or electric generators). The eight projects in Paril/Sangay consist of five goat-raising activities, and one each for agricultural crop production, ice-making and rice trading (which is handled by a women's group). The initial two goat-raising sub-projects are beginning to recover and the rice trading sub-project has started to repay its loan. The ice-making sub-project is not yet operational

because the freezer purchased from Davao is not functional.

From feed-back and observations made during field visits and consultations, the review process was not well-understood and results were questionable. The link between economic incentives, natural resource protection and effective management is hardly seen in the project's AIG sub-component. Another area for improvement is the weak monitoring system; the existing *barangay* extension workers could be trained on the AIG sub-component so that the monitoring of this can be incorporated in his/her work. However, an important accomplishment of the sub-component was the creation of two Alliances of People's Organizations in Paril-Sangay and on Bongo Island that were established for sustained management of the AIG program during and after the component implementation period. In lieu of an effective guidance document to support the AOPs, these nascent organizations, though, will need continued support from DENR-XII and the Kalamansig MENRO in Paril-Sangay and the BFAR-ARMM for Bongo Island to assure that they have the capacity to manage the program properly.

At least two of the AIG partners in Paril/Sangay expressed the need for closer monitoring and tracking of the livelihood sub-projects, citing the lack of a serious audit of the number of goats still undelivered and the number of goats missing in the course of the implementation of the AIG project. The POs also expressed the need for more technical assistance in most aspects of the AIG implementation (e.g., quality control of stock, management and technical training, negotiations, identification of more viable options and corresponding training, IEC for members, business planning and development, and marketing). The required TA for this sub-component was neither fully nor satisfactorily delivered. There was also a problem with procurement in terms of timely delivery and product quality.

The CMBC Project Appraisal Document (PAD) supported the development of mostly marine-based AIG sub-projects. This has shifted to land-based AIG sub-projects during implementation because of the direction that the CDD process took. The CDD process requires intensive and sustained capacity-building in a "learning-by-doing" mode which the component was not able fully to provide. The types and quality of proposals highlight the importance of AIG but more importantly emphasize the need for greater attention to social and institutional preparation.

6. Training of DENR/BFAR officers, LGU/NGO/PO Staff and School Teachers as Trainers in Sustainable Marine and Fisheries Management

This sub-component is rated as having been Satisfactory.

This sub-component involved educating all levels of the community in the benefits of marine biodiversity conservation, sustainable fisheries and optimal marine resource use. Those trained would serve as educators for fisherfolk, school age children, community leaders and other stakeholders. This training also included on-site investigations including diving at the project sites.

On the development of skills of communities and government staff in marine biodiversity conservation methods, training and in-country cross visits/study tours were conducted to hone the skills of communities and government staff (both at the LGU level and field level units of national government agencies) in marine biodiversity conservation. Some of the training conducted was on participatory coastal resource assessment (PCRA), SCUBA diving, underwater resource assessment, resource valuation and integrated coastal zone management plan preparation. Community volunteers were also engaged as under-studies in the conduct of RSA at the start of project implementation as well as in the impact assessments. There were about ten understudies engaged and trained in both sites within the project life who acquired basic

knowledge on the use of simple methods in coastal resources assessment. The community volunteers are expected to continue regular monitoring activities after the project life using the simple community-based monitoring and evaluation (M & E) kit developed by the TA team while the more scientific assessments will be carried out by staff from the LGUs, the DENR/BFAR-ARMM that were trained under the project, in coordination with the academe.

The component established links with institutions and agencies by inviting their representatives into the MCT and by involving members of the academe in the conduct of RSA at the start of project implementation. The Sultan Kudarat Polytechnic State College and the Mindanao State University - Gen. Santos City campus included the Paril Sangay area as practicum site for their students even at the middle of the project implementation. With this arrangement, continuous scientific assessment and recording is assured for the area even after the project life.

The numerous project meetings, seminars, planning workshops and other project activities have helped in providing insight, technical capability and an increasing sense of accountability to the LGU officials, as could be seen from the growing support accorded by the Local Chief Executives and the Municipal Government Officials. Indeed, the support has translated into financial counterparts allocated annually from the municipal budget and the integration of environment-friendly policies, strategies and management practices in local governance.

4.3 Net Present Value/Economic rate of return:

No economic analysis was carried out for the component or any part of it during appraisal.

4.4 Financial rate of return:

No financial analysis was carried out for the component or any part of it during appraisal.

4.5 Institutional development impact:

Local community awareness of the value of coastal and marine biodiversity conservation and protection was enormously heightened. Through their active participation in the various studies, assessments, inventories and consultations conducted, communities have gained a more technical understanding of their environment. The project enabled local stakeholders to appreciate the importance of their roles in effectively managing the resources of the area, and encouraged them to be involved in coastal and marine resources management and to stay away from destructive fishing practices.

The component increased the LGUs' level of awareness, appreciation, knowledge and skills on coastal and marine biodiversity conservation. This could be seen from the growing support accorded by the Local Chief Executives and the Municipal Government Officials. The project contributed to the establishment of the MENRO in Kalamansig and the possible creation of the CRMO in Parang. LGU support was translated into financial counterparts allocated annually from the municipal budget.

The component also enhanced the capacity of local staff of DENR and BFAR-ARMM to monitor and supervise coastal and marine biodiversity activities.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

1. Peace and Order

Peace and order problems existed in both sites, adversely affecting implementation of project activities. In Paril/Sangay, security measures had to be taken during the RSA in the upland areas due to the alleged presence of rebel group, and in Bongo Island security concerns caused the postponement of some site-specific activities.

2. Unexpected Changes in National Leaders in 2001 and 2004 Election

The unexpected change of the Philippine President in 2001 and the subsequent reorganization of various government departments delayed the start of project implementation and the mobilization of government counterpart funds. The national and local elections in May 2004 hampered project activities. Activities related to the protected area establishment of Paril/Sangay were deferred several times because of the May 2004 election. In Bongo Island, election and post-election conflicts stalled the implementation of planned activities during the first half of 2004.

3. Siltation and Sedimentation

From significant recovery in 2003, seagrass cover in Paril/Sangay has been badly damaged by sedimentation due to landslides and soil erosion brought about by logging in the watershed. Seagrass cover has decreased significantly over the baseline, highlighting its sensitivity to sedimentation. In Bongo, sedimentation is carried to the island by the Rio Grande River resulting from destructive agricultural land-use practices.

4. Difficulty in Finding Consultants for Bongo Island

The project experienced difficulties in finding the appropriate staff for the predominantly Muslim project site. Sensitivity to the beliefs and practices of particular communities is an important consideration in winning the trust of stakeholders in community-based resource management projects is a key requirement that was initially difficult to meet. This was subsequently resolved through the recruitment of a specialist with particular knowledge and experience in community organization. Following this, other issues arose with regard to communication between among the Bongo Island communities and the Regional Project Management Office. To resolve this impediment, the community organization specialist working in the Paril-Sangay project area, who was knowledgeable with establishing and strengthening these types of relations, was also engaged to work as the coordinator for the Bongo Island activities.

5.2 Factors generally subject to government control:

1. Delay in the engagement of consultants

The delay in the hiring of consultants severely affected project implementation and led to its extension for two years. Given the magnitude of the contract which required international selection and hiring and the length of time needed to complete the process (at least six months), starting the procurement process only

after the approval of the loan/grant automatically delayed project implementation. The processing period took much longer than expected (almost two years) due to changes in the composition of the Foreign Assisted Project Bids and Awards Committee and to the need to resolve issues. In Paril-Sangay, which used to be one of the sites of the DENR's Coastal Environment Program (CEP), the CMBC-RPMO proceeded to undertake a few project activities on its own to maintain the momentum created by the earlier coastal resources management activities under the CEP. This explains the relatively higher level of awareness and organization of the communities when the TA Team came in.

2. Bureaucratic Layers

Although field-level implementation is being led by the Department of Agriculture and Fisheries (DAF)-ARMM in Bongo Island, oversight and central level coordination is lodged with DA-BFAR. While such an arrangement was useful in ensuring technical and policy support from DA-BFAR as well as representation in central-level discussions regarding the project, it added a layer in terms of project operations particularly on administrative and financial concerns. Hence, flows of communication and financial disbursements were longer. Eventually, however, recognizing the need to speed up implementation, the protocol on communications was adjusted and a direct line of communication between DENR and DAF-ARMM established.

5.3 Factors generally subject to implementing agency control:

The issues raised above in 5.1.4 and 5.2.1 are also factors that can be attributed to the implementing agencies.

5.4 Costs and financing:

At appraisal, total incremental costs to be funded by the GEF grant were estimated at US\$1.25 million. The actual incremental costs incurred are estimated at US\$0.99 million. There was a considerable under-disbursement for the AIG sub-component, resulting from the complicated and centralized loan approval process. Substantial amounts of funds intended for the international study tour were not utilized. It should be noted that actual project costs in local currency terms are close to the PAD estimates. However, the project costs in US dollar terms are noticeably lower resulting from the Peso depreciation (from 40 PhP/US\$ at appraisal to a weighted average of 54 PhP/US\$ during implementation, a decline of 35 percent). The project implementation and disbursement delay was mainly caused by the over-optimistic implementation plan which was impeded by the slow process of international contract bidding of consultants (social mobilization), the lack of readiness of project financial systems and the lack of synergy between central and local government cycles. Detailed project costs and financing are shown in Annex 2.

6. Sustainability

6.1 Rationale for sustainability rating:

The overall sustainability of the achievement of the component is rated as Likely, based on the following:

Well-coordinated institutional arrangements established under the component contributed significantly to the progress achieved. The local governments in the two sites are visibly supportive of endeavors relating to coastal and marine ecosystems management. Aside from the budget allocations accorded to the MCT

for project monitoring, additional support for CRM endeavors was allocated under the MENRO for Kalamansig, Sultan Kudarat and under the Municipal Agriculture Office for Parang, Maguindanao.

The communities also expressed their support to sustain the protection of the established NTZs and to expand the achievements of the component in adjacent areas which may cause direct or indirect impacts. During meetings with stakeholders, the question was often raised of the possibility of funding the AIG sub-projects already submitted during Phase II implementation.

Under the Mindanao Rural Development Project –Adaptable Program Loan II, the CMBC component, now the Natural Resource Management (NRM) component, is expected to be expanded to include upland areas which have direct impact on the coastal zone. This will further contribute to the sustainability of marine biodiversity protection.

6.2 Transition arrangement to regular operations:

Members of the MCTs in both sites are not unified in their view as to what will happen to them now that activities under the component have ended. There is a need to clarify the role of the MCT and the functions of various members in order for them to function effectively and craft an operational plan. Other discussion- and decision-points are the overlaps and the gaps normal in “special projects” (externally-funded projects that have separate implementation structures, financial and management systems and time lines) that are brought into LGUs’ jurisdictions.

The Alliance of People’s Organizations (APOs) for both sites are tasked with providing assistance to their member POs and in supervising the AIG projects. Furthermore, the APOs is expected to receive loan repayments from the AIG beneficiaries and to reloan/re-invest the funds in environmentally friendly livelihood/economic activities. Even though training was given to the officers and staff of the AOP, they need more technical assistance and on-the-job coaching to be able to perform their roles and functions. It was observed that the AOPs in both Kalamansig and Parang were not yet functional and were not yet confident about their readiness to take on the responsibilities assigned to them. The AOP should be recognized by the Municipal Council and encouraged to actively participate in the Municipal Development Council so that concerns of the project communities can be considered in the deliberations on funding for development interventions.

It will be important for Memorandums of Understanding to be developed and signed as soon as possible for each that defines their respective responsibilities and the budget implications.

7. Bank and Borrower Performance

Bank

7.1 Lending:

Bank lending performance has been rated as Satisfactory. Preparation of the component was of good quality and on time. Missions were composed of staff and consultants of appropriate disciplines. The Task Manager and some mission members were involved in an earlier project of similar nature. Valuable sector background information and project implementation issues and lessons learned were helpful in the preparation (Section 3.5).

7.2 Supervision:

Bank performance in supervision is also rated as Satisfactory. In all, the Bank carried out ten supervision missions of the project at six-month intervals. When site visits were not included in the mission itinerary because of the peace and order conditions in the areas, the direct beneficiaries were gathered in workshop/consultation meetings. In addition to bi-annual missions, the Assistant Team Leader (ATL) based in Manila participated in project management meetings and conducted mini-missions. This facilitated the resolution of concerns needing Bank attention. There was a continuity of task managers and some mission members during the supervision stage. This proved helpful to the implementing agencies.

7.3 Overall Bank performance:

The Bank's overall performance is rated as having been Satisfactory. The Bank responded promptly to Borrower requests and adequately prepared and appraised the project within the normal time-frame. It provided regular and effective supervision and maintained close interaction with the Borrower. Taking into consideration the various implementation constraints, the Bank provided the appropriate extensions of the grant closing date so that the project could be completed within the available resources of the Borrower.

Borrower

7.4 Preparation:

The performance of the Borrower in project preparation is rated as Satisfactory.

During preparation, there was keen interest in the DENR at the national level, in Region 12, and by the ARMM to support the CMBC component of the MRDP. At the outset, the endorsement letter accompanying this proposal from the GEF Focal Point in the DENR demonstrated the government's commitment to the implementation of the component. Also, local staff of the CENRO of the DENR in the project area welcomed the possibility of assisting with the implementation of the component. Captains of the barangays and Fishers' Organization consulted during preparation looked forward to the potential opportunities that would come with the component toward improving resource use.

7.5 Government implementation performance:

The government's performance is rated as Satisfactory. The CMBC was implemented by the DENR through the Foreign-Assisted Special Projects Office (FASPO) as the lead agency and the DA through the BFAR as the cooperating agency. The Paril-Sangay site at Kalamansig, Sultan Kudarat was implemented by DENR-XII under the auspices of FASPO while the Bongo Island site at Parang, Maguindanao was implemented by BFAR-ARMM under the auspices of DA-BFAR. FASPO support, in terms of administrative and financial requirements, to project implementation was timely and adequate. MPA establishment and management followed the processes stipulated in the NIPAS, the Local Government Code and the Fisheries Code.

7.6 Implementing Agency:

The overall performance of DENR is rated as having been Satisfactory. It provided timely and effective supervision and maintained close interaction with the Bank and other implementing partners to ensure that funds were released on time and that up-dates on project implementation were shared. Project

implementation was hindered by the delay in the procurement of consultants services which resulted in the additional extension of one and a half years.

During implementation, there were delays with the approvals of AIG sub-projects. The poor quality of the proposals required several iterations that resulted in an excessively lengthy review process. This could have been at least partially resolved if the implementing agency had ensured a high-quality formulation and review of sub-project proposals.

7.7 Overall Borrower performance:

Based on the above, the overall performance of the Borrower is rated as Satisfactory. Despite some initial constraints in central-level coordination on site administration and supervision and financial disbursements, the two main project implementing agencies (DENR and BFAR) were fully committed to achieving the project objectives and the project's results and benefits have been substantially achieved.

8. Lessons Learned

Key lessons learned from the implementation of the component include:

1. A stronger link between resource conservation and management and local economic priorities (poverty alleviation and food security), through well-chosen conservation-oriented income-generating activities, is necessary to ensure success and sustainability.
2. Institution building at the community level in support of conservation and natural resource management initiatives is a time-consuming and challenging effort, especially for two project sites that have varied cultural orientations and traditions. It is beneficial to develop "champions" who will pursue the initiatives started under the project after assistance has terminated.
3. Culture should be understood and recognized, especially in Mindanao where feudal relations of the *Datu*(leaders) are still deeply-rooted and influential in defining power relations in the community. Practices, beliefs and traditions of multi-cultural/religious groupings in the area must be appreciated, respected and taken into consideration in the implementation of project interventions.
4. A conducive policy framework and effective institutional arrangement is essential to successful NRM. A way should be found to harmonize and reconcile pertinent sections of various laws (e.g., the Local Government Code, the Fisheries Code, the NIPAS, the Wildlife Act) on protected area establishment where government agencies have overlapping concerns. Establishing protected areas following the NIPAS process is time-consuming and challenging to LGUs in terms of procedural and time requirements - the costs are heavy and the amount of time needed to complete the process is beyond the three-year regular term of a local chief executive. Where there is more than one implementing agency involving different stakeholders, such as the CMBC, more effort should be made to create an atmosphere of respect, trust and cooperation among all actors through team building, continuous dialogue, and practice of transparency and consistency.
5. The key to effective and sustained implementation of projects is the employment of sustainable mechanisms from the start, especially at the municipal level, and, if possible, during the project design stage. This entails a comprehensive review of the LGU bureaucracy, and determination of existing

projects, units/projects that may be used as vehicles for the new project, so as not to create more layers and *ad hoc* teams. Project sustainability has a greater chance of prospering when, at the start, management is lodged within a regular office of the government. It may have been more strategic to strengthen the municipal planning office or the municipal ENR office where budget can be assured and activities are linked with local development planning. A multi-agency task force, such as the MCT, created solely for the project usually disbands by the end of the project because it is not organic to existing structures.

6. Marine biodiversity conservation should adopt an integrated and holistic approach. Siltation and sedimentation brought about by destructive agricultural land-use in the upland and forest areas that drain into the coast pose major constraints to the recovery of coral reefs, mangroves and seagrass beds.

9. Partner Comments

(a) Borrower/implementing agency:

The Borrower's Completion Report on the component has been included in Annex 8.

Comments were received from the Borrower on a draft of this ICR. Most of these comments were incorporated into the text, either by modifying or adding to it. The following comment was not acted upon:

"Can we add something on ... the AIG monitoring manual which was prepared towards the end of the project in an attempt to enable the communities through the AOP to monitor their AIG activities after the Project?"

(b) Cofinanciers:

There were no co-financiers of the component.

(c) Other partners (NGOs/private sector):

There were no other partners in the implementation of the component.

10. Additional Information

Annex 1. Key Performance Indicators/Log Frame Matrix

	Output/Reports Delivered
Resource/Social Assessment	RSA Report
Inventory of maps & information and initial mapping	- Training Modules/Training Doc.
Initial rapid appraisals and RSA Design	- Socioecono, Resource and Area Profile
Training Needs Assessment (TNA) and Training of Resource/Community Partners on RSA Survey	- Protected Area Suitability Assessment - Protected Seascape/marine Sanctuaries
Conduct of Comprehensive Field survey/studies	Identified/Proposed
Processing/Analysis of Field Survey Results	- Resource and thematic maps
Participatory Planning and Management	PASA Reports/Management Plans
Training & Strengthening of PAMB/FARMC	- Training/IEC Modules
Conduct of CO and IEC Activities	- CO Documentation
Planning sessions with stakeholders	- Documentation of Planning Session
Protected area delineation/zonation framework	- Protected Seascape/Marine Sanctuaries
Mapping/demarcation of management zones	- Identified/Proposed
Identification of Plan components and priority activities	- Draft Management Plans
Drafting of the Management Plan	- Draft Municipal Resolution/Proclamation
Strengthening local surveillance and networking	
Assistance in Training of Fish wardens and Forest Rangers	- Training modules/documentation
Assistance in drafting of brgy and municipal ordinances	- Draft ordinances
Assistance to Alternative Income Activities	
Preparation of guidelines for AIG implementation	- AIG Criteria/Guidelines
Assistance in AIG implementation	- Sub-project proposals/FS
Development of mechanism for monitoring progress of AIG	- Training Modules on AIGP and Training
M&E of the progress of AIG component	- AIGP monitoring results
Resource Monitoring and Evaluation	
Development of M & E system	- M & E system
Pre-test of M & E	- Database established
Establishment of data base	- Impact Assessment results
Training on RME	- Training Modules /Training Doc.

****.** Not defined in project document. Indicators here were developed in Inception report and have been used for M&E.

Annex 2. Project Costs and Financing

2A-1. Project Costs by Procurement Arrangements (Appraisal Estimate) /a:

(US\$ million equivalent)	Procurement Method				
	ICB	NCB	Other	N.B.F.	Total Cost
1. Goods under Part D of the Project 1/			0.130		0.130
			(0.130)		(0.130)
2. Consultant Services under Part D of the Project 2/			0.850		0.850
			(0.850)		(0.850)
3. Training, study tours and workshops under Part D of the Project 3/			0.120		0.120
			(0.120)		(0.120)
4. Incremental Operating Costs of DA for:					
(a) calendar year 2000, 2001 and 2002			0.007	0.05	0.057
			(0.005)		(0.005)
(b) calendar year 2003			0.007	0.05	0.057
			(0.005)		(0.005)
(c) calendar year 2004 and thereafter			0.007	0.05	0.057
			(0.005)		(0.005)
4. Incremental Operating Costs of DENR for:					
(a) calendar year 2000, 2001 and 2002			0.007	0.12	0.127
			(0.005)		(0.005)
(b) calendar year 2003			0.007	0.12	0.127
			(0.005)		(0.005)
(c) calendar year 2004 and thereafter			0.007	0.12	0.127
			(0.005)		(0.005)
4. Unallocated:			(0.116)		(0.116)
TOTAL			1.260	0.50	1.760
			(1.250)		(1.250)

NBF: Not Bank Financed

1/ National Shopping

2/ QCBS

3/ Direct Contracting

2A-2. Project Costs by Procurement Arrangements (Actual/Latest Estimate) /a:

(US\$ million equivalent)	Procurement Method				
Expenditure Category	ICB	NCB	Other	N.B.F.	Total Cost
1. Goods under Part D of the Project 1/			0.110		0.110
			(0.110)		(0.110)
2. Consultant Services under Part D of the Project 2/			0.710		0.710
			(0.710)		(0.710)
3. Training, study tours and workshops under Part D of the Project 3/			0.150		0.150
			(0.150)		(0.150)
4. Incremental Operating Costs of DA for:					
(a) calendar year 2000, 2001 and 2002			0.007	0.030	0.037
			(0.005)		(0.005)
(b) calendar year 2003			0.005	0.040	0.045
			(0.004)		(0.004)
(c) calendar year 2004 and thereafter			0.020	0.050	0.070
			(0.010)		(0.010)
5. Incremental Operating Costs of DENR for:					
(a) calendar year 2000, 2001 and 2002			0.009	0.300	0.039
			(0.006)		(0.006)
(b) calendar year 2003			0.005	0.050	0.055
			(0.003)		(0.003)
(c) calendar year 2004 and thereafter			0.006	0.050	0.056
			(0.004)		(0.004)
6. Unallocated:					
TOTAL			1.010	0.250	1.260
			(0.990)		(0.990)

NBF: Not Bank Financed

/a: 1/ Figures in parenthesis are the amounts financed by the GEF. All costs include contingencies.

2B. Project Costs by Components:

<i>COMPONENT (US\$ million equivalent)</i>	<i>At Appraisal</i>	<i>Actual</i>	<i>Percent of Appraisal</i>
<i>Resource assessment survey of selected conservation sites</i>	0.87	0.13	14%
<i>Application of a participatory planning and management process for identification and development of protected areas</i>	0.12	0.40	332%
<i>Strengthening of local marine resources surveillance by coastal communities linked to existing enforcement agencies</i>	0.10	0.14	137%
<i>Resource monitoring and evaluation program</i>	0.27	0.13	48%
<i>Assistance to the development of alternative income generating (AIG) activities</i>	0.23	0.15	64%
<i>Training of DENR/BFAR officers, LGU/NGO/PO staff, and school teachers as trainers in sustainable marine and fisheries management</i>	0.17	0.33	195%
TOTAL	1.76	1.26	72%

2C. Project Financing by Components:

<i>Component (in US\$ million equivalent)</i>	<i>Appraisal Estimate</i>			<i>Actual/Latest Estimate</i>			<i>Percent of Appraisal</i>		
	<i>Bank</i>	<i>Govt.</i>	<i>CoF.</i>	<i>Bank</i>	<i>Govt.</i>	<i>CoF.</i>	<i>Bank</i>	<i>Govt.</i>	<i>CoF.</i>
<i>Resource assessment survey of selected conservation sites</i>	0.66	0.21		0.10	0.02		15%	10%	
<i>Application of a participatory planning and management process for identification and development of protected areas</i>	0.09	0.03		0.31	0.09		342%	300%	
<i>Strengthening of local marine resources surveillance by coastal communities linked to existing enforcement agencies</i>	0.06	0.04		0.10	0.04		163%	100%	
<i>Resource Monitoring and evaluation program</i>	0.17	0.10		0.09	0.04		53%	40%	
<i>Assistance to the development of alternative income generating (AIG) activities</i>	0.14	0.09		0.11	0.04		78%	44%	
<i>Training of DENR/BFAR officers, LGU/NGO/PO staff, and school teachers as trainers in sustainable marine and fisheries management</i>	0.13	0.04		0.29	0.04		223%	100%	
<i>Total</i>	1.25	0.51		0.99	0.27		80%	53%	

Annex 3. Economic Costs and Benefits

Not applicable

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating		
	Month/Year	Count	Specialty	Implementation Progress	Development Objective
Identification/Preparation					
	02/21/1999	2	Task Team Leader, Marine Biodiversity Specialist		
		3	Task Team Leader, Marine Biodiversity Specialist, Social and Community Development Specialist,		
Appraisal/Negotiation					
	07/05/1999	3	Task Team Leader, Institutions Specialist, Marine Biodiversity Specialist		
Supervision					
	02/12/2000	4	Task Team Leader, Institution Specialist, Procurement Officer, Finance Officer	S	S
	08/02/2000	3	Task Team Leader, Procurement Officer, Social Development Specialist	S	S
	02/26/2001	2	Task Team Leader, Institution Specialist	S	S
	02/28/2002	5	Task Team Leader, Institution Specialist, Procurement Officer, Finance Officer, Social Development Specialist, Sr. Anthropologist	S	S
	09/11/2002	5	Task Team Leader, Institution Specialist, Procurement Officer, Finance Officer, Social Development Specialist, Sr. Anthropologist	U	S
	02/10/2003	4	Task Team Leader, Operation Officer, Environmental Specialist, Financial Officer,	U	S
	06/23/2003	4	Task Team Leader, Operation Officer, Social Scientist, Marine Biologist	S	S
	12/09/2003	3	Task Team Leader, Operation Officer, Social Scientist	S	S
	04/12/2004	3	Midterm Review: Task Team Leader, Operation Officer, Finance Officer	S	S

ICR	08/18/2004	2	Task Team Leader, Operation Officer	S	S
	02/07/2005	1	Operation Officer	S	S
	10/11/2005	4	Task Team Leader, Financial Officer, Operation Officer, Procurement Officer		
		3	Mission Leader, Marine Biologist, Intuitional Specialist		

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ ('000)
Identification/Preparation		20,744.58
Appraisal/Negotiation		-
Supervision		158,435.64
ICR		12,345.61
Total		191,525.83

Note: The amount for Identification/Preparation is total amount for Lending that includes Appraisal/Negotiation.

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	<u>Rating</u>				
<input type="checkbox"/> <i>Macro policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Sector Policies</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Physical</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Financial</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Institutional Development</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Environmental</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA

Social

<input type="checkbox"/> <i>Poverty Reduction</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Gender</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Private sector development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Public sector management</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA

Socio-economic Benefits

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance

Rating

- | | | | | |
|--------------------------------------|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input type="checkbox"/> Lending | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Supervision | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Overall | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

6.2 Borrower performance

Rating

- | | | | | |
|--|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input type="checkbox"/> Preparation | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Government implementation performance | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Implementation agency performance | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input type="checkbox"/> Overall | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

Annex 7. List of Supporting Documents

1. GEF Project Brief
2. Mid-Term Review Supervision Report March 2000
3. Government ICR
4. MRDP I ICR

Additional Annex 8. Borrower's Completion Report

PROJECT COMPLETION REPORT

I. Basic Project Data

Project Name: Mindanao Rural Development Project –
Conservation Component Coastal and Marine Biodiversity

Grant Number: TF 023302-PH

Country/Department: Philippines

Region: South East Asia

Sector/Sub-sector: Biodiversity

Date of Grant Agreement: December 14, 1999

Original Closing Date: June 30, 2003

Extension: December 31, 2005

Grantee : Government of the Philippines

Executing Agency: Department of Environment and Natural Resources

Other Partners: DA-Bureau of Fisheries and Aquatic Resources
Department of Agriculture and Fisheries – ARMM

II. Principal Performance Ratings: Satisfactory

III. Assessment of Development Objectives

A. Objectives

The overall objective of the long-term Mindanao Rural Development Program (MRDP) is to reduce poverty and ensure food security for the rural poor and indigenous communities in 25 provinces of Mindanao through the implementation of better-targeted agricultural and fisheries-related rural development and biological diversity conservation programs and through improved institutional, technical, management and financial capabilities and systems of participating local government units (LGUs). The Program will be supported by a series of four Adaptable Program Loans (APLs), the first of which has been completed in CY 2004. One of the four program components is the Coastal and Marine Biodiversity Conservation (CMBC) funded by the Global Environment Facility (GEF) with the World Bank (WB) as the Implementing Agency, which under the first phase (CMBC 1) was implemented under a parallel co-financing arrangement. The underlying concept for including this component under the MRDP is to derive experiences that will show that good coastal and marine resources management can simultaneously conserve and protect biodiversity and increase fisheries productivity.

The purpose of the CMBC is to promote coastal and marine biodiversity conservation in, and sustainable use of the coastal waters of Mindanao. CMBC 1 piloted initiatives that were geared towards the empowerment, capacitation and motivation of local communities, LGUs and other stakeholders in the barangays of Paril and Sangay, both in Kalamansig, Sultan Kudarat, and in the island of Bongo located in the municipality of Parang, Maguindanao in line with the development and sustainable management of the coastal and marine habitats within established municipal boundaries. Specific outputs of the project are: 1) establishment of marine protected areas at the two pilot sites; 2) development of sub-projects to provide alternative income generating activities for coastal communities; and 3) strengthening of community-based surveillance and protection, and the capacity of coastal communities in the enforcement of CRM laws and regulations; and 4) development of the skills of communities and government staff in marine biodiversity conservation methods.

The CMBC was implemented by the DENR mainly of its experience under its Coastal Environmental Program which dealt mainly with the management and protection of coastal areas. Likewise, under this component, the pilot areas were foreseen to be proclaimed as protected areas following the provisions stipulated in the NIPAS Act which is under the purview of the DENR.

In terms of the Government's priorities, the objectives of the CMBC, both at the purpose and output levels, remains relevant. These are consistent with the thrust on biodiversity conservation as provided for in the Medium Term Philippine Development Plan as well as in the General Plan of Action of the Department of Environment and Natural Resources. Further, these directly support the implementation of the National Integrated Protected Areas System Act, the Fisheries Act, the Local Government Act and the Wildlife Act and contribute to the Philippine Government's compliance with its commitments and obligations under the UN Convention of Biodiversity Conservation.

Vis-à-vis the development objective of the MRDP, the objectives of the CMBC are vital in ensuring long-term sustainability of the gains achieved under the main Program in terms of promoting poverty alleviation and ensuring food security.

The objective of the project has not undergone any adjustment.

B. Components

CMBC-1 has six components. These and their corresponding activities are briefly described below.

1. Resource assessment survey of selected conservation sites (Total Cost US\$ 0.87million; GEF US\$0.66 million)

The resource assessment survey was intended to be one of the first activities to be undertaken where resource profiling would include the collection and compilation of all relevant information on the biophysical features of the area, inventory flora and fauna and determination of endangered and threatened species, in addition to those already identified prior to the Project. An initial area plan would be developed that includes the demarcation of protected area and delineation of the different management zones. Under this plan, initial management measures based on the resource inventory would be recommended. These community-based initiatives would include, but not be limited to, the imposition of closed fishing period for certain fish species, particularly during spawning season, the adjustments/replacement of certain fishing gears and/or fishing techniques to conform to environmentally friendly fishing strategies. These assessments and plans would be coordinated by the Ecosystems Research and Development Sector (ERDS)

of the DENR with assistance from national and international consultants. During this phase, identification of additional sites for mangrove reforestation is among the activities that would be included.

In the actual project implementation, adjustments had to be made in this component to make it consistent to the participatory approach adopted for the Project. Instead of focusing just on the bio-physical resources, assessment was also conducted on the socio-economic condition in both sites.

2. Application of a participatory planning and management process for identification and development of protected areas (Total Cost US\$0.06 million; GEF US\$0.06 million)

It is expected that local NGOs would be recruited to work toward awareness building about the threats to marine biodiversity and resultant adverse impacts to fishers' livelihoods. For the first phase of the project, the two sites noted above that were selected through stakeholder consultation would be planned in detail, developed and managed through continued community participation. To augment local knowledge and experience, representatives from Peoples Organizations (PO) in other areas in the country (e.g., Bais Bay of Dumaguete, Apo Island, Palompon Leyte, etc.), where successful coastal marine management and marine protected area experience has concurrently led to improved biodiversity conservation and greater returns from fishing, would be invited to visit the POs at the project sites to share their experiences and how obstacles were overcome. Some representatives from the MCBC sites would also visit the areas of the Philippines where community-based good management practices have been demonstrated.

During the actual implementation of the Project, the TA and the RPMOs, instead of an NGO, undertook awareness building. This was basically to reduce the administrative work entailed in engaging another group to undertake project activities which could delay project implementation. Further, the RPMOs had the capability to undertake IEC work for the Project.

3. Strengthening of local marine resources surveillance by coastal communities linked to existing enforcement agencies (Total Cost US\$0.09 million; GEF US\$0.09 million)

Two activities may be undertaken, the training of stakeholders in community-based surveillance to complement existing agencies and the reorientation of the existing enforcement agencies on newly passed laws (NIPAS, Local government Code, Fisheries Code, etc.) and regulations. Strengthening of the capabilities of enforcement agencies is expected with the installation of a community-based radio communications network in the protected area and the procurement of a chase boat (equipped with binoculars and cameras with telephoto lenses) to guard each of the two selected areas.

Adjustments had to be made in the implementation of this component particularly with regards to the training of Bantay Dagat members. In the conceptualization of the Project, it was assumed that training of Bantay Dagat would be eligible for GEF funding. During the project and as preparations for this activity were being made, it was learned that this was not so. Hence, considering that the Bantay Dagat is the mechanism which engages coastal communities in coastal resources protection and links them to enforcement agencies, the trainings were pursued but utilizing GOP counterpart funds.

4. Resource monitoring and evaluation program (Total Cost US\$0.38 million; GEF US\$0.38 million)

Under this component, monitoring would be undertaken by the Ecosystem Research and Development Sector (ERDS) of the DENR on a yearly basis. Assistance would be provided to the ERDS by national and international consultants. Basic key indicators would be identified, and data would be collected to monitor the progress of the conservation in terms of biodiversity and to monitor the recovery of

damaged habitat. The acquisition of monitoring equipment built into the project would improve the monitoring capability of the ERDS. Also, during the latter part Phase 1, monitoring of other livelihood components like mariculture of seaweeds, shellfish, and cage fish culture (independently or in combination) may also be undertaken. Impacts upon water quality would also be assessed and assisted by the project.

A modification in this component is the involvement of the communities and other stakeholders, in addition to ERDS, in the conduct of the impact assessment. Likewise, social impact of the Project was given attention.

5. Assistance to the development of alternative income generating (AIG) activities (Total Cost US\$0.10 million; GEF US\$0.10 million)

This component would be specifically targeted to benefit those involved in livelihoods that are particularly destructive to the marine environment. It would also be complemented by Community Funds for Agricultural Development Component mentioned above. In this component, the selected NGO (who would be identified in close consultation with the concerned community and LGUs) would help fishing communities in the identification and development of mostly water-based alternative livelihood activities. The main target group would be those poor coastal fishers who practice destructive fishing techniques. Opportunities for AIG activities include crab fattening, seaweed culture (possible improvement of existing culture techniques and technology), combination of fish cage with seaweed and/or bivalve culture and the transplantation of giant clams (*Tridacna* sp.) Similarly developmental skills in fish processing may improve products and, therefore, give value added to the fish produced. Bee keeping is another option that can be conducted, particularly in the vicinity of mangroves. For all activities proposed for grant assistance under this component, an environmental analysis would be conducted by the DENR/NGO in advance of approval and implementation, showing each activity would be environmentally benign. Ecotourism, though considered, may not be a demand-driven option during the first three-year phase of the project due to instability in the area. The NGO would also assist their respective communities with the preparation of proposals for grant support from the CFAD of the MRDP, following the general guidelines for the project. This capacity building would ensure that biodiversity is mainstreamed in coastal development by providing local communities access to development funds for biodiversity-friendly initiatives.

The consultant which, technically, can be considered as also a non-government entity was engaged to provide assistance in the identification and development of AIG projects as well as in the procurement of the required inputs, during project implementation since there were no site-based NGOs which had the required expertise and enough experience in developing AIG activities. Likewise, the selection and engagement of another group to handle the AIG could mean a delay in implementation since this would have to be done following the Bank guidelines. Towards the end of the Project however, site-based NGOs, i.e., the Alliance of POs in each of the sites were organized and capacitated to continue providing assistance to and overseeing AIGs initiatives after the project life.

6. Training of DENR/BFAR officers, LGU/NGO.PO staff, and schoolteachers as trainer in sustainable marine and fisheries management (Total Cost US\$0.15 million; GEF US\$0.15 million).

Those trained would be educators for fisherfolk, school age children, community leaders and other stakeholders in the vicinity of sites selected for assistance under the project. This component would involve educating all levels of the community in the benefits of marine biodiversity conservation, sustainable fisheries, and optimal marine resource use. The training of the trainers would be conducted at one of the higher-level education institutions and institutes that have a suitable curriculum on coastal resources management. Those trained through these sessions would subsequently conduct workshops and lead

classes on the information learned. These workshops would be conducted after the trainer consults with the communities on the condition of their respective coastal resources. From this knowledge base, the trainer would apply the technical information obtained from his/her training courses on marine biodiversity conservation and coastal resource management. This training could also include on-site investigations including diving at the project sites.

IV. Achievement of Objectives and Outputs

A. Achievement of Objectives

The CMBC was able to meet its purpose of promoting coastal and marine biodiversity conservation in, and sustainable use of the coastal waters of Mindanao as manifested by the following:

1. At the start of the project, only 72% in Paril-Sangay and 49% in Bongo Island are aware and appreciate the essence of biodiversity conservation while at the end of its life, these increased to around 91% and 93%, respectively.
2. The catch per unit effort (CPUE) for hook and line for demersal fish at the Paril-Sangay site has improved from 0.39kg/man-hour in 2003 to 0.77kg/man-hour in 2005 or a 97.4% increase during the 3-year period. The significant increase in CPUE maybe attributed to the demersal fishes coming from the deeper parts of the MPA. In Bongo Island, the CPUE for hook and line for both demersal and pelagic fishes has been slowly increasing from 1.21kg/man-hour in 2003 to 1.405kg/man-hour in 2005. The latest data showed an increase of 9.43% for 2004-2005. In peso terms, this means an increase in the fisherfolks income from Php1,808.63 to Php3,570.88/fisherman/month and Php5,975.40 to Php6,538.88/fisherman/month for Paril-Sangay and Bongo Island, respectively. Although the CPUE data from the project sites are comparatively lower than in other MPAs such as Apo Island, the significant increase displays the possibility that these areas could still be developed for the purpose. Overall, the improvement in both areas is attributed mainly to the reduction of destructive fishing activities which notably decreased by almost 90% in Paril-Sangay and 89% in Bongo as a result of the Project.
3. Data from 2003-2005 showed that branching coral cover on the shallow areas (3m depth) of the “No-Take-Zones” (NTZs) at the Paril-Sangay site increased by 27%. However, in deeper areas (10m), a decrease by 47% from the baseline data of 14.25% was registered. The same trend was observed at the NTZs in Bongo Island where branching coral cover in shallow areas showed an increase of 38% that of the baseline data while in the deeper areas, a decrease of 13% was registered. The decrease of branching coral cover in the deeper areas of the NTZs in both sites maybe attributed to the crown of thorns (COTS) starfish infestation observed in early 2004 and other environmental disturbances such as sedimentation and siltation.
4. Based on the latest survey at the Paril-Sangay site in 2005, both the NTZs and “Take Zones” (TZs) showed an average live hard coral (LHC) cover that can be generally classified as “Fair”. The Donauan NTZ (10m depth) posted the highest average LHC cover at 56.5% followed by the Simsiman TZ with 42.5%, and Tayakan NTZ at 40.83%. For Bongo Island, the NTZs had average LHC cover ranging from 23.2% to 35.5% for each station. The deep NTZ station had a pooled average of 24.44%, while shallow NTZ stations registered 29.64%. Conversely, the LHC cover in deep and shallow stations along the TZs recorded a pooled average of 26.34% and 20.36%, respectively. It may be noted however that the increase is not substantial and this is due mainly to the slow growth rate of corals and the existence of the crown of thorns in the area.

5. In terms of local financial support, allocations have been made by the LGU for their counterpart support to the Project and this is expected to continue even after the GEF assistance has terminated. Indeed, the proposed LGU allocation for the monitoring of project activities, protection of the MPA, and other CRM related activities has increased considerably.

6. Community-based protection groups such as the CBIN/Bantay-Dagat in partnership with the Maritime Police are now actively patrolling and protecting the marine protected area especially the “No-Take Zones”. Minimal logistic support, particularly gasoline and some necessities are provided by the Local Government through the Barangay Councils.

In terms of outputs, the Project was able to achieve all that have been targeted. The components, activities and corresponding outputs produced are as follows:

1. Resource assessment survey of selected conservation sites (Total Cost US\$ 0.126 million; GEF US\$0.101 million)

This component was carried out to generate comprehensive baseline information that will provide the biophysical and social bases for management of the marine protected areas in the Paril-Sangay and Bongo learning sites and at the same time, to serve as the venue for the initial capacitation and involvement of stakeholders in the management of their area.

The landscape cum oceanographic approach was employed as the general assessment framework of the RSA. This approach combined and highlighted the interrelationship between the biophysical environment and the social dimension that influences human activities impacting on the environment. Specific information generated as follows:

- a. In the biophysical assessment, condition/degree of disturbance in the ecosystems both coastal and forest, the status and value, both ecological and economic, of the species existing therein and, the areas of ecological processes critical in maintaining biodiversity in the area were identified;
- b. In the social assessment, demographic information such as population and population trends, economic activities and anthropogenic activities affecting the environment were likewise established.

The RSA was conducted by the TA Team (i.e. OIDCI/REEC/SEARCA/SUAKCREM) engaged for the CMBC together with understudies from DENR-12, BFAR-ARMM, the academe, the concerned LGUs and the communities. This sub-component started with the identification and delineation of project boundaries with the stakeholders at the forefront to ensure common understanding on the area covered. It was then followed with collection and assessment of information on the biophysical and social attributes of the two project sites using secondary and primary sources.

In gathering and analyzing data from primary sources, various scientific methods were employed. Primary information collected was then supplemented with secondary information gathered from the local inhabitants.

Terrestrial Environment

For flora, investigation was done using a 100-meter transect in a combination of cruising techniques in areas sampled. Elevations in areas sampled were also included. Trees were measured at diameter breast

height (dbh) using diameter tapes while height was estimated. For herpetofauna, the cruising and plot sampling methods were used while for avifauna and bats, observations and the mist net method were used. For mammals, live traps and snap traps were used.

Coastal/Marine Environment

The assessment of the water quality was done with the establishment of fifteen water quality sampling stations set up in both sites. Corals were assessed using the line-intercept transect method while reef fishes were assessed using the fish visual census method. Seagrass/seaweeds and algae components were measured using the modified transect-quadrat method. Baseline data for the catch per unit effort (CPUE) was derived by following the fishers and gathering data on the fishing gears used, fish identification, size, weight, and number of hours spent in fishing from December 2002 to January 2003.

Social Assessment

The Participatory Resource Systems Assessment Method was used to generate information on the social aspect of the two sites. Specific tools and techniques employed were household surveys, focus groups discussions/unstructured group interviews, interview of key informants. Information generated using said tools were complimented by secondary data from published and unpublished documents such as barangay development plans and NSO-NSCB publications.

On the establishment of marine protected areas, Paril-Sangay has opted to adopt Republic Act 7586, otherwise known as the National Integrated Protected Area System or the NIPAS Act of 1991. Indeed, 9 of the 13 steps stipulated in the NIPAS Act leading to the proclamation of the proposed Paril-Sangay Protected Seascape were accomplished. The Integrated Protected Area Plan (IPAP) was presented to the Regional Development Council (RDC-12) and was endorsed by majority vote (25-5). The draft proclamation was subsequently endorsed to the DENR Secretary through the Protected Areas and Wildlife Bureau for processing and national review, and hopefully endorsed to the Office of the President for the Presidential Proclamation. In anticipation, the LGU of Kalamansig has proclaimed the area as a Protected Seascape by virtue of Municipal Ordinance No. 4, Series of 2004 adopting the provisions of Republic Act 7160, otherwise known as the Local Government Code of 1991, to strengthen the protection of the proposed MPA and to justify the demarcation of the NTZs and the establishment of buoys/markers and signages. In Bongo Island, the project site, involving 6 barangays, was proclaimed as a Marine Protected Area by virtue of a Municipal Ordinance adopting the provisions of Republic Act 8550, otherwise known as the Fisheries Code of the Philippines, and ratified by the Provincial Government of Maguindanao. For the purpose of delineation as well as strengthening protective mechanism for the six (6) fish sanctuaries/MPAs, buoys and signages were installed to serve as guide and likely as a warning device.

Tangible outputs of the component are the Resource and Social Assessment Report, draft presidential proclamation for the Paril-Sangay site, local ordinances for the marine protected areas in both sites and Resource Management Plans, also for both sites. The management plans were prepared in a highly participatory manner involving the local communities in all 8 barangays covered by the Project (2 in Kalamansig; Paril and Sangay, and 6 in Bongo Island, Parang; Tuca-Maror, Limbayan, Datu Macarimbang, Litayen, Tagudtungan and Kotongan in Bongo Island, Parang) in which gender concerns were mainstreamed in the management process. Implementations of the plans started on the last year of the Project.

2. Application of a participatory planning and management process for identification and development of protected areas

(Total Cost US\$ 0.398 million; GEF US\$ 0.312 million)

To sustain the protection and proper management of the MPAs, high level of awareness and appreciation among all project stakeholders is recognized to be a key ingredient. Hence, intensive IEC initiatives were undertaken by the Project. Radio programs/plugs were sponsored to promote the Project and biodiversity conservation in the area. IEC materials such as newsletters were printed and disseminated. Activities such as poster making and essay writing contests were conducted in schools targeting the elementary and high school children with the end view of inculcating in their minds at the early stage of the value of biodiversity. It may be worth mentioning that as a result of the IEC conducted by the Project, a jingle was composed for the CMBC in Paril Sangay site. The high school situated in the site has likewise organized a CMBC club.

With regard to the management and coordination process, Municipal Coordinating Teams (MCT) were created in both sites to oversee site-level project implementation. The MCT for Bongo Island is chaired by the Municipal Mayor himself and is composed of the Municipal Planning Officer, Municipal Administrator, and representatives from BFAR-ARMM, Academe, NGOs/POs and the Barangay Chairmen of the 6 barangays of Bongo Island. Conversely, the MCT for Paril-Sangay is chaired by a Senior Agriculturist from the Municipal Agricultural Office and is composed of the Municipal Environment and Natural Resources Officer, Municipal Budget Officer, Municipal Treasurer, Municipal Accountant and representatives from the DENR-CENRO XII-5B, Academe, NGOs/POs and the 2 Barangay Chairmen of Barangay Paril and Sangay, all of Kalamansig. Although not a member of the MCT, the incumbent Municipal Mayor however, oversees the operations of the team.

3. Strengthening of local marine resources surveillance by coastal communities linked to existing enforcement agencies (Total Cost US\$ 0.137 million; GEF US\$ 0.099 million)

Under this component, local-level groups such as; BFARMCs, Bantay Dagat Task Force, Interim PAMB, Inter-Agency Task Forces, Community-Based Intelligence Network were deputized and strengthened to undertake coastal protection and assist in the enforcement of laws and regulations in the two sites. Members of the protection groups were either deputized as fish wardens, Bantay-Dagats and Community-based Intelligence Network through R.A. 8550, LGU issuances, and PNP-MARIG accommodations. Capacitation was done through trainings, provision of equipment particularly patrol boats and communication facilities, and linkaging with the PNP, particularly the Maritime Group, operating in these areas. As a result of the networking efforts, agreements were forged with the Maritime Police covering both sites establishing a working arrangement in the protection of the MPAs.

It should be noted however that the training of bantay dagat groups was accordingly not eligible for GEF funding. Hence, this had to be funded using GOP counterpart.

4. Assistance in the development of alternative income-generating activities (Total Cost US\$ 0.130 million; GEF US\$ 0.092 million)

This component dealt with the provision of support for the development and start-up of environment-friendly and non-extractive AIG projects of the POs. Its purpose was to increase the income of the communities through non-extractive livelihood endeavors with the end view of reducing pressure, brought about by over-fishing and use of destructive fishing practices, on the coastal and marine resources. In the case of Bongo Island, the component also involved the development and implementation of projects which are “social” in nature and geared towards providing basic services to the communities while at the same time directly providing livelihood to some of the beneficiaries and income-generating opportunities for

the rest of the community members. Activities under this component are:

- a. Development of guidelines for the selection/approval as well as implementation of AIG projects
- b. Preparation of AIG project proposals
- c. Establishment of the Alliance of POs to oversee implementation of AIG projects and eventually undertake fund management
- d. Preparation of AIG Monitoring Manual and setting-up of a AIG Monitoring Committee
- e. Review and Approval of AIG Projects
- f. Implementation of the AIG projects

Under this component, a total of 13 AIG projects out of more than 30 proposals developed by the communities with the assistance of the TA team and the RPMOs, based on the approved AIG guidelines formulated under the Project, were approved and funded in both sites. These AIG projects were designed to capitalize on the aspect of community-based management to further environmental objectives while addressing the communities' economic concerns and its concomitant poverty problems. Five of these AIG projects, i.e., those in Bongo Island, are considered social projects for which assistance to POs was in the form of a grant. These projects are on electrification using either solar power or electric generators. The remaining eight projects in Paril/Sangay are for livelihood assistance in the form of loan to the POs. Five are on goat-raising, and one each for agricultural crop production, ice-making, and rice trading which is handled by a women's group. As of the closing stages of the CMBC, most of the AIG projects started to generate income. The initial 2 goat-raising projects are beginning to recover and the rice trading project started to repay its loan.

To ensure sustainability of the AIG projects, trainings relevant to the management of the social and livelihood assistance projects were provided to the PO beneficiaries. Likewise, the Alliance of POs (AOP) was established in both sites as a rallying point in the monitoring of project activities. The AOP, composed mainly of representatives from the local POs, is responsible for monitoring AIG projects, conflict resolution/trouble shooting in cases where external intervention is needed, and fund management. Fund management includes the collection of loan repayments from the POs as well as re-lending to other PO borrowers for livelihood/social projects. In support of the AOP, trainings on leadership and fund management as well as mentoring were provided to the members to equip them with the necessary know-how to run the Association after the Project completion.

5. Resource monitoring and evaluation program (Total Cost US\$ 0.148 million; GEF US\$ 0.110 million)

Annual impact assessment was conducted to determine the changes in the biophysical and social condition in the area as a result of the Project. This was conducted by the TA Team together with the stakeholders (community volunteers, RPMOs, MCTs) using the results of the initial RSA as the baseline. In addition to the impact assessment studies conducted, water quality monitoring stations were likewise installed to regularly assess water quality.

A participatory approach involving the communities and the LGUs was adopted in resource monitoring. This is to train the local stakeholders on-the-job on the methods and techniques of resource monitoring and

thereby, somehow ensure continuity of at least, simple resource monitoring after the assistance has terminated.

To further assist the local stakeholders (communities, LGUs and local DENR/DAF-ARMM) to continue resource monitoring even after the Project has terminated, a user-friendly Resource Monitoring Manual was developed. Likewise, goods such as resource monitoring boats and diving equipment such as scuba diving gears, goggles, fins, etc., were provided.

6. Training of DENR/BFAR officers, LGU/NGO/PO staff and school teachers as trainers in sustainable marine and fisheries management (Total Cost US\$ 0.311 million; GEF US\$ 0.293 million)

On the development of skills of communities and government staff in marine biodiversity conservation methods, trainings and in-country cross visits/study tours were conducted to hone the skills of communities and government staff (both at the LGU level and field level units of national government agencies) in marine biodiversity conservation. Some of the trainings conducted were on participatory coastal resource assessment, SCUBA diving, underwater resource assessment, advanced underwater survey methods, resource valuation and integrated coastal zone management plan preparation. Community volunteers were also engaged as understudies in the conduct of Resource and Social Assessment (RSA) at the start of project implementation as well as in the impact assessments. There were about 10 understudies engaged and trained in both sites within the project life, of which, they had acquired basic knowledge on the use of simple methods in coastal resources assessment. The community volunteers are expected to continue regular monitoring activities after the project life using the simple methods introduced by the TA team while the more scientific assessments will be done by staff from the LGUs, the DENR/BFAR-ARMM that were trained under the project, in coordination with the academe.

In relation to the academe, the project has embarked on the establishment of linkages by inviting representatives in the MCT and by involving members of the academe in the conduct of RSA at the start of project implementation. In effect, the Sultan Kudarat Polytechnic State College and the Mindanao State University - Gen. Santos City campus included the Paril Sangay area as practicum site for their students even at the middle of the project implementation. With this arrangement, continuous scientific assessment is assured for the area even after the project life.

B. Achievement of Institutional Impact

To ensure institutional impact and hopefully, guarantee sustainability of the Project even after assistance is terminated, an institutional arrangement that encourages active involvement of all local stakeholders was deliberately adopted. Pursuant to NIPAS Act, management and supervision of the Paril-Sangay area which is intended to be proclaimed as a protected seascape under the NIPA system was lodged with DENR Region 12 while supervision over the Bongo Island which was to be protected following the provisions of the Fisheries Act was given to DAF-ARMM. In both sites, however, multi-sectoral MCTs were created to oversee project implementation at the site level.

With the arrangement cited above, the various local, project has created an impact in terms of increasing the level of awareness and appreciation on coastal and marine biodiversity conservation. This could be seen from the growing support accorded by the LGUs particularly the Local Chief Executives, the Barangay Officials and other stakeholders including the academe and the civil society. On the part of the LGUs, both at the municipal and the barangay level, the support was translated into financial counterparts allocated

annually from their budgets.

On the part of the local communities who are the main beneficiaries of the Project, awareness on coastal and marine biodiversity conservation and protection was enormously heightened. Through their active participation in the various studies, assessments, inventories and consultations conducted, the communities have gained a more technical understanding of their environment. Through massive IEC, the project was able to provide the local communities with appreciation of the importance of biodiversity conservation and protection. Particularly, the project enabled them to appreciate the importance of their roles in effectively managing the resources of the area and generated interest to be involved in coastal and marine resources management. Through trainings and mentoring, they were provided with the necessary skills to manage the resources and through the AIG activities, most were given the opportunity to increase their income through environment-friendly means, thus veering away from destructive fishing practices, and to obtain basic services.

V. Financial Performance

As of December 31, 2005, about US\$ 1.006 M or 80% of the total grant amounting to US\$1.250 M has been utilized. (See Annex 1.) On the GOP side, around US\$ 0.264 M or almost 100% of the US\$ 0.266 M allotted for the Project was disbursed.

Full utilization of the grant proceeds was not achieved due to a number of factors. First and foremost is peso devaluation. Another factor is the low number of approved AIG projects. Another reason is the low number of sub-projects approved under the AIG component of the project. While the target amount for AIG is US\$ 0.209 M, projects worth a total of only US\$ 0.130 has been approved and funded. In component 3 which is on the strengthening of Local Marine Resources Surveillance by Coastal Communities linked to existing enforcement agencies, a low level of disbursement has also been noted. Out of the allocation of US\$ 0.224 M, only US\$ 0.137 M was disbursed and this could be attributed to the non-eligibility of Bantay-Dagat trainings for GEF funding. These trainings which are essential in the implementation of the Project was instead funded using GOP counterpart.

VI. Major Factors Affecting Implementation and Outcome

A. Factors Outside the Control of the Government

1. Peace and Order Situation

Peace and order problem existed in both sites and this adversely affected implementation of project activities. In Paril Sangay, security measures had to be taken during the resource and social assessment in the upland areas due to the alleged presence of groups outside the folds of the government. In Bongo Island, there were two incidents not related to the Project but which caused some site-specific activities to be deferred. The first is the killing of a suspected illegal fisher which triggered a clan war referred to as a “rido” in local vernacular. Another is an election-related killing incident. In both instances, the field-based project office as well as the TA team had to wait for the resolution of the problem through traditional means before resuming full-blast project operation in the area.

To minimize the negative impact of the peace and order problem to the Project, efforts were deliberately taken to ensure cooperation and participation of the political and traditional leader/elders in both sites. Local volunteers were likewise engaged in the conduct of project activities. In addition to ensuring full

support and cooperation from the local communities, these arrangements facilitated safe conduct of the project staff, both from the government and the TA team to and from the areas.

2. Siltation and Sedimentation

Siltation and sedimentation have been noted to be among the problems in the coastal/marine waters of Paril/Sangay and Bongo Island. Paril/Sangay's biophysical make-up exemplifies a varied landscape system characterized by rugged terrestrial landscape interconnected to its coastal/marine waters and a small but productive agricultural land. The integrity and productivity of its marine ecosystem is therefore closely linked to its forest watersheds which unfortunately, have undergone various forms of exploitation and degradation resulting to soil erosion.

Bongo Island, on the other hand, typifies a small and fragile island ecosystem surrounded by vast and coastal waters whose productivity is linked to the large Rio Grande river in the mainland which carries silt and sediments from its headwaters in the uplands .

3. Inappropriateness of Individual Consultants Engaged for Bongo Island

Initially, the TA deployed a Muslim CO specialist and a Christian-turned-Muslim CMBC specialist in Bongo Island. Their credentials as well as religious affiliation were viewed to be ideal for the predominantly Muslim-populated site. The CO however seem to have been overwhelmed with the task as provided in the TA's CO framework. No coherent framework was therefore applied and the AIG was used as the vehicle to get the attention of the communities. The CMBC specialist, on the other hand, used "spiritual ecology" to reinforce behavioral changes and build cooperation. His approach, however, was not effective as he was a convert and not a Muslim by birth.

Immediately after the performance of the CO specialist was noted, he was replaced. With the replacement as well as engagement of a community organizer/assisting professional, CO activities were put back to track. After a while however, problems cropped up again as the replacement has not helped in fostering good relationship between the communities and the DAF-ARMM RPMO. Since this occurred towards the last year of the Project, the CO specialist assigned to Paril/Sangay was tapped to cover Bongo Island as well. An assisting professional was left to oversee operations in Paril/Sangay on a full-time basis.

As for the CMBC specialist, he was likewise immediately replaced and his tasks were taken over by the CMBC specialist of Paril/Sangay who had to divide her time between the two sites. To ensure that activities in both sites are not adversely affected, two assisting professionals (one for each site) were engaged.

5. Long Review and Approval Process of Deliverables and Outputs

During the negotiations of the contract with the OIDCI, the latter requested and DENR agreed that a lump-sum mode of payment would be adopted. Under this arrangement, payments were based on distinct outputs/deliverables and hence, were expected to entail shorter processing time. When this was presented to the WB, however, they requested that their concurrence be obtained for each billable report before payment is made. Hence, all reports had to be coursed to the Bank for review and concurrence prior to payment.

Though the condition set by the WB was well-meaning, this resulted to the further delay in the processing of payment because of the additional layer/s that deliverables had to pass for acceptance/comments. As a consequence, the financial performance of the Project suffered.

As for the AIG proposals which likewise had to be cleared by the Bank, the qualms in the issuance of “No Objection Letter” (NOL) for the sub-projects have slowed down the advancement of the gains, in terms of community involvement, achieved in the pre-implementation and in the early stages of the project. The long review process sowed disheartenment among the prospective beneficiaries inducing estrangement, especially among the marginal fishermen that are directly affected by the project. As a result, the initiatives to introduce locally-focused management and conservation measures are sometimes overtaken by events. This was compounded by the non-pursuance of the study tour which both the community leaders and the field implementers looked forward to.

B. Factors Generally Subject to Government Control

1. Delay in the engagement of consultants

One factor which has severely affected Project implementation and resulted to its extension for additional two years is the delay in the procurement of consultants. The procurement process was initiated only after the Project has been approved. Given the magnitude of the contract which required international competitive bidding and the length of time needed to complete the process (i.e., at least six months), starting the procurement process only after the approval of the Project automatically delayed full-blast project implementation by the corresponding procurement period. Unfortunately, the processing period took much longer than expected (almost two years) due to changes in the composition of the FAPs-BAC and to the need to resolve certain issues which cropped up in the process. The effect of the delay in the procurement was aggravated by the provision in the Manual of Operations prepared for the Project which states that site-level project operation will only start once the TA Team is on-board.

In Paril-Sangay which used to be one of the sites of the DENR’s Coastal Environmental Program (CEP), the CMBC Regional Project Management Office proceeded to undertake a few project activities on their own. The risk was taken by them to maintain the momentum which was created by the earlier coastal resources management activities they have initiated under the CEP. Their efforts paid off as shown by the relatively more advanced level of awareness and organization of the communities when the TA Team came in.

The delay in the engagement of the consultants resulted in the extension of the Project for two years.

2. Inter-Agency Arrangements

Although field-level implementation is being led by DAF-ARMM, oversight and central level coordination is lodged with DA-BFAR. While such arrangement was useful in ensuring technical and policy support from DA-BFAR as well as representation in central-level discussions regarding the Project, it added a layer in terms of project operations particularly on administrative and financial concerns. Hence, flows of communications and financial disbursements were longer. Eventually, however, recognizing the need to speed-up implementation in Bongo, the protocol on communications had to be relaxed and a direct line of communication between DENR and DAF-ARMM was established.

3. Political Changes

Within the project life, there were two local level elections held, one in 2001 and another in 2004. In Paril-Sangay, the delay brought about by this political exercise was minimal as the Chief Local Executive was re-elected in both instances. In Bongo Island, there was a change in the leadership in Parang in the second election. With this, considerable time had to be given for the new Local Chief Executive to be familiarized and fully appreciate the Project.

At the national level, the DENR had a change of leadership four times. With the designation of a group of permanent staff both at the central office and the regional office to manage the Project, however, the impact of this was minimal.

VI. Sustainability

The project, as a development vehicle, was designed to establish conservation areas in support to the promotion of biological diversity and productive capacity of the coastal and marine ecosystems. In like manner, the project was fashioned to help the coastal communities to be developed in the process while extending the wisdom that may fortify community-based management. It was expected to supplement the gains of past endeavors and to generate employment opportunities in consideration to coastal community development in parallel to the attainment of environmental objectives.

To ensure sustainability of project interventions after the Project has terminated, the following were given ample attention during the project life:

1. Strengthening of co-management mechanisms to promote active involvement of local leaders and cooperation of participating agencies;
2. Strengthening of the CMBC-Municipal Coordinating Team to sustain coordinative functions in all activities therein, in accordance with the Municipal and Barangay Development Plans;
3. Identification/designation and capacitation of community volunteers to undertake periodic assessment of the coastal resources;
4. Organization and capacitation of the Alliance of POs to handle the management of AIG repayments, market expansion, planning workshops, project implementation, and technology adoption;
5. Issuance of Municipal and Barangay ordinances designating and protecting the MPAs;
6. Preparation in a participatory manner of Resource Management Plans for both sites which would serve as guide for the local stakeholders in the management of their resources;
7. Issuance of Municipal and Barangay ordinances supporting the provision of logistic support for the deputized protection groups and the IEC Task Force;
8. Establishment of linkages between the communities and the law enforcement agencies as well as academe which they could build on even after the Project;
9. Development of the Resource and AIG Monitoring Manuals which will guide the local stakeholders in conducting resource monitoring and in ensuring that their AIG activities as on-track, even after the Project.

Even before the Project terminated, there were already indications of sustainability. The Local Governments in the 2 project sites were very supportive of future endeavors in relation to coastal and marine ecosystems management. Aside from the budget allocations accorded to the Municipal Coordinating Teams (MCT) in consideration to the monitoring of the project, additional support for CRM endeavors was allocated under the Municipal Environment and Natural Resources Office for Kalamansig, Sultan Kudarat and under the Municipal Agriculture Office for Parang, Maguindanao.

The communities, on the other hand, expressed their support to sustain the protection of the established “No-Take-Zones” and to expand the project in adjacent areas which may cause direct or indirect impacts. However, their main concern was on the economic support through the approval and funding of sustainable livelihoods based on the submitted sub-project proposals.

VII. Lessons Learned

- 1.** The endorsement of community leaders in the implementation and sustainability of development projects is crucial in obtaining cooperation and support from the populace within or adjacent to the project sites. As such, management options should respect the role of community leaders, particularly the Commanders, the Datus and the Imams (religious leaders), and the degree of influence that goes with it.
- 2.** Community awareness and comprehension that are founded based on the project’s ecological importance usually promotes the principle of local ownership and advances the commitment of stakeholders. Thus, it is imperative that participatory approach should be encouraged and sustained in the identification of possible solutions towards a specific vision and outcome.
- 3.** The impacts of soil erosion from upland activities are the major contributors to the degradation of the coastal ecosystems and limiting the recovery of the coastal resources. The implementation of the watershed approach should be considered in order to promote a management continuum from the upland to the coastal zone.
- 4.** Variations in project setting require experimenting with different strategies and approaches. There should therefore be a certain level of flexibility within the project intervention framework so as to allow adjustments depending on the situation in the area.
- 5.** Cross-visits can be very useful in educating and motivating the communities. By visiting relatively successful MPAs and interacting with the communities in these areas, they are able to see and hear for themselves the results of good practices and are encouraged to adopt these in their own sites.
- 6.** The process of community organizing and social change is a slow, long and arduous endeavor especially for the two project sites which have varied cultural orientation and traditions. Local biases and misconceptions have to be overcome to set the stage for gradual change in community perception, understanding, attitudes and behavioral patterns. Working within a given timeframe is therefore a bane to meaningful community organization since community response could vary significantly depending on the spatial and social setting. Given this, it is beneficial therefore to develop champions of the project who will pursue the initiatives started under the Project even after assistance has terminated.
- 7.** For projects with two or more implementing agencies and involving different stakeholders, such as the CMBC, conscious efforts should be made to create an atmosphere of respect, trust and cooperation among all actors. This could be achieved through team building, continuous dialogue, and practice of

transparency and consistency particularly by the project implementers.

IV. Partners Comments

The CMBC component of the Mindanao Rural Development Program (MRDP) funded through a grant by the Global Environment Facility (GEF) under the auspices of the World Bank (WB) was implemented by the Department of Environment and Natural Resources (DENR) through the Foreign-Assisted and Special Projects Office (FASPO) as the lead agency and the Department of Agriculture (DA) through the Bureau of Fisheries and Aquatic Resources (BFAR) as the cooperating agency. The Paril-Sangay site at Kalamansig, Sultan Kudarat was implemented by DENR-XII the auspices of FASPO while the Bongo Island site at Parang, Maguindanao was implemented by BFAR-ARMM under the auspices of DA-BFAR.

For the LGUs, except on the failure of some commitments on the approval and issuance of “No Objection Letter” for the proposed AIGPs due to the prolonged review process, positive comments were accorded to the project as expressed by the endorsement of the IPAP by the local executives, provincial and municipal officials, to the DENR Secretary coupled with the support extended during the project implementation and their expressed commitment to sustain the project after its termination.

For the community, majority of those involved in the project, in one way or another, expressed positive comments and are willing to pursue the goal of the project. The Barangay Officials and other community leaders that were given the chance to visit other MPAs such as; the Apo Island in Negros Occidental and the Olango Reserve at Cebu City, had expressed enthusiasms to develop their MPAs for future’s sake. However, the confidence on the project of some community members is low. This was caused by high expectations on the approval and funding of their AIG projects coupled with some useless commitments.

In the Paril-Sangay site, DA-BFAR XII, as a partner agency, has questioned the proposal to proclaim the Paril-Sangay site into a Protected Seascape under R.A.7586, or the NIPAS Act, insisting that the term “Marine Protected Area” should be used instead of protected seascape citing some provisions of R.A.8550, or the Fisheries Code, with further allegation that they were never included in the project which is obviously not true. The objection was elucidated and the allegation was straightened during the presentation of the IPAP to the RDC-12 in early 2005 paving a way for the endorsement of the draft proclamation to the DENR Secretary.

