



PROJECT EXECUTIVE SUMMARY

GEF INTERSESSIONAL WORK PROGRAM SUBMISSION

AGENCY'S PROJECT ID: PHI 33276
GEFSEC PROJECT ID: 1185
COUNTRY: Philippines
PROJECT TITLE: Integrated Coastal Resources Management Project (ICRMP)
GEF AGENCY: Asian Development Bank
OTHER EXECUTING AGENCY(IES): Department of Environment and Natural Resources (DENR)
DURATION: 6 years
GEF FOCAL AREA: Biodiversity
GEF OPERATIONAL PROGRAM: OP #2, Coastal, Marine, and Freshwater Ecosystems
GEF STRATEGIC PRIORITY: BD-1, Catalyzing Sustainability of Protected Areas; BD-2, Mainstreaming Biodiversity in Production Landscapes and Sectors; and BD-4, Generation and Dissemination of Best Practices for Addressing Current and Emerging Biodiversity Issues
Pipeline Entry Date: February 9, 2000
ESTIMATED STARTING DATE: Q1, 2005
EA FEE: US \$872,920.00

FINANCING PLAN (US\$)	
GEF PROJECT/COMPONENT	
Project	9,000,000.00
PDF A	
PDF B	335,000.00
PDF C	
SUB-TOTAL GEF	9,335,000.00
Co-financing*	
GEF Agency	36,000,000.00
National and Local Governments	13,300,000.00
Bilateral	
NGOs	
Others (Beneficiaries)	4,700,000.00
Sub-Total Co-financing:	54,000,000.00
Total Project Financing:	63,335,000.00
FINANCING FOR ASSOCIATED ACTIVITIES IF ANY:	
LEVERAGED RESOURCES IF ANY:	
*Details provided under the Financial Modality and Cost Effectiveness section	

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN: The Project will establish networks of MPAs in the priority marine biodiversity corridors that serve as pathways for migration of flagship species and facilitate dispersal of larvae of corals and other organism to depleted areas. This holistic approach will be an innovation and will involve community management of 50,000 hectares (ha) of ocean area with at least 5,000 ha of core 'no-take' zones of which 20% will be newly established. The MPAs will contribute to sustainable fisheries production. Republic Act 8550 mandates establishment of MPAs with over 3.4 million ha ocean area and hence there will be ample scope for replication outside Project area. The Project will significantly enhance GEF focus on marine biodiversity in the country, direct financial assistance for which has so far been less than \$5 million.

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

Elisea G. Gozun, Secretary, Department of Environment and Natural Resources

Date: 6 July 2004 and 19 July 2004 (Annex H)

Approved on behalf of the Asian Development Bank:

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for work program inclusion

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A. PROJECT SUMMARY

1. The Project will support the Government of Philippines' (GOP) efforts to address the critical issue of sustainable management of marine and coastal resources, including conservation of globally important marine biodiversity resources. The Project forms part of the Government's Medium-Term Development Program to achieve its long-term goal of having 3.4 million hectare (ha) of marine protected area in municipal waters, as mandated by the Republic Act 8550 of 1998. The Philippines is a recognized global marine biodiversity 'hotspot,' having significant existing threats and underlying barriers to marine biodiversity conservation. These threats, and possible interventions to address them, are detailed in Annex A.

2. The Project components include: (A) Policy and Institutional Strengthening and Development for integrated coastal resources management (ICRM), in order to address policy weaknesses and legal gaps, clarify roles of national government agencies and concerned local governments, and build capacity; (B) ICRM and Biodiversity Conservation for management of coastal resources in participating municipalities, to be accomplished through resource assessment, development and implementation of ICRM plans by municipal governments in association with existing Fisheries and Aquatic Resources Management Councils (FARMCs), *Bantay Dagats* (marine watch teams) and NGOs, focused research on critical ecosystems, community-led law enforcement, rehabilitation/improvement of 6,500 ha of mangrove and 6,000 ha of watershed, establishment of marine sanctuaries, and protection of corridors of high biodiversity, and development and implementation of sustainable financing mechanisms for management and conservation of biodiversity; (C) Enterprise Development and Income Diversification assistance to municipal fisherfolks, to develop sustainable enterprises and livelihood, and reduce reliance on fishing; and (D) improvement of Social Services and Environmental Infrastructure among disadvantaged coastal communities, in order to improve water supply and sanitation, mitigate coastal erosion and pollution, and support a population management program that highlights reproductive health and the link between population growth and deterioration of environmental quality. The Project will be implemented in 65 municipalities in six provinces (Cagayan, Zambales, Masbate, Cebu, Siquijor, and Davao Oriental). The rationale for the project approach, and basis for selection of biodiversity areas for the project is presented in Annex B, while the Logical Framework for the project is presented in Annex C.

3. The baseline design provides for addressing the underlying causes of biodiversity loss mentioned in Annex A. Policy gaps and inconsistencies will be addressed through finalizing the national policy and institutional framework, which will provide a mechanism for an integrated approach to development. The draft coastal resources management policy will be expanded and finalized incorporating a holistic management approach to coastal ecosystems and addressing policy gaps relating to biodiversity conservation, marine pollution, mangrove management, foreshore management, coastal tourism, environmental impact assessment, and trade in reef-associated species. The policy initiatives will be supported by institutional strengthening at national, regional and local levels, and a policy advocacy campaign. Additionally, a system to recognize and reward conservation programs of local governments will be developed and institutionalized. Lack of awareness among stakeholders will be addressed through an information, education and communication (IEC) strategy supporting focused campaigns on policy advocacy, ICRM and biodiversity conservation. A progressive population management program will highlight the link between population growth and deteriorating coastal ecosystems. Alternative and supplemental livelihoods will reduce community's dependence on coastal resources, and social and environmental infrastructure and facilities will improve their living conditions.

4. Building upon the baseline preparation, additional activities will aim at conserving nationally and globally significant marine biodiversity resources. Following a 'corridor approach', four marine corridors of "extremely high" biodiversity values, with high level of threats, have been selected through a prioritization process and are: (i) Babuyan marine biodiversity corridor; (ii) Ticao Pass-San Bernardino Strait-Samar Sea marine biodiversity corridor; (iii) Daanbantayan; and (iv) Pujada Bay. Additionally, two more areas of "very high" to "high" biodiversity significance have been identified in Zambales and Siquijor. Within each corridor MPAs will be established or existing MPAs strengthened, in order to form

corridor-based MPA networks. Ultimately, about 50 MPAs will be identified, management plans prepared or strengthened, and functional management organizations put into place; 15-20 will be new and 30-35 MPAs will be existing. All new MPAs will be established in the four corridors of extremely high biodiversity significance. Under a staggered program, implementation will commence by the start of year 2 for four MPAs (namely, Babuyan Island, Batuan, Daanbantayan, and Mati) all of which are located in the core of the extremely high priority corridors. Activities on the remaining corridors will commence with a lag of about one year providing an opportunity for improving performance through experience gained in the first four MPAs.

5. Within the 50 MPAs, about 50,000 ha of coral reef areas will be rehabilitated through proper management and about 5,000 ha of 'no take zones' within marine sanctuaries will be protected. Conservation efforts will be supported by research on critical marine biodiversity resources including sensitive ecosystems, threatened and flagship species, and special functional features of each biodiversity corridor. Species restocking and pilot schemes for coral reef and giant clam transplanting will be undertaken. Five ICRM Centers will be established as hubs for biodiversity monitoring and research, and training and demonstration activities. ICRM Centers will also be the focal points for undertaking an information, education and communication (IEC) campaign to be developed and implemented in coordination with the ongoing works under communication, education, and public awareness (CEPA) programme of the Convention on Biodiversity. Operational linkages between IEC and CEPA will be examined and specific recommendations will be made during further processing of the Project. The Project will also support development and implementation of a system for eco-certification of sustainable harvesting activities in coral reef-associated species, taking into account the changing degree of vulnerability of species, and will be linked to the biodiversity monitoring program of the Project.

6. Key risks that may affect Project implementation, constrain attainment of objectives and ultimately impact Project success include: (i) degradation of global environment and macroeconomic conditions; (ii) peace and order situation; and (iii) governance and anti-corruption. The project addresses the risks caused by possible global environmental conditions (e.g., climate change, coral bleaching, etc.) through selection of dispersed and varied sites and habitats that are expected to have different responses to such changes, and through creation of networks of MPAs to further disperse the risks. The effect of possible worsening macroeconomic conditions will be addressed through adaptive project implementation, using a variety of enterprise development and social services options to respond to the needs of the local communities. To address potential peace and order problems, the Project Steering Committee (PSC) could decide, in consultation with ADB, to redirect efforts and staff to more secure sites within the project area. Governance risks will be mitigated through participatory management at the national, regional, and field level, thus improving transparency and accountability. Cost-sharing mechanism will motivate local governments to strive for economy and efficiency in project implementation and avoid corrupt practices, and the performance of implementing agencies will be measured against an eco-governance index that takes into account planning, budgeting, implementation (including procurement and issuance of permits and licenses), and control or enforcement (including monitoring, reporting, sanctioning, etc). The index will be applied in measuring performance of DA, DENR and local governments, and the design sets specific targets to be achieved and maintained (see Output 1 in Logframe).

B. COUNTRY OWNERSHIP

1. Country Eligibility

7. The Philippines ratified the Convention on Biological Diversity on 8 October 1993.

2. Country Drivenness

8. The GOP places high priority on the conservation and sustainable management of its natural resources, including marine biodiversity. In 1997, GOP produced a comprehensive assessment of biodiversity resources and a National Biodiversity Strategy and Action Plan. In 2002, the Department of Environment and Natural Resources (DENR) released the results of the *Philippines Biodiversity Conservation Priorities (PBCP)*, a prioritization of marine and terrestrial biodiversity sites nationwide which ranks sites according to their importance in contributing to overall biodiversity within the country and according to the degree of urgency for conservation. Recently, DENR drafted a *Proposed National Coastal Resources Management Policy for the Philippines*. In *ArcDev: A Framework for Sustainable Philippine Archipelagic Development* (2003), DENR drafted a Policy and Institutional Framework for sustainable management of marine and coastal resources, including the rich biodiversity resources found within the archipelago.

9. Several laws have been enacted to further biodiversity conservation goals in the country. The *National Integrated Protected Areas System (NIPAS) Act of 1992 (Republic Act 7586)* created the legal framework for establishing protected areas in the Philippines. The *Local Government Code of 1991 (Republic Act 7160)* has empowered local government units (LGUs) to manage key resources contained within their municipal waters, and to establish and manage municipal MPAs. The *Fisheries Code of 1998 (Republic Act 8550)* contains a range of provisions that support sustainable management of coastal resources and marine biodiversity through creation of FARMCs at national, provincial, and municipal levels, and through prohibition of commercial fisheries operations within municipal waters (within 15 km from shore).

10. The Government has initiated a number of projects with GEF assistance which directly and indirectly contribute to marine biodiversity conservation. These projects are: (i) the Asian Conservation Corporation/ Asian Conservation Foundation (ACC/ACF) public/private partnership for sustainable conservation and use of marine resources; (ii) the Bohol Marine Triangle project for coral reef conservation and management; (iii) the Critical Ecosystem Partnership Fund (CEPF) regional program for management and maintenance of biodiversity corridors; (iv) the Conservation of Priority Protected Areas Project (CPPAP) for pilot-testing of a national protected area system for biodiversity conservation; (v) the Tubbataha Reefs National Marine Park (TRNMP); and (vi) the Coastal Marine Biodiversity Conservation (CMBC) Project for marine biodiversity conservation in Mindanao. In general, these projects have helped to contribute to conservation of globally-important biodiversity resources, offer valuable lessons for other biodiversity conservation efforts in the country, and provide opportunities for leveraging and cross-project benefits. Further details concerning other GEF assistance to the Philippines are presented in Annex D.

C. PROGRAM AND POLICY CONFORMITY

1. Fit to GEF Operational Program and Strategic Priorities

11. Under OP 2, incremental activities aimed at conservation and management of marine and coastal biological diversity are eligible for GEF funding support. For ICRMP, the ADB-assisted activities will help to remove barriers to effective coastal resources management and will reduce threats to resources that are important not only for the continued integrity of natural ecosystems but also for supporting sustainable economic development. Cost savings and efficiencies are achieved in the project by combining complementary baseline and incremental activities together in an integrated package. If activities aimed at achieving global benefits were conducted in isolation from sustainable baseline activities, achieving global benefits would be far more costly (due to addition of 'sunk costs', lack of sustainability, etc.), and possibly, unattainable. Support from GEF will help the Government in pursuing activities that will result in removal of barriers to effective management and reduction of direct threats to biodiversity. Without such support for appropriate interventions, continuing threats and persistent barriers could result in further degradation or permanent loss of the country's globally important biodiversity.

12. The project also supports three key GEF strategic priorities: BD-1, Catalyzing Sustainability of Protected Areas; BD-2, Mainstreaming Biodiversity in Production Landscapes and Sectors; and BD-4, Generation and Dissemination of Best Practices for Addressing Current and Emerging Biodiversity Issues. The project supports BD-1, because it will (i) establish networks of MPAs as a means to strengthen and extend the conservation benefits of MPAs; (ii) work towards strengthening MPAs in the existing national PA network; (iii) build capacity for more effective MPA management; (iv) emphasize participation of the local community as a means of achieving sustainability; and (v) promote replication of the MPA as an effective management and conservation tool. By law (Republic Act 8550), establishment of municipal MPAs, covering 15% of the nation's 226,000 sq. km of coastal waters (3.4 million ha), is mandated, giving ample scope for further replication within and outside the Project area.

13. Through economies of scale in aspects such as management, service delivery, capacity building/backstopping and knowledge dissemination, the Project will be more cost-effective than small-scale interventions made so far. The greater cost-effectiveness will enhance sustainability and lead to higher replicability of project initiatives. The project also advances BD-2, since it will (i) support sustainable fisheries production by maintaining viable breeding populations, and, (ii) develop market incentive measures (e.g., eco-certification) to enhance the economic benefits to be realized through sustainable management of biodiversity. Additionally, the project is in conformance with BD-4, since it will (i) support research that will improve and strengthen ICRM and biodiversity conservation best practices; (ii) pilot-test innovative methods for biodiversity conservation, through habitat rehabilitation and restoration, and stock enhancement; and (iii) establish ICRM centers to disseminate information on marine biodiversity conservation, through public awareness, research, training and outreach, and international workshops and symposia. Having as its basis the highly innovative methodology of protecting marine biodiversity within critical marine corridors through networking of MPAs, the Project will strive to promote this approach for replication and implementation outside the Project areas. Further details regarding Project contributions to key indicators of the business plan are provided in Annex E.

2. Sustainability (including financial sustainability)

14. In addition to the sustainability aspects mentioned in connection with BD-1, above, a number of factors will contribute to the sustainability of project benefits beyond its completion: (i) strong commitment and desire of the national, provincial and municipal governments, and community stakeholders to achieve sustainable management of globally-important biodiversity resources; (ii) capacity-building within communities, and among national agencies, to promote effective long-term resource management; (iii) development of sustainable financing of conservation efforts from a variety of sources; (iv) harmonization of policies and improvement of coordination across different levels of jurisdiction (especially between DENR, Department of Agriculture (DA) and local governments); and (v) promotion of community-based implementation and management methodologies.

3. Replicability

15. In addition to the replicability aspects mentioned in connection with BD-4 above, opportunities exist for replication of successful methodologies within the majority of the target communities of the project. The focus of the project on achieving conservation of important biodiversity resources located within critical marine corridors, is upon extensive replication. Proven interventions begun in key communities within the marine corridors will first be expanded to other adjacent communities. This will strengthen overall management of resources along the corridors. In later stages, best practices will be further replicated to other areas of the project provinces and then to communities in other provinces and regions. Lessons learned at selected sites could readily be replicated at similar sites on a national, regional, or global scale. One tool of great value in promoting replicability will be the establishment of an internet website for marine biodiversity conservation, and for the management of networks of corridor MPAs. The website will promote information dissemination and exchange, and will facilitate knowledge transfer and problem-solving from one community site to another. The prospect of linking the website to

the national and Global Clearing House Mechanism of CBD will be examined during further processing of the Project.

4. Stakeholder Involvement

16. A participatory approach is fundamental to the project design. During the PDF-B-funded formulation phase, extensive activities were conducted to gather inputs from a wide cross-section of stakeholders. These activities included a series of workshops, site visits, participatory rapid appraisals, household surveys, focus group discussions, and informal planning and information dissemination meetings. Information gathered during the course of these extensive consultations was used in the formulation of the proposed project.

17. For project implementation, local stakeholders, through FARMCs, *bantay dagat*, and other municipal- and village-level people's organizations, will be the principal implementors, and their continuing involvement throughout future information-gathering, planning, implementation, and dissemination of design will be ensured through a range of interventions and activities, such as: (i) community needs assessments that will encourage a higher level of interest, and sense of ownership; (ii) IEC aimed at engaging community members and encouraging their active participation in ICRM and biodiversity conservation activities; (iii) participatory community mapping and planning activities designed to engage stakeholders in the early project stages; (iv) preparation/improvement of ICRM and MPA plans with community participation; and (v) formation of various coordinating committees to give stakeholder groups effective representation. Periodically, national workshops will be held, at which local-level agencies and organizations will specifically be represented. These workshops will ensure that local proponents will be given adequate opportunity to air their opinions within a national-level forum.

5. Monitoring and Evaluation

18. A project performance management system (PPMS) will be established at the national and field level. The PPMS will encompass the following elements: (i) monitoring of physical and financial progress as well as the economy and efficiency in achieving major activities; (ii) monitoring of the level and adequacy of participation of various stakeholders in planning and implementing project activities and the performance of the Project EA and IAs against an ecogovernance index; (iii) collection of gender-disaggregated data in benchmark surveys and policy and legal studies; (iv) monitoring the Project's social, environmental, and economic impacts including the establishment of benchmark information and data; and (v) developing a mechanism for making necessary adjustments in project design and implementation arrangements in light of the PPMS findings.

19. Provision has been made for adequate consulting services and budget for developing a PPMS that integrates environmental and biodiversity monitoring as a key activity, including establishment of baseline information, and mid-term and project completion assessments. Consistent with GEF Operational Strategy, the biodiversity monitoring will pay special attention to species selection, current occurrence, density and other demographic parameters, including yield studies, and regeneration surveys, and actual impacts of harvesting. The Project will coordinate with the GEF in designing the monitoring and evaluation of the biodiversity. The GEF is in the process of developing a Project Information Form for Biodiversity (PIFB); once developed, PIFB forms and relevant GEF targets will be incorporated in the monitoring program. The five ICRM centers will oversee the monitoring and evaluation program.

D. FINANCIAL MODALITY AND COST EFFECTIVENESS

20. Total cost of the Project is estimated at \$63.00 million. ADB will provide GOP a loan of \$36.00 million from ADB's ordinary capital resources, with a 22-year term, including a grace period of 6 years. GEF will provide grant financing for the Project of \$9.00 million¹ equivalent. ADB and GEF together

¹ Excludes the PDF-B grant and Executing Agency fee of \$860,010.

will finance \$45.00 million (72% of the total Project cost) and the balance of \$18.00 million will be provided by the national Government, participating municipal governments, and beneficiary communities. The Government will have a cost-sharing arrangement with the LGUs for the project activities undertaken by them. The Government's financial support to the LGUs will be a mix of loan and grant which would complement equity contributions from the LGUs and beneficiaries, to be determined according to current lending terms and conditions of the LGU-National Government Cost-Sharing Policy. Incremental costs and global benefits are detailed in Annex F.

Co-financing Sources				
Name of Co-financier (source)	Classification	Type	Amount (US\$)	Status
ADB	GEF EA	Loan	36,000,000	Confirmed in principle at loan fact-finding through MOU between ADB and GOP
Central Government	EA/IA	Own resources	7,000,000	
LGUs and Beneficiaries	IA/beneficiary	Own resources	11,000,000	
Sub-Total Co-financing			54,000,000	

E. INSTITUTIONAL COORDINATION AND SUPPORT

1. Core Commitments and Linkages

21. Marine and coastal resources management has been an important sector in ADB's portfolio in the Philippines. ADB has approved \$169 million for 6 projects in the sector. Two of these projects with direct relevance to the proposed project are the Fisheries Sector Program Loan (\$80 million) and the Fisheries Resources Management Project (\$35 million). ADB's Country Strategy and Program Update 2003-2005 for the Philippines identified the sector as an area for continued commitment with emphasis on sustainable management of marine and fisheries resources and biodiversity conservation. The proposed project is consistent with ADB's country strategy and will promote sustainability of marine and coastal resources and conserve biodiversity, while contributing to poverty reduction and promoting equitable growth and good governance.

22. The Project is closely linked with GEF focal areas, namely, biodiversity, climate change, international waters and land degradation. There are about eight major ongoing GEF and other donor assisted biodiversity conservation initiatives in the country that are of direct relevance to the proposed project (para. 10). The Bohol Marine Triangle Project and Coastal Marine Biodiversity Conservation Project will provide valuable experience gained in biodiversity conservation with community participation and can serve as training venues for project personnel. Tubataha Reef and National Marine Park Project has developed an effective marine protection model, which can be adopted for the proposed project. The proposed eco-tourism activities in the baseline development path will benefit from experience gained in similar activities, albeit in a large-scale scale, under the Asian Conservation Corporation (ACC)/ Asian Conservation Foundation (ACF) projects. ACC/ACF projects have specific emphasis on mariculture development through public private partnership and the proposed project could establish linkages to foster enterprise development under the income diversification and livelihood development component. The Marine Aquarium Market Transformation Initiative will setup market infrastructure catering to eco-friendly trade in marine species, which will facilitate forward linkages to the Project supported eco-certification system for trade in reef related species.

2. Consultation, Coordination and Collaboration between IAs, and IAs and EAs if Appropriate

23. ADB will serve as the GEF executing agency (EA). In implementing the Project, ADB will coordinate with other GEF EAs (FAO and UNIDO), implementing agencies (World Bank and UNDP)

and other donors (European Union and USAID) active in the sector. ADB will assign a professional staff, assisted by a national staff, to oversee the Project implementation. In depth review of the Project will be undertaken jointly with the Government at least once a year. The review findings will be discussed with GEF EAs and IAs, and other development partners in the sector. In addition to regular annual reviews, a mid term review will be undertake to assess the Project implementation status, review project parameters and recommend appropriate measures for ensuring achievement of project objectives.

3. Project Implementation Arrangements

24. DENR, as the National EA, will be responsible for overall management of the Project. DENR will establish a Project Steering Committee (PSC) to oversee and coordinate project implementation. The PSC will be chaired by the DENR secretary, and comprise senior officials of National Economic and Development Authority, DA, Department of Budget and Management, Provincial Governments of the six project provinces, and Project Director. Participating municipal governments will be invited to attend meetings on issues that require their participation. DENR will also establish a Regional Steering Committee in each of the five regions covering the Project. In addition to its responsibilities as the National EA, DENR is also one of three designated Implementing Agencies (IAs), sharing implementation responsibilities with the DA, and with local governments and beneficiaries for the four project components (as shown in the table below).

Component	Implementing Agencies (IAs)		
	DENR	DA	Local governments and beneficiaries
A: Policy and institutional strengthening/development	X	X	X
B: ICRM and biodiversity conservation	X	X	X
C: Enterprise development and income diversification	X	X	X
D: Social and environmental services and facilities			X

25. The Coastal and Marine Management Office (CMMO) at the DENR Central Office will be the project management office. Regional Project Implementation Units (RPIUs) will be established in the project regions, and ICRM Units (ICRMUs) will be established in project municipalities, to facilitate field implementation of project activities largely through such people's organizations as the FARMCs and bantay dagat. The project will be implemented over a period of 6 years, commencing in early 2005.

ANNEXES

- A: Threats Analysis
- B. Innovation in Project Design: The Corridor Approach to Marine Biodiversity Conservation
- C. Project Logical Framework
- D. Other GEF Investments in the Philippines
- E. Project Contributions to Key Indicators of the Business Plan
- F. Incremental Cost Analysis
- G. Response to Project Reviews
- H. Government Endorsement

THREATS ANALYSIS

1. To facilitate design of the GEF Alternative, an analysis was conducted to identify the immediate threats to coastal and marine biodiversity, along with underlying and root causes and possible means to address them. The analysis followed a participatory process, in which stakeholders initially identified a range of threats and barriers to marine biodiversity conservation. Additional information was then gathered to produce a more comprehensive analysis. The outcome of the analysis is illustrated in Figure 1, and is summarized in Table 1.
2. While the threats analysis was conducted specifically to identify problems relating to globally-important marine biodiversity, the threats that affect all coastal and marine resources in the Philippines are identical. Thus the analysis is useful and relevant for elucidating the broader negative impacts that these threats pose not only to biodiversity, but also to economic development and the well-being of residents in coastal communities.
3. The analysis identified three immediate threats to globally-important coastal and marine biodiversity in the Philippines:
 - a. **Coastal Siltation and Pollution.** This threat is based upon such effects as erosion from degraded lands, agricultural and urban runoff, industrial effluent, and discharge of sewage and solid waste in coastal areas. Such effects cause serious and often irreversible damage to valuable biodiversity resources in the nearshore environment.
 - b. **Habitat Destruction.** Biodiversity losses in coastal areas occur through cutting or clearing of mangroves and seagrass beds, and through loss of productive coral reefs by blast (dynamite) fishing, cyanide, and other destructive practices. Loss of habitat results in a direct decline in biodiversity by destroying the support system that all species in the ecosystem depend upon.
 - c. **Unsustainable Use of Resources.** In the face of mounting pressures and competition to acquire sufficient resources for the sustenance of their families, inhabitants of coastal areas in the Philippines, many of whom fall within the subsistence economy, are often left with no other option but to extract resources in exceedance of maximum sustainable yields. Thus such practices as overfishing and overharvesting, illegal commercial fishing, and blast and poison fishing, have been proliferated. In addition to the destructive effects that these practices have on habitats (as described above), they also result directly in population depletion of important target species. Non-target species, while not of direct economic importance, play a role in the overall ecology of coastal and marine ecosystems, and are also adversely affected.
4. A closely interrelated constellation of root causes underlies these immediate threats. The principle underlying root causes include: (i) population pressures; (ii) lack of public awareness and participation; (iii) institutional weaknesses; (iv) inadequate information for appropriate decision-making; (v) poor enforcement of laws and regulations in the coastal zone; and (vi) pervasive poverty of coastal communities.
5. While it is not expected that the project by itself could fully resolve all these issues, it is nonetheless considered that, to at least some degree, all the underlying causes fall within the project scope. Thus the project will attempt to address all the root causes, and to bring about at least some improvement in each of these critical areas, through the specific interventions that are comprised in the four project components. Other ongoing initiatives by government being conducted outside the project, in such areas as reproductive health and good governance, contribute to the baseline, and will complement and strengthen project interventions in addressing these important underlying issues.

Figure A1.1 Threats to Biodiversity and the Project Conceptual Model

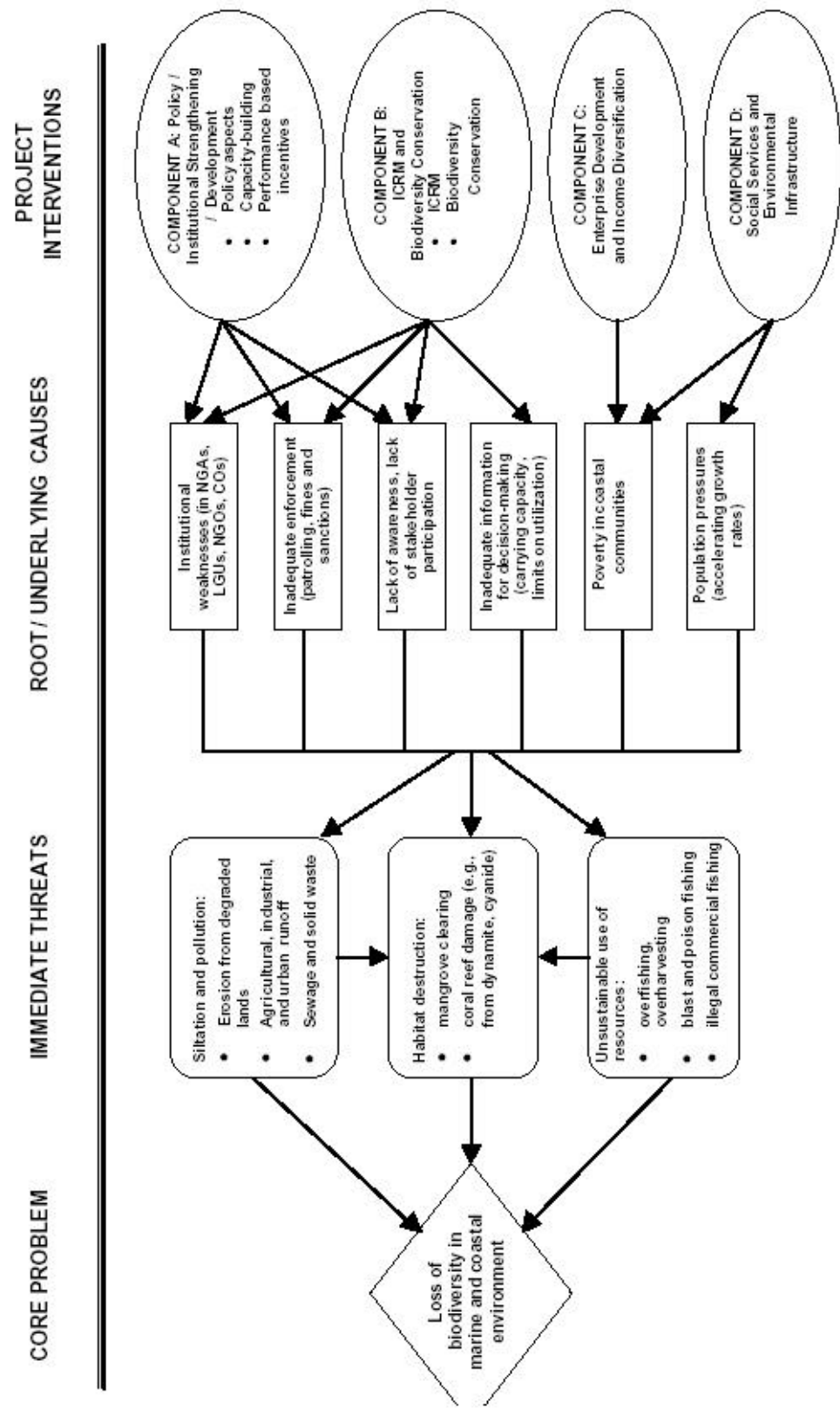


Table 1: Threats Analysis and Project Response Matrix

Threats and Constraints	Root Causes	Key Project Responses/ Interventions
<u>SILTATION AND POLLUTION</u> <ul style="list-style-type: none"> Erosion from degraded (deforested, overgrazed) lands Agricultural, industrial, and urban runoff Sewage and solid waste in coastal areas 	<ul style="list-style-type: none"> Inadequate enforcement of land use ordinances 	<ul style="list-style-type: none"> Environmental impact monitoring system established ICRM plans including upland management developed Legal seminars conducted for local judges
	<ul style="list-style-type: none"> Institutional weaknesses: poor coordination between DA, DENR, other agencies for integrated management 	<ul style="list-style-type: none"> Review and finalize ArcDev institutional framework, emphasizing cross-sectoral interactions affecting coastal zone Complete policy study on delineation of agency responsibilities Multi-sectoral community organizations organized 600 DENR, DA, LGU staff trained in ICRM 6,500 ha of watersheds reforested or rehabilitated
	<ul style="list-style-type: none"> Lack of awareness regarding upland actions and resultant lower watershed and coastal impacts 	<ul style="list-style-type: none"> awareness and training workshops in 65 municipalities
	<ul style="list-style-type: none"> Poverty in coastal communities 	<ul style="list-style-type: none"> provide environmental infrastructure, including erosion control, sewage/sanitation
	<ul style="list-style-type: none"> Population pressure causing depletion of resources, land degradation 	<ul style="list-style-type: none"> conduct training for reproductive health, contraception
<u>HABITAT DESTRUCTION</u> <ul style="list-style-type: none"> Mangrove and seagrass cutting/ clearing Coral reef damage (dynamite, cyanide, other destructive practices) 	<ul style="list-style-type: none"> Inadequate enforcement and lack of effective economic incentives and disincentives 	<ul style="list-style-type: none"> 50 MPAs established, management plans completed, management activities undertaken <i>bantay dagat</i> trained in enforcement, equipment procured incentive systems pilot-tested
	<ul style="list-style-type: none"> Lack of institutional capacity (technical, administrative) to manage/rehabilitate coastal resources 	<ul style="list-style-type: none"> 600 DENR, DA, LGU staff trained in ICRM 3,500 ha of mangroves brought under improved management
	<ul style="list-style-type: none"> Poverty in coastal communities resulting in use of destructive practices 	<ul style="list-style-type: none"> 6,500 community members trained in promising enterprises

ANNEX A

Threats and Constraints	Root Causes	Key Project Responses/ Interventions
	<ul style="list-style-type: none"> Population pressure causing inappropriate land transformation (e.g., mangroves converted to fishponds) 	<ul style="list-style-type: none"> conduct training for reproductive health, contraception
<u>UNSUSTAINABLE RESOURCE USE</u> <ul style="list-style-type: none"> Overfishing, overharvesting Blast and poison fishing Illegal commercial fishing 	<ul style="list-style-type: none"> Inadequate enforcement and lack of effective economic incentives and disincentives 	<ul style="list-style-type: none"> 50 MPAs established, management plans completed, management activities undertaken municipal waters delineated, licensing system in place <i>bantay dagat</i> trained in enforcement, equipment procured incentive systems pilot-tested policy study on user fees and resource rents eco-certification instruments designed (B2)
	<ul style="list-style-type: none"> Inadequate information for decision-making: establish realistic controls on capture activities (quantitative, spatial, temporal) 	<ul style="list-style-type: none"> Scientific assessment of resources in 6 provinces completed; coastal resource database established biodiversity research conducted, international symposia held
	<ul style="list-style-type: none"> Institutional weaknesses: conservation objectives not firmly mainstreamed into economic development agendas 	<ul style="list-style-type: none"> Review and finalize ArcDev institutional framework Prepare participatory ICRM plans
	<ul style="list-style-type: none"> Lack of awareness and participation regarding long-term consequences of short-term actions 	<ul style="list-style-type: none"> Awareness campaigns implemented in 65 municipalities ICRM centers established for information dissemination
	<ul style="list-style-type: none"> Population pressure causes maximum sustainable yields to be exceeded 	<ul style="list-style-type: none"> conduct training for reproductive health, contraception
	<ul style="list-style-type: none"> Poverty in coastal communities causes adoption of efficient but destructive extraction methods 	<ul style="list-style-type: none"> environment-friendly land- and sea-based enterprises identified, 130 demonstration enterprises established (e.g., ecotourism pilot project)

INNOVATION IN PROJECT DESIGN: THE CORRIDOR APPROACH TO MARINE BIODIVERSITY CONSERVATION

A. INTRODUCTION

1. The proposed Integrated Coastal Resources Management Project (ICRMP) will support innovation by testing new strategies in marine biodiversity conservation. One of the key innovative features of the project design is to undertake conservation efforts through development of networks of marine protected areas (MPAs) within marine corridors that are recognized as having high biodiversity significance. Four marine corridors of critical importance to marine biodiversity have been identified. Within each of these, it is proposed that MPAs will be established to form networks of linked MPAs which is expected to develop synergies among the MPAs within the corridor. These synergies will be of an institutional as well as ecological and biological nature. Networking of MPAs among nearby communities will allow exchange of information for more effective knowledge transfer and problem-solving. In addition, by promoting protection of sites over an extended ocean area within each corridor, greater exchange of fish and larvae will result, thus improving chances of restoring biodiversity where resource depletion and loss of habitat has occurred. One important feature of such an approach is that, by reducing gaps in management coverage within the biodiversity corridors, 'weak links' in the management chain are minimized. This should therefore support more effective management of the marine corridors in their entirety. Further opportunities for replication of this system beyond each corridor area are expected.

B. SELECTION OF MARINE BIODIVERSITY CORRIDORS

2. Based primarily on the results of the *Philippines Biodiversity Conservation Priorities (PBCP)*, sixty-five areas were evaluated as potential locations for biodiversity conservation initiatives. These sites were screened based on some of the key factors that strongly reflect marine biodiversity conservation priorities, including: total marine biodiversity conservation value of the area (as reflected in the PBCP ranking), value of the area for coral reef and reef fish biodiversity, and importance of the area for sensitive species (specifically, dugongs, sea turtles, and cetaceans). In addition, other (non-biodiversity-related) factors were taken into account that affected the suitability of locations as possible areas for biodiversity conservation under the ICRMP. These additional factors included status of the localities as declared National Integrated Protected Areas System (NIPAS) protected areas; attributes adding to the uniqueness or importance of the areas; and detracting or disqualifying factors, such as safety and security issues, and possible redundancy with other major CRM initiatives. A prioritization matrix was used to rank 65 biodiversity-rich areas on a long-list (Table 1).

3. Following a further short-listing process, additional inputs were gathered from academe and scientists, NGOs, members of the conservation community, and representatives from the private sector, during a GEF Planning Workshop held in Manila. These inputs, plus information gathered through additional field visits and consultations with local stakeholders, contributed to the site selection process.

4. During these consultations, the "corridor" approach emerged as a mechanism that could produce strong synergistic advantages. Biologically, marine corridors perform critical functions in maintaining and dispersing globally-important biodiversity, especially by: (i) serving as pathways for migration of flagship species including large fish and marine mammals; (ii) facilitating dispersal larvae of corals and other organisms that can be transported to other sites to regenerate and restore degraded habitats, and re-establish depleted populations of economically important species. In addition, by selecting neighboring municipalities within each corridor as the sites for development of a network of linked MPAs, it was reasoned that it would be possible to develop stronger institutional ties and foster greater cooperation and coordination among the neighboring communities. This cooperation could, for example, help to overcome barriers inadvertently brought about through delineation of municipal water boundaries (which may lead to competition for resources between neighboring communities).

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5. Ultimately, four “extremely high” priority marine biodiversity corridors were selected:
 - The Babuyan marine biodiversity corridor runs around the Babuyan Islands in Northern coast of Luzon joining the Pacific Ocean and the South China Sea. The area is a breeding ground for humpback whales and habitat for many other cetaceans, sea turtles, whale sharks and rays.
 - The Ticao Pass-San Bernardino Strait-Samar Sea marine biodiversity corridor runs past Ticao and Burias Islands. The corridor is an important migratory route for whale sharks, which move transnationally through the seas of the Philippines, into the waters of neighboring countries. Three species of sea turtles, as well as dugongs and cetaceans, have been reported here.
 - Another key area is centered around Daanbantayan, which straddles the rich Visayan Sea to the east and Tañon Strait to the west. Daanbantayan is notable for the presence of a range of larger fish species, including thresher sharks and other shark species, and manta, devil, eagle and reef rays. Extensive coral reefs are found in the area.
 - Fronting the Philippine Sea marine biodiversity corridor in southeastern Mindanao is Pujada Bay area. This corridor is an important point of convergence for bioregions of the Pacific Ocean and the Celebes Sea. Pujada Bay has extensive coral reefs and seagrass beds, and provides habitat for dugongs, whales, dolphins, whale sharks, and sea turtles.
6. Two more areas of “very high” to “high” priority marine biodiversity significance are near to marine corridors. These were assigned a lower rank through the prioritization process, but were nonetheless included within the project framework, since it was felt that including these areas would add features that could contribute to the project’s overall effectiveness. Masinloc, Zambales, is the site of the San Salvador Marine Sanctuary, a long-running MPA project. The project recently received national attention and recognition when the people’s organization (PO) member responsible for management of the MPA was named as ‘national model fisherman of the year.’ A pilot program for transplantation of corals and giant clams (*Tridacna* spp.) has also recently been initiated in cooperation with University of the Philippines. Siquijor, consisting of six municipalities, constitutes a small-island ecosystem that offers unique coastal resources management opportunities and challenges. Through the Local Governance for Coastal Management Project, initiatives have been undertaken around the island for integrated coastal resources management. It is on the basis of these special features that these two areas were selected for inclusion in the project, to serve primarily as sites for knowledge transfer based on lessons learned through past ICRM initiatives. It should be noted that no new MPAs will be established in either of these two areas.
7. The location of these important marine biodiversity corridors is shown in Figure 1. The biodiversity characteristics of these corridors is discussed below in Section C.

C. SELECTION OF MPAS WITHIN CORRIDORS

8. Within the corridor areas identified above, six provinces were selected based on the following: (i) strategic location; (ii) status of coastal communities that can potentially benefit from the enhanced management of coastal resources; and (iii) willingness of provinces and municipalities to support an integrated coastal resources management program. The provinces thus selected were: Cagayan, Masbate, Cebu, Davao Oriental, Zambales, and Siquijor.
9. Within these provinces, multiple municipalities will be targeted. Factors taken into account in the selection of participating municipalities include: (i) no major investments on ICRM activities were made in recent years or are planned under any ongoing projects in the municipality; (ii) existence of a comprehensive ICRM plan, municipal coastal database (MCD), land use plan, or environmental management plan which will hasten project implementation; (iii) existence of a formal office with coastal management responsibility within the municipal administrative set up; (iv) community participation in preparing and implementing development

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schemes, managing resources, and enforcing laws and regulations; and (v) commitment to the Local Government Unit-National Government Cost-Sharing policy and certification by the Bureau of Local Government Finance of the municipality's fiscal capacity to participate in the Project. Based on initial assessment, 65 out of the 120 coastal municipalities in the 6 provinces have been preliminarily selected (Appendix 4 of RRP) and the selection will be confirmed during further processing of the Project. Of the 65 participating project municipalities, 54 lie along the identified critical marine corridor areas. These include all of the project municipalities in Cagayan, Masbate, Cebu, and Davao Oriental provinces. Thus the large majority of ICRMP municipal sites are within important marine biodiversity corridors, and it is within these municipalities that networks comprising some 50 MPAs will be established.

10. The following four MPA sites have been selected for commencement of implementation by year 2: Babuyan Islands (Cagayan), Batuan (Masbate), Daanbantayan (Cebu), and Mati (Davao Oriental).

i. Babuyan Islands, Cagayan Province

11. The Babuyan Islands consist of about 24 islands and shoals of volcanic origin off northern Luzon (18°40'-19°30'N—123°-124°20'E). The islands belong to two municipalities (Aparri and Calayan) in the province of Cagayan. They cover an aggregate area of 58,275 ha.² Fuga Island, and associated smaller islands nearby, are under the political jurisdiction of Aparri, while the rest of the islands belong to Calayan. Fuga Island was declared a Tourism Zone/Marine Reserve under Presidential Decree (P.D.) No.1801 because of its tourism potential; it is also part of the Cagayan Economic Zone Authority (CEZA). Fuga Island and the smaller associated islands are owned by a few wealthy landowners. Fuga Island has a population of 1,496 in 300 households (NCSO, 2000), while the islands comprised within Calayan municipality have a total population of around 14,000 in 3,700 households. About 75 percent of households are wholly or partly dependent upon fishing.

12. Past efforts in coastal resources management were initiated in the Babuyan Islands under the DENR's Coastal Environment Program (CEP). However, these activities only reached the initial community-organizing stage. Nonetheless, the present municipal administration in Calayan has been quite active in attempting to improve management of coastal and marine resources. Efforts have helped to reduce illegal and damaging fishing practices, such as blast fishing. Recently (2001), three Taiwanese commercial vessels caught poaching in coastal waters were apprehended. Two MPAs are also proposed on Minabel Island. In addition, BFAR has provided some assistance by supporting undergraduate scholars at Cagayan State University, conducting surveys, and developing a CRM plan for Babuyan Channel.

13. The Babuyan Islands are included as part of the Sierra Madre Corridor, an implementation site of another GEF-funded project, the Critical Ecosystem Partnership Fund (CEPF). However, it is not expected that there will be redundancy with the proposed ICRMP, because this regional project is aimed primarily at preserving large-scale terrestrial biodiversity corridors. Considerable progress has been made under this project in mobilizing interior communities in the Sierra Madre to help to protect and manage forestry resources and other terrestrial biodiversity. Possibly, linkages could be established between the two projects during implementation, so that they lead to enhanced conservation of the total biodiversity resources of the area. If this coordination is successful, similar linkages could be established for complementary land- and marine-based projects in other sites.

Biodiversity Significance

14. The waters running between the Babuyan Islands, mainland northern Luzon, and the Batanes Islands form the Babuyan biodiversity corridor³ where the Pacific Ocean meets the South China Sea. The waters

² Webster's New Geographical Dictionary

³ PBCP

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surrounding the Babuyan Islands are a breeding ground for humpback whales (*Megaptera novaeangliae*) and also provide habitat for ten other cetacean species (sperm, short-finned pilot, false killer-, melon-headed, and dwarf sperm whales; long-snouted spinner, spotted, bottlenose, fraser and rough-toothed dolphins).⁴ The area is of extremely high priority for protection of these sensitive species. Other documented biodiversity resources in the area include hawksbill turtles,⁵ 75 species of fish,⁶ including whale sharks and rays, and 52 species of red seaweeds.⁷ Undoubtedly, with further field research, other important biodiversity resources will be recorded from this area. The area has marine resources of high economic value. Major fisheries catch includes tuna, sharks, blue marlin, and lobsters.⁸ The relatively unspoiled beaches, coral reefs, and varied biodiversity resources of the area offer potential for future ecotourism development.

Principal Threats

15. Encroachment and illegal poaching, mainly by Taiwanese commercial fishing vessels operating in municipal waters, occur frequently; thus catch levels for commercially-important species are largely unmonitored.. Local fishers are usually hired by the Taiwanese. Blast fishing is still practiced in the area by local fishers and outsiders (though much reduced from prior levels through local enforcement efforts). There is also commercial collection of pebbles (the popular “Camiguin pebble”, used for construction material) from beach deposits in Calayan Island and Camiguin.⁹ While the impacts of this activity have not been fully studied, reports suggest that these beaches have become unstable as a result.¹⁰

ii. Ticao and Burias Islands, Masbate

16. Ticao and Burias Islands in Masbate Province lie to the east and northeast of the main island of Masbate (at 12°15' -50' N-122° 45-124° 00'E) and cover a total land area of some 750 sq. km. The two islands are separated from the southeastern tip of Luzon by the Ticao and Burias passes, which form part of the Ticao-San Bernardino Strait-Samar Sea marine corridor¹¹ that connects the Pacific Ocean with the waters of the inland Sibuyan and Samar Seas. The Philippine fault line passes along the eastern portion of Ticao, and the island has high uplifted limestone cliffs dropping precipitously to the sea that are evident especially on its northwestern end. The island offers scenic views, including high limestone sea cliffs and small islands; a spectacular waterfall, Catandayagan Falls, which spills from the forest atop the cliffs directly to the sea; and distant vistas of Mt. Mayon volcano across the Ticao Pass. Tapus Island has an interior lagoon. Apart from the steepest slope areas, much of the coastline of Ticao is fringed by long coralline sand beaches.

17. Ticao Island includes three of the project municipalities of Masbate Province (San Jacinto, San Fernando, and Batuan) while one additional project municipality is found on Burias Island (San Pascual). Total population for both islands is about 150,000. Population density is quite low (based on national averages), due in part to outmigration. Coconut is the major vegetation along the coast while cogon grows in the hillsides, and the area is utilized for cattle grazing.¹² Most of the grazing areas and plantation lands are controlled by a few owners (about 70% hacienda lands) who may lease the land to local residents. Principal occupations are fishing and agriculture. The municipalities of the islands are rated as fifth class, and the poverty level is high, due in part to lack of employment opportunities. However, a high literacy rate is reported.

⁴ Acebes, J.M., Lesaca, L.A.R. Research and conservation of humpback whales (*Megaptera novaeangliae*) and other cetacean species in the Babuyan islands, Cagayan province, northern Luzon, Philippines.

⁵ Aparri Municipal Coastal Profile

⁶ Bayoga, J., Paguirigan, J.U., Simon J., Coral reef fishes of Camiguin I. Undergraduate thesis. Cagayan State University-Aparri.

⁷ Alada, E., Lazo, R., Navarro, J. The red seaweeds of Calayan I. Undergraduate thesis.

⁸ Pers. Comm., Mayor Joseph Llopis of Calayan.

⁹ Pers. Comm., Mayor Joseph Llopis of Calayan.

¹⁰ Alonso and Llopis, pers. comm.

¹¹ PBCP

¹² CENRO – San Jacinto, Masbate District Profile

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18. While most of the terrain is steeply sloping, most areas are heavily vegetated, with relatively little open ground exposed (eg, Monreal is mostly timberland). As a result it is believed that erosion and runoff are not a major problem at present. The lack of silt results in good ambient water quality observed in nearshore and offshore areas.

19. The 164-ha Bongsanglay Mangrove Reserve, a NIPAS site, has had some successes in management. Baseline surveys have been conducted, a PAMB has been formed and it meets regularly, and there is a level of protection given within the reserve, through the presence of DENR Forest Guards assigned there. Proposals have been made for additional reforestation activities.

20. Through the Community-Based Resource Management Project (CBRMP, World Bank) capacity has been built up in Batuan LGU for CRM activities. A general management plan has been prepared. Capacity has been built for continuing management. Divers capable of doing survey work have been trained, and necessary dive equipment has been purchased. CBRMP is also supporting activities in San Pascual, Burias.

21. With assistance from USAID/CRMP, some progress has been made in curtailing illegal fishing activities. Also, WWF has done surveys for whales in Ticao and Burias, and International Marinelife Alliance and Plan International have also conducted conservation-related activities in the area.

Biodiversity Significance

22. The Ticao and Burias passes, which reach depths up to 700 fathoms, are part of the migratory route of whale sharks,¹³ the largest fish in the world.¹⁴ These whale sharks have been found to migrate transnationally through the seas of the Philippines, Brunei, Malaysia and Vietnam.¹⁵ Three species of sea turtles (olive ridley, hawksbill and green) have been tagged in the waters around Ticao; it is not known whether the turtles utilize the extensive sand beaches of the island for nesting although these beaches appear to offer suitable nesting habitat.¹⁶ Dugongs have been sighted around Burias.¹⁷ The San Miguel Pass, which separates Burias and Ticao, is an area where dolphins were plentiful in the past, but recently, a decline in the population of these animals has been noted, possibly due to increased fishing pressure by residents of Baleno municipality on Masbate, who have traditionally hunted cetaceans. Recently a sperm whale was found stranded on Burias Island.

23. Rapid surveys as part of participatory coastal resource assessments (PCRA)¹⁸ rate most coastal habitats (corals, seagrasses, and mangroves) around Ticao as 'fair' to 'good.' Coral reefs in Batuan have been surveyed and rated as fair to poor in condition.¹⁹ Excellent water quality observed in the passes surrounding Ticao, in combination with fairly strong currents, present favorable conditions that may support growth of healthy coral reefs around other unsurveyed parts of both islands.

24. The 163 ha Bongsanglay Mangrove Reserve, in Batuan, Ticao, is a NIPAS site in which 22 mangrove tree species have been recorded. The reserve harbors extensive stands of old-growth mangroves, including the largest-girth specimen known from the region.

¹³ Eckert, S.A., dolar L.L., Kooyman, G.L., Perrin, W., Rahman, A.R. 2002. Movements of whale sharks (*Rhincodon typus*) in South-east Asian waters as determined by satellite telemetry. J. Zool. Lond. 257:111-115.

¹⁴ Whale sharks are regularly sighted near Burias, and occasionally reported from the deeper waters of the Masbate Pass off western Ticao (informal reports from USAID/CRMP).

¹⁵ Ibid.

¹⁶ CENRO – San Jacinto, Masbate District Profile

¹⁷ DENR Protected Area and Wildlife Board (PAWB) research reports.

¹⁸ USAID/CRMP data.

¹⁹ Community-Based Resource Management Project report.

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Principal Threats

25. Whale sharks are still being hunted in the coastal waters of the Philippines, despite a ban declared by the BFAR. In tagging studies conducted by Eckert et al (2002), a transmitter which had been used to tag a whale shark in Donsol, Sorsogon (across the Ticao Pass) was recovered near a village on Burias Island where a whale shark had reportedly been butchered. Dolphins are also apparently still being captured in the waters between Ticao and Burias.

26. It is reported that productivity of fisheries resources around Ticao is declining. Among the threats to the coral reefs and fisheries resources of these islands are domestic pollution, coral quarrying, and illegal fishing using dynamite, superlights, cyanide, compressor and *hulbot-hulbot* (Danish seine). Mangrove cutting and illegal conversion to fishponds are reportedly occurring, even inside the Bongsanglay Mangrove Reserve. Beach sand extraction for construction purposes and occasional *kaingin* (slash and burn agriculture) have been observed on Ticao.

27. Management is further constrained by institutional weaknesses. For example, while the CENRO office for Ticao/Burias has over 30 staff positions, personnel are not being utilized effectively to carry out basic CRM and conservation activities. Also, those assigned as CMMSs typically come from forestry background and have no formal academic CRM background. Training and resources are lacking. Budget allocations for activities such as mangrove reforestation are very small.

28. Despite generally low population density, localized population pressure and immigration are causing encroachment on the shore and in mangrove habitat in some areas. A high incidence of dengue and typhoid are indicative of improper disposal of waste and inadequate sanitation infrastructure. The immediate threats are further complicated by community apathy and a perceived lack of political will, high poverty level and lack of alternative employment opportunities.

iii. Daanbantayan, Cebu

29. Daanbantayan, located at the northernmost tip of Cebu Island (11°N-124°E), straddles the rich Visayan Sea to the east and Tañon Strait to the west. The municipality includes six small offshore islands and has an aggregate land area of 9,226 ha. The coastline is 42 km long. Population is 69,376 (NCSO, 2000) with a growth rate of 2.8 percent; 90 percent live in the coastal area. Some 11,588 marginal fishermen, about 17 percent of the total coastal population, are based in the coastal communities of Daanbantayan.

30. Despite the institutional weaknesses mentioned above, the LGU has a number of committed personnel involved in coastal resources management matters, including the Municipal Environment and Natural Resource Officer (MENRO) and the Municipal Agricultural Officer (MAO), and their staff. The declaration of three protected areas in Daanbantayan (Gato Island and Monad Shoal are marine protected areas; Lapus-Lapus in Malapascua is also being proposed for protection; and Malapascua, Gato Island and Monad Shoal are declared ecotourism zones) is an initial step that has been taken toward managing important marine biodiversity resources.

Biodiversity Significance

31. International attention has been drawn to Daanbantayan because of the spectacular marine life found on Monad Shoal, a coral shoal believed to serve as a 'cleaning station' for large fishes. Species recorded here include thresher sharks (*Alopias pelagicus*), manta rays (*Manta birostris*), devil, eagle and reef rays, as well as great hammerheads, grey, silvertip and whitetip reef sharks.²⁰ Nearby Gato Island is reportedly a breeding site

²⁰ Paul Foley, Research Agenda. Possible avenues for research on *Alopias pelagicus* and *Manta birostris* at Monad Shoal. 25/5/01.

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for sea snakes. Terns and swifts also nest in the limestone caves of Gato Island. The rare leatherback sea turtle has also been recorded from Daanbantayan waters.²¹

32. Coral reefs in the area are extensive, covering about 20,000 ha and concentrated mostly around the southeastern part of the municipality (Bgy. Bateria) and the offshore islands.²² Live hard coral cover averages between 30-40 percent, but coverage is as high as 90 percent around Carnasa Island. Scattered mangrove stands are found throughout the coastal fringe, but mostly toward the northernmost tip of Cebu. Damage to mangroves has been extensive.

Principal Threats

33. Because of the abundant and varied marine life, dive tourism has increased in the area. In 2001 alone, 1,600 divers were recorded on Malapascua Island. This situation creates economic opportunity but also poses potential threats to biodiversity. Resorts are being built at a fast pace and many are encroaching into the shoreline setback area, or 'salvage' zone, thus obstructing access to the shore by traditional fishers. Pollution and sedimentation are high, especially on the western side of the municipality. In addition, destructive fishing practices using dynamite, cyanide and compressor are still widespread in the area. Much of the coral at Monad Shoal has been reduced to rubble through dynamiting. Blast fishing explosions can be heard regularly around Gato Island (despite its being a protected area), and around Carnasa Island. Extreme fishing pressure from commercial superlight vessels, which enter Daanbantayan municipal waters to fish, is forcing local small-scale fishers to resort to these other destructive practices to survive.

34. The above-described problems are exacerbated by institutional weaknesses, and reported poor governance. One of the MPAs, Gato Island, was formerly being managed by the Cebu College of Science and Technology's Fisheries Department. Management authority was recently transferred to the LGU, with a reported weakening of management effectiveness. Other significant weaknesses have also undermined attempts at conservation and effective management (among them, participation of bantay dagat in illegal blast fishing, and other continuing illegal activities). Pervasive poverty in the area (an estimated 50-60 percent of the coastal population living in poverty, as compared to 32.1 percent for Cebu Province as a whole; 2000 data), contributes to resource degradation in a cyclical fashion, further reducing populations of ecologically and economically important fishes and invertebrates.

iv. Pujada Bay, Mati, Davao Oriental

35. Pujada Bay, covering an area of 21,200 ha, is located in the southeasternmost part of Mindanao (6° 53' N-126° 14' E), facing the Pacific Ocean. There are nine coastal barangays surrounding the bay, all part of the municipality of Mati, Davao Oriental. Total population of Mati municipality is 105,908, with the population around the Pujada Bay area estimated at 65,438 (2000 data). Under P.D. 431, the bay was proclaimed as a NIPAS Protected Landscape and Seascape in 1994.

36. Among the most significant CRM/biodiversity initiatives to have been undertaken in Pujada Bay were activities conducted as part of DENR's Coastal Environmental Program (CEP). Included as part of this program were mangrove reforestation, and set-up of a mangrove nursery area with environmental center and watchtower. It is reported that the implementation of CEP also helped to curb illegal activities in the coastal area.

37. The Pujada Bay PAMB is also very active, and there is strong support from the governor, the PENRO office, and mayor for protection of coastal resources and marine biodiversity. A 'Provincial Coastal Resource Management Program' includes a listing of proposed conservation activities to be implemented over a three-

²¹ PAWB research reports.

²² From Uychiaco, A.

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year timeframe. Members on the PAMB represent a variety of stakeholder interests, and can address cross-cutting issues of upland watersheds and coastal ecosystems. A preliminary management plan for the protected area has been drafted, but considerable work is needed in order to finalize a document that will provide a practical, usable framework for effective management.

38. Several local NGOs²³ are active in the area, and have initiated activities aimed at coastal resource and biodiversity conservation including assistance with enforcement and strengthening of *bantay dagat*; securing funding for livelihood for fisherfolk; and a Biodiversity CRM project being implemented in 2 barangays of Balete Bay. A number of academic institutions²⁴ are also based nearby, and have experience in conducting coastal assessments. There is also a proposal by DoST to establish a small marine reserve to be used solely for biodiversity research purposes. The DENR has initiated a number of IEC activities, including a radio campaign about the Pujada Bay protected area and the need for continued management.

39. A variety of interventions have been initiated in the surrounding watersheds that are intended to minimize impacts of pollution, sedimentation, and runoff on coastal ecosystems. These have included establishment of community-based forestry management areas (CBFMs), reforestation projects, agroforestry, 'adopt a mountain,' campaigns, and use of 'sloping agricultural land technology' (SALT).

Biodiversity Significance

40. Pujada Bay borders the Philippine Sea marine corridor,²⁵ an important point of convergence for bioregions of the Pacific Ocean and the Celebes Sea. The bay has extensive coral reefs consisting of 25 species, with live coral coverage rated good to excellent around several small islands near the mouth of the bay (Pujada, Juanivan, Oak and Ivy islands). Extensive seagrass beds, containing 8 of the 12 seagrass species reported for the Philippines, are also found here (in the inner parts of the bay, and also around Juanivan Island). Dugongs, now quite rare throughout the country, use these beds for grazing.²⁶ There are about 183 ha of native mangrove stands with 12 species. Whales, dolphins, whale sharks, and two species of sea turtles (green and hawksbill) are also reported from the area. The sand bar formation of Oak and Ivy islands is reportedly used as a nesting site by sea turtles. Threatened mollusk species (covered under Philippines Fisheries Administrative Orders [FAO] 158 and 168), including giant clams (*Tridacna* and *Hippopus* spp.) and giant helmet shells (*Cassis cornuta*) are found in fairly large numbers in and around Pujada Bay.

Principal Threats

41. Sedimentation is extremely high due to clearing of hilly terrain in surrounding watersheds for conversion to farmland. Agricultural runoff, domestic wastes from the population center in Mati and surrounding coastal settlements, and discharge from coconut oil and animal feed factories, drain into the bay. Elevated nutrient levels are a likely contributing factor causing frequent red tide outbreaks in the shallow, inner Balete Bay (where water circulation and exchange are poorest). Recent beachings and mortality of dugongs in Balete Bay are as yet unexplained but may be linked to these deteriorating biophysical conditions.

42. A variety of illegal fishing activities occur in the bay, including blast fishing, cyanide, use of active gear (*basnig*), superlight, and illegal entry of commercial fishing vessels (some based in Mati, and others coming from General Santos City). Some violations have blatantly undermined ongoing conservation efforts

²³ Nagkahiusang Mangisda sa Mati Fdn Inc. (NFI), Alang sa Davao Oriental Fdn (ASDOF), and IMFED

²⁴ Zamboanga State College of Science and Technology, Davao State College of Science and Technology

²⁵ Ong, P.S., L.E. Afuang, and R.G. Rosell-Ambal (eds.) 2002. *Philippine Biodiversity Conservation Priorities: A Second Iteration of the National Biodiversity Strategy and Action Plan*. DENR-PAWB, CI-Philippines, UP-CIDS, and FPE. Quezon City, Philippines.

²⁶ Dugongs are also found in Mayo Bay (possibly in greater numbers than in Pujada), an adjacent bay that is open to the Pacific Ocean. While technically outside the Pujada Bay protected area, Mayo Bay is still part of Mati municipality and it may be feasible and appropriate to include within the project dugong conservation activities for Mayo Bay.

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(eg, the burning of a CRM watchtower). These activities are depleting fish stocks, reducing biodiversity, and destroying coral reef and seagrass habitat. The possibility of further unplanned development (eg, from tourism, urban expansion, and intensive agriculture) poses added environmental threats of encroachment, pollution, and habitat loss.

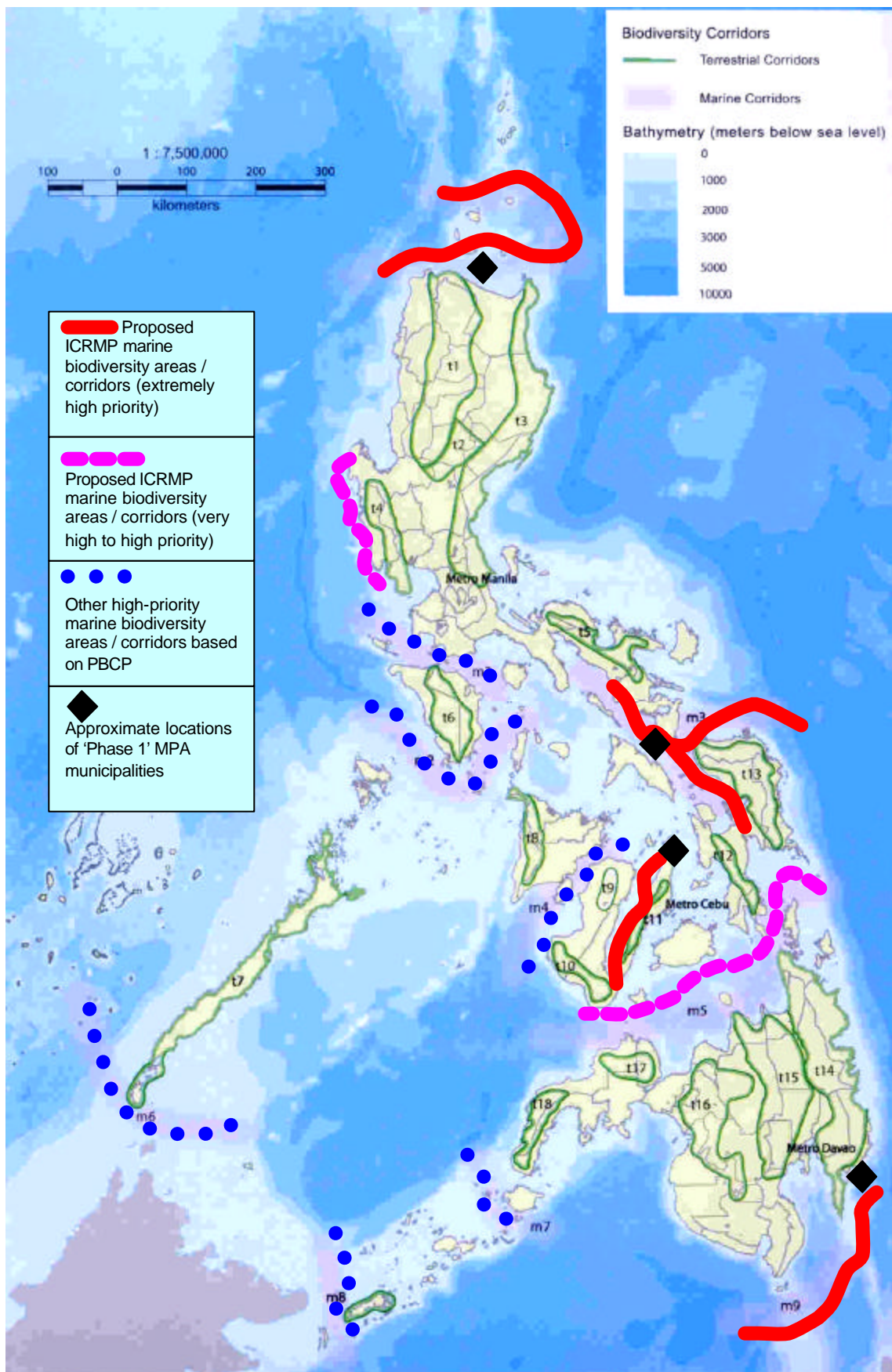
v. Other MPAs

43. While implementation of the above-mentioned four MPAs is underway, further investigations will be conducted to determine appropriate expansion MPAs in other municipalities within the four marine corridor areas. These investigations will include (i) basic biological delineation; (ii) where appropriate, focused studies of special features at the various sites (e.g., populations of threatened species, flagship species, or special habitats); as well as (iii) socioeconomic appraisals and institutional appraisals. The expansion sites will be selected from the list of pre-qualified participating municipalities (Appendix 4 of RRP).

44. Building on lessons learned during initial implementation, new MPAs will be established, or existing MPAs will be strengthened for a total of about 50 MPA sites for the Project. Of these, 15-20 will be new and 30-35 will be existing MPAs. The importance of integrated corridor management will be stressed throughout this process, and mechanisms will be put in place to build synergistic MPA networks, rather than individual MPAs functioning independently of each other at isolated sites.

D. CONCLUSION

45. The marine biodiversity corridors selected as key project implementation sites comprise some of the most outstanding features of marine biodiversity found within the Philippines, including significant threatened and flagship species, as well as high biodiversity value in terms of presence of integrated and intact coral reef, mangrove forest, and seagrass bed ecosystems. Through its innovative approach of establishing networks of MPAs for integrated and holistic management within critical corridor areas, the project seeks to provide an enhanced framework for community-based management of these globally-important resources. If successful, benefits can be extended through replication, not only within the corridors themselves, but also, to other provinces and regions, within the country and beyond.



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PRIORITIZATION OF POSSIBLE ICRMP GEF BIODIVERSITY CONSERVATION AREAS

	MCP=marine conservation priority; CRFS=coral reef or reef fish site; DS=dugong site; CS=cetacean site; TS=turtle site; RS=raw score; AS=adjusted score	biodiversity score						enhancing factors			disqualifying or detracting factors			AS ¹
		MCP	CRFS	DS	CS	TS	RS	associated ICRMP study site (+2)	NIPAS site (+1)	uniqueness (+2)	redundancy w/other projects (-2)	GEF recipient site	security issues	
1	El Nido	XXX	X	X	X	X	7	◆ (Claveria, Cagayan)	◆			*ACC/ACF		8-D
2	Babuyan Islands (Cagayan)	XXX	X		X		5					CEPF		7
3	Danajon Reef (Bohol)	XXX	X				4		◆	◆ (double barrier reef)				7
4	Palau Island	XX	X		X		4	◆ (Claveria, Cagayan)	◆			CEPF		7
5	Turtle Islands, Tawi-Tawi	XXX	X		X	X	6		◆			* CPPAP		7-D
6	Tubbataha Reefs-Cagayancillo Islands, Sulu Sea	XXX	X		X	X	6		◆			*WWF/UNDP		7-D
7	Pujada Bay (Davao Or.)		X	X	X		3	◆ (Mati, Davao Oriental)	◆					6
8	Visayan Sea (Daanbantayan, Cebu)	XXX	X				4	◆ (Daanbantayan, Cebu)						6
9	Ticao-San Bernardino Strait-Lagonoy Gulf (Masbate)	XXX	X				4	◆ (Batuan, Masbate)						6
10	Calamianes Islands (Coron, Busuanga) - Palawan	XXX	X	X	X	X	7		◆ (Coron)		□	CEPF		6
11	Taytay Bay, Palawan	XX	X	X	X		5		◆					6
12	Taño Strait (Cebu and Negros Islands)	XXX	X		X		5		◆					6
13	Siargao Island	XXX	X		X		5		◆			* CPPAP		6-D
14	Cuyo Islands, Sulu Sea	XXX	X			X	5							5
15	Southern Negros	XX	X		X	X	5							5
16	Bohol Triangle	XXX	X		X		5					* FPE/UNDP		5-D
17	Batanes, Northern Luzon	XX	X		X		4		◆			* CPPAP		5-D
18	Zambales Coast		X		X	X	3	◆ (Masinloc, Zambales)	◆		□			4
19	Kalayaan Groups of Islands	XXX	X				4							4
20	Surigao del Sur	XXX	X				4							4
21	Moro Gulf, Mindanao	XX	X	X			4							4
22	Sulu Archipelago, Sulu Sea	XX	X	X			4						□	4-D
23	Zamboanga del Norte, Mindanao	X	X		X	X	4						□	4-D
24	Southern Palawan		X	X	X	X	4						□	4-D
25	Sarangani Bay, Mindanao	X	X		X		3		◆					4
26	Siquijor Island		X				1	◆ (Lazi, Siquijor)						3
27	Southern Leyte	XXX					3							3
28	Western Samar	XXX					3							3
29	Casapsapan, Aurora	X	X		X		3							3
30	Bolinao, Pangasinan	X	X				2							2
31	Guimaras Strait	X	X				2							2
32	Lianga Bay (Surigao del Sur)	X	X				2							2
33	Polillo Island to Camarines Norte	X	X				2							2
34	Antique-Semirara Islands		X			X	2							2
35	E. Samar		X			X	2							2
36	Lubang Island, S. Luzon		X	X			2							2
37	N. Samar		X		X		2							2
38	Romblon-Sibuyan Island		X		X		2							2
39	Samar Sea		X			X	2							2
40	Scarborough Shoal		X		X		2							2
41	Sultan Kudarat-South Cotabato		X	X			2						□	2-D
42	Zamboanga del Sur (Dumanquillas Bay)		X			X	2						□	2-D
43	Malampaya Sound, Palawan		X				1		◆					2
44	Apo Reef, Mindoro		X				1		◆			* CPPAP		2-D
45	Bantayan Island, Cebu		X				1							1
46	Bacon, Sorsogon			X			1							1
47	Biri Is-Balicut Islands (N.W. Samar)		X				1							1
48	Camiguin Island		X				1							1
49	Casiguran Sound, Aurora			X			1							1
50	Comotes Island (Leyte)		X				1							1
51	Davao Gulf		X				1							1
52	Davao Oriental		X				1							1
53	Fuga Island, N. Luzon		X				1							1
54	Gov. Generoso (Davao Oriental)		X				1							1
55	Guiuan (S. Samar-N. Surigao)		X				1							1
56	Honda Bay, Palawan		X				1							1
57	Lian - Calatagan, Luzon		X				1							1
58	Lingayen Gulf, Luzon				X		1							1
59	NE Panay		X				1							1
60	Oras Bay (E. Samar)		X				1							1

PROJECT LOGICAL FRAMEWORK

Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
Goal Enhanced coastal resources Poverty reduction in the coastal areas	Depletion of coastal resources is arrested and 30% improvement in productivity and biophysical state of resources by year 20 Poverty incidence in coastal communities reduced by one third by year 20	National statistics, and State of Ocean Reports National statistics and livelihood surveys	
Purpose Sustainable management of the coastal resources Improved income levels for the coastal communities	10% improvement over baseline levels in fisheries resources and 10% improvement in hard coral cover and 20% improvement in mangrove density in participating municipalities by year 7 10% increase in real household incomes of fisher folk households over baseline by year 7	State of the Ocean Reports of DENR, Coastal and Marine habitat monitoring reports, Project impact assessments, PCR and PPAR National Household Level surveys, Project impact assessments, PCR and PPAR	<u>Risks</u> Degradation of global environment and macroeconomic conditions
Outputs 1. Policy environment and legal framework for Integrated Coastal Resources Management (ICRM) rationalized, institutional capacities strengthened and improved governance 2. ICRM institutionalized and functional at the local levels, and coastal ecosystems and resources in the threatened areas of biodiversity are protected and managed	Increased stakeholder participation in major policy decisions, and resource and budget allocation for ICRM by year 4 Participating LGUs score at least 75% on the Ecogovernance Index and the Project score at least 80% by year 6 In the 65 participating municipalities, 50,000 ha of coral reefs with 5,000 ha of no take zones, 6,000 ha of mangroves, and 6,500 ha of watersheds are managed with active participation of communities by year 6 50,000 ha of coral reefs and 3,500 ha of mangroves are under improved management and 2,500 ha of mangrove reforested and managed by year 6 Incidence of illegal fishing, threats to marine habitats and encroachments to foreshore areas reduced by 50% by year 6	Department Administrative Orders and Legal Instruments, and Project PPMS LGU's ICRM reports, Project Impact Assessment, and PPMS Municipal Development Plans, and LGU budget documents Municipal Development Plans, Records of ICRM organizations, and PPMS Records of ICRM organizations, and PPMS	<u>Assumptions</u> Enforcement of regulations and other instruments.

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
	At least 30 percent increase in fish density and 5 percent increase in fish species richness over baseline in no take zones within the MPAs by year 6	Reports of participatory and scientific assessments, Records of ICRM and community organizations, and Project Impact Assessment	
3. Alternative and supplementary livelihoods provided	By year 6, 780 enterprises are established of which at least 60% remain operational beyond their first year of operations	Records of ICRM and community organizations, PPMS, and Project Impact Assessment	
4. Improved health and social conditions in the coastal communities	The enterprises provide supplemental employment opportunities to 7,800 of which at least 30% are women At least 1,000 households with improved access to safe drinking water, and 1,000 households with access to improved sanitation facilities by year 6 Households in at least 65 barangays benefiting from social facilities such as community centers, daycare centers, and new classrooms by year 6	Records of community organizations, Training reports, and PPMS Records of ICRM and community organizations, PPMS, and Project Impact Assessment Records of ICRM and community organizations, PPMS, and Project Impact Assessment	
Activities			
A. Policy and Institutional Strengthening and Development			
A-1: Policy Aspects a. Establish and implement institutional framework for coordinating ICRM b. Finalize ICRM Policy	Review and finalize institutional framework (ArcDev) prepared by the Government in year 1 Coordinating bodies at national, regional and provincial levels established and funded by year 2 Review of draft ICRM policy prepared by the Government completed in year 1 Policy studies on marine pollution, mangrove management, foreshore management, coastal tourism, environmental impact assessment, biodiversity conservation and trade in coral reef associated fish and vertebrate species completed by year 3 Department administrative orders to implement new CRM policy issued by year 3	Study reports, Department Records, and PPMS Study reports, Department Records, and PPMS Study reports, Department Records, Legislative records, and PPMS	<u>Assumption</u> National Government remains committed to ICRM and biodiversity

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
	Draft ICRM law prepared for submission to the congress by year 4 Policy study on marine protected areas under the national integrated protected area systems act completed by year 2 and the act revised on basis of its recommendations by year 3		
c. Clarify the roles of DENR, DA, LGUs and other stakeholders in implementing the new ICRM policy and institutional frameworks d. Develop means of sustainable financing for ICRM operations e. Undertake ICRM policy awareness and advocacy campaigns	Policy study on delineation of responsibilities completed and the recommendations implemented through relevant administrative orders by year 2 Policy study on user fees and resource rents for mangroves, coral reefs, beaches, foreshores, fisheries and mariculture and on appropriate implementation arrangements is completed by year 3 Pilot testing in 6 locations completed by year 3 Campaigns conducted for DENR, DA, 6 provinces and 65 LGUs by year 3	Study reports, and Department Records Study reports, and PPMS Campaign reports, and PPMS	
<u>A-2: Capacity Building and Institutional Development</u> a. Develop and implement human resources and institutional development strategies for DENR, DA and LGUs b. Develop the ICRM and marine biodiversity research agenda for DENR and DA	Assessment of human resources and institutions, and capacity building requirements of DENR, DA and LGUs and develop strategies to address these developed by year 2 Respective strategies are owned by DENR, DA and LGUs 600 DENR, DA and LGU staff are trained in various aspects of ICRM by year 6 Research agenda and plans are approved by year 2	Study reports, Budget documents and Department Records, and PPMS Study reports PPMS	<u>Assumption</u> Sufficient numbers of qualified personnel will be available for training when required
<u>A-3: Performance based Incentive and Disincentive System</u> a. Identify and pilot test	Existing incentive and	Study reports, and	<u>Assumption</u>

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
appropriate incentive systems for ICRMs that link to ICRM certification systems adopted by DENR's Coastal and Marine Management Office	disincentive systems at local, national and international levels documented by year 2 Promising incentive systems pilot tested in 6 municipalities by year 3	PPMS	National Government's commitment to provide incentives to the performing municipalities
b. Design and implement an effective incentive system linked to ICRM certification	Incentive system designed and documented, and endorsed by at least 3 NGAs in year 4 Awareness and training workshops conducted in each of the 65 municipalities conducted in year 4 Incentive system is adopted in at least 50% of the municipalities by year 6	Administrative records, Workshop proceedings, Municipal Development Plans and LGU Budgets PPMS	
B. ICRM and Biodiversity Conservation			
<u>B-1: Integrated coastal resource management (ICRM)</u> a. Undertake awareness and education campaign	Awareness campaigns for communities and LGU staff designed by year 2 Awareness campaigns implemented in the communities neighboring the 65 municipalities completed by year 6	Campaign reports, and PPMS	<u>Assumptions</u> Municipalities continued commitment to ICRM, and community participation in the planning, budgeting and execution of management plans Communities' commitment to the ICRM and their effective enforcement of the ICRM regulations in the municipal waters Continued backstopping of the
b. Undertake the coastal resources assessment through participatory coastal resources assessment (PCRA) and scientific observations	PCRAs completed in 65 municipalities (including MPAs), and coastal resource maps indicating location, extent and use patterns in year 2 and updated in year 6 Scientific assessments of resources and habitats in 6 provinces completed in years 1, 3 and 6 Coastal resource database established by year 2	Study reports, and PPMS	

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
c. Develop and strengthen ICRM organizations	Multi-sectoral and community organizations including Fish and Aquatic Resources Management Committees, NGOs, community organizations and Bantay Dagat) organized in 65 municipalities by year 6 195 members of ICRM organizations trained in organizational aspects by year 3 975 members of ICRM organizations trained in ICRM by year 3	Records of ICRM organizations, Training records, and PPMS	LGUs by the national government agencies in technical and enforcement matters
d. Prepare participatory ICRM plans and institutionalize these in LGU planning and budgeting	Participatory planning workshops undertaken in 65 municipalities in year 2 Integrated ICRM plans including the upland management developed and incorporated in municipal development plans in 65 municipalities by year 2 and updated annually during project implementation Each of the 65 municipalities provides an adequate annual allocation for ICRM activities for years 2-6	PPMS, Municipal Development Plans, and LGU Budgets	
e. Participatory implementation of ICRM plans	Planning and coordination hubs established at the provincial levels in year 1 Municipal coastal databases established in 65 municipalities by year 2 Environmental impact monitoring system established in 65 municipalities by year 2 Municipal water delineated into zones and a system of licensing in place in 65 municipalities by year 2 By year 6, sustainable financing mechanisms (user fees, rents and revenue generation) are introduced in at least 33% of the municipalities	Administrative orders, Municipal Development Plans, LGU Budgets, ICRM organizations' records, and PPMS	
f. Rehabilitation and management of mangroves and watersheds through community participation	By year 6, 3,500 ha of mangroves brought under improved management and 2,500 ha of mangroves reforested By year 6, 3,500 ha of watersheds rehabilitated and	Municipal Development Plans, LGU Budgets, ICRM organizations' records, and PPMS	

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
	3,000 ha of watersheds reforested		
g. Design and implement participatory enforcement mechanisms	650 Bantay Dagat (marine watch team) members and 650 community members familiarized in fisheries laws and regulations by year 3 65 legal seminars conducted for the local judges by year 2 650 Bantay Dagat members and 650 community members trained in enforcement related activities by year 3 77 patrol boats and 77 sets of enforcement equipment procured by year 2	Administrative orders, Municipal Development Plans, LGU Budgets, ICRM organizations' records, and PPMS	
<u>B-2: Biodiversity Conservation</u>			
a. Establishment of ICRM centers	5 centers established by year 2	Study reports, and PPMS	<u>Assumptions</u> LGU's and communities' continued commitment to the biodiversity conservation
b. Conduct focused research on critical biodiversity resources	30 studies on habitat condition, population size of threatened species, trends in coastal resources and baseline studies completed by year 6 5 international evaluation symposia, each with up to 100 participants, are held by year 6	Study reports, PPMS, and Symposia Records	
c. Identify marine protected areas (MPAs), networks or corridors of MPA	50 MPAs for effective management with at least 5,000 ha of sanctuary (no take) areas identified by year 3	Study reports, Administrative orders, and PPMS	
d. Prepare and implement integrated management and rehabilitation plans	Management plans for the 50 MPAs developed by year 3 At least 5 coordinating bodies to manage MPA Networks and Corridors by year 2 MPA database and rating system operationalized by year 2	Administrative orders, Municipal Development Plans, LGU Budgets, ICRM organizations' records, and PPMS	
e. Habitat rehabilitation, restoration and stock enhancement	By year 6, management activities undertaken in the 50 MPAs	Administrative orders, Municipal Development Plans, LGU Budgets, ICRM organizations' records, and PPMS	

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
f. Establish and strengthen eco-certification of sustainable harvesting activities	Appropriate eco-certification instruments designed and 325 community members, 325 traders and 325 LGU staff trained in eco-certification by year 6 In 50 MPAs, trade of marine species regulated and managed through eco-certification by year 3	Study report, LGU eco-certification records, and PPMS	
C. Enterprise Development and Income Diversification			
a. Mobilize self-reliant community groups	650 community groups established by year 6 Organizational training and needs assessment completed in 650 community groups by year 6 Internal savings mobilized in 75% of the community groups by year 6 By year 6, 50% of community groups are linked to sources of credit	Records of ICRM organizations, Training records, and PPMS	<u>Assumptions</u> The NGOs with adequate coverage in the municipalities and with the proper orientation are recruited in a timely manner. Adequate coverage of microfinance institutions in the project area. Enterprise Development Units are established and staffed in timely manner.
b. Environment friendly land and sea based enterprises identified, pilot tested and developed in participating municipalities	6 Enterprise Development Units established and 100 staff trained in business development planning by year 2 20 Fish related and land based activities identified through needs assessment, skills inventories and 12 market studies undertaken by year 6 130 demonstration enterprises established by year 6 6,500 (100 per municipality) community members trained in the promising enterprises and entrepreneurial skills by year 6 5 pilot eco-tourism initiatives conducted by year 6	Administrative records, Community groups' activity reports, Training reports, PPMS PCR and PPAR	
D. Social and Environmental Services and Facilities			
a. Assess need and feasibility for social and environment related infrastructure	Assessments completed in 65 participating municipalities by year 6 Feasibilities and Initial environmental evaluations or environmental impact assessments completed for 130 schemes by year 5	Study report Feasibility and IEE or EIAs, and PPMS	<u>Assumptions</u> The LGUs have competent engineering staff to undertake the surveys, basic designs and environmental assessments.
b. Provide social and environment infrastructure addressing priority environmental and social needs	130 infrastructure schemes completed by year 6	ICRM Organizations' reports, Completion Certificates, and PPMS	

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Design Summary	Indicators and Targets	Monitoring Mechanism	Assumptions and Risks
c. Design and implement population management program	Training modules for education on reproductive health, contraception and link between population and environmental quality by year 2 650 barangay health workers and 25,000 persons trained through population management program by year 6	Training records, and PPMS	
Inputs Resource Management Capacity Building NGO Services Demonstration and Trials Dissemination Activities PPMS, Studies, Surveys and Audits Consulting Services Equipment and Materials Vehicles Land Purchase Civil Works Implementation and Supervision <u>Recurrent Costs</u> Total Base Costs	Resources (\$ million) 5.09 2.25 2.86 1.05 2.51 4.90 5.18 2.52 1.31 0.89 8.26 4.57 <u>8.46</u> 49.84	Loan and Financial Information System (LFIS), PPMS, and Project Progress Reports	<u>Assumptions</u> Timely compliance with the relevant assurances and loan covenants Timely establishment of project offices and recruitment of consultants Contracts will be negotiated and awarded in a timely manner Equipment will be procured in a timely manner Adequate counterpart funding will be available when required

OTHER GEF ASSISTANCE TO THE PHILIPPINES

1. GEF has made significant direct contributions to conserving important Philippine biodiversity resources, both through regional project and projects specifically targeting the Philippines. The GEF-supported projects that are directly or indirectly supporting marine biodiversity conservation are listed in Table 1. Selected projects that are believed to have the greatest relevance to ICRMP are discussed in greater detail below.

**Table 1: GEF-Supported Projects for Biodiversity Conservation in the Philippines
(includes regional projects)**

Project Name date approved GEF grant (US\$ millions) Project Cost (US\$ millions)	Donor, Cooperating, Implementing, and Recipient Agencies/ Institutions	Marine Biodiversity Conservation Objectives and Geographic Coverage
Marine Aquarium Market Transformation Initiative Approved: 21 May 2004 GEF grant: \$6.915 Project Cost: \$22.281	GEF/IBRD/IFC/Marine Aquarium Council	Ensuring that the marine aquarium industry is transformed to become a principal driver of marine biodiversity conservation, sustainable use, sustainable livelihoods for coastal communities in the Philippines and Indonesia
Asian Conservation Corporation/ Asian Conservation Foundation (ACC/ACF) Approved: 17 May 2002 GEF grant: \$1.600 Project Cost: \$16.400	GEF, World Bank, IFC, ACC/ACF, World Wildlife Fund	public-private partnership promoting sustainable conservation and use of marine resources in El Nido, Palawan (ecotourism development through Ten Knots Corporation) and sites in Negros Occidental (development of sustainable blue crab fisheries through Stellar Seafoods)
Bohol Marine Triangle (BMT) Approved: 5 Dec 2000 GEF grant: \$0.743 Project Cost: \$1.381	GEF, UNDP, Foundation for Philippines Environment	conservation of coral reefs and associated marine biodiversity resources around Panglao, Pamilacan and Balicasag islands of southwestern Bohol
Critical Ecosystem Partnership Fund (CEPF) Approved: 1 July 2000 GEF grant: \$25.000 Project Cost: \$100.000	GEF, Conservation International, MacArthur Foundation, World Bank	Regional program for maintenance of biodiversity corridors; in the Philippines areas include: <u>Sierra Madre Corridor</u> : terrestrial zone defined by the Sierra Madre mountain range in Northern Luzon, but also including some of the Batanes-Babuyan islands straddling the South China Sea <u>Palawan Corridor</u> : including terrestrial communities ranging from high biodiversity value botanical assemblages on the Balabac Islands to karst islands in northern Palawan (El Nido, Calamianes) <u>Eastern Mindanao Corridor</u> : forming part of the Greater Mindanao Biogeographic Region, and bordered at the north by Siargao island, a Protected Landscape and Seascape.

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Project Name date approved GEF grant (US\$ millions) Project Cost (US\$ millions)	Donor, Cooperating, Implementing, and Recipient Agencies/ Institutions	Marine Biodiversity Conservation Objectives and Geographic Coverage
Tubbataha Reefs National Marine Park (TRNMP) Approved: 20 March 2000 GEF grant: \$0.775 Project Cost: \$1.759	GEF, UNDP, WWF-Philippines	promote effective management of the marine park, a declared World heritage site, through implementation of the approved TRNMP Management Plan
Coastal Marine Biodiversity Conservation (CMBC) Project Approved: 7 May 1999 GEF grant: \$1.250 Project Cost: \$6.050	GEF, World Bank, DENR Region 12, Department of Agriculture (Mindanao Rural Development Project), ARMM	biodiversity conservation of Paril-Sangay Protected Seascape and Bongo Island, Southern Mindanao
Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) Approved: 1 Nov 1998 GEF grant: \$16.224 Project Cost: \$28.545	GEF, UNDP, IMO (International Maritime Organization), SIDA	building partnerships within the coastal countries of East Asia to remove barriers to effective environmental management, through integrated coastal management, and risk assessment/risk management; demonstration sites in the Philippines are Manila Bay, Batangas Bay, and Bataan.
Conservation of Priority Protected Areas Project (CPPAP) Approved: 1 May 1991 GEF grant: \$20.000 Project Cost: \$22.856	GEF, World Bank, DENR, NGO consortium	Pilot-testing of NIPAS system for biodiversity conservation including the following marine/coastal sites: <ul style="list-style-type: none"> • Batanes Protected Landscape and Seascape • Apo Reef Natural Park • Turtle Island Wildlife Sanctuary • Siargao Island Protected Landscape and Seascape

2. The *Marine Aquarium Market Transformation Initiative*, approved in 2004, is to be implemented in the Philippines and Indonesia. The purpose of the project is to develop mechanisms for ensuring the sustainability of the marine aquarium fish trade, in order to conserve unique marine biodiversity resources. The principal project proponents include the Marine Aquarium Council and ReefCheck. Methods used in furthering this purpose include eco-certification at various stages in the capture and marketing chain. While eco-certification is one of the activities earmarked for implementation under ICRMP, it is not the main focus of ICRMP, which rather takes a much larger macro-scale ecosystem approach to biodiversity conservation. Thus it is not expected that the two projects will overlap or conflict. Rather, through discussions already initiated, it is expected that synergies may be developed by which both projects may benefit.

3. One of several GEF-supported projects in the Philippines that have influenced the design of the proposed ICRMP, and that will likely continue to exert influence on the project through its subsequent implementation, is the *Bohol Marine Triangle (BMT)* project. The BMT is a project for community-based management of coral reefs and associated marine biodiversity resources around Panglao, Pamilacan and Balicasag islands in southwestern Bohol. Its methodologies are similar to those being proposed for ICRMP. It is expected that valuable lessons learned from this project may be applicable for the ICRMP, especially regarding interventions at the nearby Danahon Reef biodiversity site in northern Bohol. Opportunities may also exist for synergies to develop between the two projects' Bohol implementation

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sites, especially in the areas of cross-training visits, management of resources around small island ecosystems and communities, and networking of MPAs.

4. Another GEF-funded project, the *Asian Conservation Corporation/Asian Conservation Foundation (ACC/ACF)* project, has also had some influence on design of the ICRMP. As of June 2004, the ACC/ACF project has been approved but not yet begun. The project proposes to conserve significant coastal and marine biodiversity through a partnership between a private equity investment company (ACC), and a non-profit funding institution (ACF). Biodiversity conservation and equity investment will be integrated to encourage local firms to actively support conservation in six biodiversity-rich areas. ACC companies will channel a portion of their revenues into an endowment to be managed by ACF. The endowment and continuing contributions to the ACF will be used to sustain conservation efforts over the long-term. The first stage of the project will be used to support conservation activities in El Nido, Palawan, where ACC's initial investment activities will be made in the El Nido Resorts of Ten Knots Corporation. The second phase will be used to support conservation activities at sites in the central and western Visayas and Mindanao associated with Stellar Industries, a seafood production and processing concern which is ACC's second planned investment.

5. The implementation arrangements for the ACC/ACF project represent one of several alternative strategies that could potentially ensure sustainable financing for conservation activities. In order to avoid redundancy with the ACC/ACF project, it was determined that the ICRMP would explore other strategies to achieve financial sustainability. Thus the ICRMP design incorporates a variety of financial incentives and disincentives (such as governmental budget allocations, user fees, licensing fees, fines, private and institutional donor contributions, etc.) rather than direct investments per se, to secure funding for conservation activities. Applying these two different models will allow a wider range of options to be considered for financing future conservation efforts.

6. Another GEF project that has particular relevance to the ICRMP is the *Critical Ecosystem Partnership Fund (CEPF)* project. This regional project is aimed primarily at preserving biodiversity corridors, especially in terrestrial ecosystems. One of the CEPF sites, the Sierra Madre Corridor of Northern Luzon, is defined to include the Babuyan Islands. While this might lead to the assumption that ICRMP-supported biodiversity conservation activities in the Babuyan Islands would duplicate CEPF-funded activities, this is unlikely, given the focus of CEPF mostly on terrestrial biodiversity resources. On the contrary, it is hoped that through close coordination during implementation, activities for both projects could be carried out so that cumulatively, they lead to enhanced conservation of the total biodiversity resources of the area. If this coordination is successful, similar linkages could be established for complementary land- and marine-based projects in other sites.

PROJECT CONTRIBUTIONS TO KEY INDICATORS OF BUSINESS PLAN

1. In recent guidance documents²⁷ GEF details directions and targets for its various operational programs. The directions and targets for the Biodiversity Conservation focal area are based on recommended measures to (among others) (i) ensure better sustainability and replicability of results; (ii) move beyond project-based emphasis to a more strategic approach to address biodiversity conservation over the long term; and (iii) improve dissemination of tools, lessons learned, and best practices.

2. Strategic priorities that are identified for Biodiversity Conservation are:
- (BD-1): Catalysing sustainability of protected areas
 - (BD-2): Mainstreaming biodiversity in production landscapes and sectors
 - (BD-3): Capacity building for the implementation of the UN Convention on Biological Diversity, Cartagena Protocol on Biosafety; and
 - (BD-4): Generation and dissemination of best practices for addressing current and emerging biodiversity issues.

Of these, BD-1, BD-2, and BD-4 have relevance to the ICRMP project.

4. In the matrix, “Programming for the Biodiversity Focal Area for GEF 3” targets are defined for each of the ‘emerging strategic directions.’ For BD-1, the targets relevant to ICRMP are:

- at least 15 countries receive support for strengthening PA systems to ensure their long-term sustainability;
- at least 400 PAs supported, of which at least 20% should be new additions;
- at least 70 million ha of PAs supported;
- at least 30% of total resources dedicated to capacity building with special attention to indigenous and local communities.

5. For the BD-2 strategic priority for mainstreaming biodiversity conservation in production systems, the targets relevant to ICRMP are:

- at least 5 projects in each production sector (agriculture, forestry, fisheries, tourism)
- at least 20 million ha of production landscapes and seascapes contribute to biodiversity conservation;

6. Finally, for BD-4, the target for dissemination of best practices having relevance to ICRMP is:

- improved compilation and dissemination of best practices on specific themes.

7. Based on these key indicators, the ICRMP will support GEF’s stated strategic priorities. The project supports BD-1, because it will (i) establish networks of MPAs as a means to strengthen and extend the conservation benefits of MPAs; (ii) work towards strengthening MPAs in the existing national PA network; (iii) build capacity for more effective MPA management; (iv) emphasize participation of the local community as a means of achieving sustainability; and (v) promote replication of the MPA as an effective management and conservation tool.

8. The project also advances BD-2, since it will (i) support sustainable fisheries production by maintaining viable breeding populations, and, (ii) develop market incentive measures (e.g., eco-certification) to enhance the economic benefits to be realized through sustainable management of biodiversity.

9. Additionally, the project is in conformance with BD-4, since it will (i) support research that will improve and strengthen ICRM and biodiversity conservation best practices; (ii) pilot-test innovative methods for biodiversity conservation, through habitat rehabilitation and restoration, and stock

²⁷ GEF Council. April 17, 2003. *Strategic Business Planning: Direction and Targets*. GEF/C.21/Inf.11.

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enhancement; and (iii) establish ICRM centers to disseminate information on marine biodiversity conservation, through public awareness, research, training and outreach, and international workshops and symposia.

10. At the present time, a Project Information Biodiversity Form (PIBF) is being developed as a tool for monitoring and evaluation of project results. It is expected that the Form will make use of the same targets and indicators described above. The ICRM project has already taken these indicators into consideration and will be well-prepared to utilize them as a basis for its long-term monitoring activities.

INCREMENTAL COST ANALYSIS

A. BROAD DEVELOPMENT OBJECTIVE

1. The Government of the Philippines (GOP) adheres to the goals of the Convention on Biological Diversity (CBD) that it ratified on 8 October 1993 and the agreements made at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil. In line with these commitments, the Philippines developed a *National Biodiversity Strategy and Action Plan (NBSAP)* in 1996, which has been recently updated.²⁸ This is the framework upon which national efforts in biodiversity conservation and management are based. GOP's Department of Environment and Natural Resources (DENR) has also formulated the *Philippines Biodiversity Conservation Priorities (PBCP)*, a prioritization of marine and terrestrial biodiversity sites nationwide according to their importance in contributing to overall biodiversity within the country and according to the degree of urgency for conservation. Implicit in this priority-setting exercise is the intention on the part of the government to take the aggressive steps needed to conserve important biodiversity resources. Through its *Medium-Term Philippine Development Plan (MTDP), 1999-2004*, the GOP indicated its commitment to the principle of environmental sustainability in pursuing economic growth. Specific targets for coastal and marine resources management are provided for in the plan. In *ArcDev: A Framework for Sustainable Philippine Archipelagic Development* (2003), the DENR outlines a draft strategy and institutional set-up for sustainable management of marine and coastal resources. Through these various plans and policy instruments, the GOP clearly demonstrates the high priority being placed on the conservation and management of its natural resources, including marine biodiversity, within an overall sustainable development context.

B. RATIONALE FOR GEF INVOLVEMENT

2. The Philippines is recognized as one of earth's biodiversity hotspots, and one of just 17 'megadiversity' countries.²⁹ The Philippines' marine systems stand out as some of the most important among some 237 ecoregions³⁰ identified as areas where the Earth's biological wealth is most distinctive and rich, and where its loss will be most severely felt if conservation efforts are not successful.

3. The Philippines archipelago comprises over 7,100 islands bounded by the South China Sea, Pacific Ocean, and Celebes and Sulu Seas, with a total ocean area of 2.2 million square kilometers (km²) and coastline of over 36,000 km. The Philippine coastal zone covers a total of about 11,000 km² of land and 267,000 km² of coastal waters. The nation lies at the global epicenter of marine biological diversity known as the 'Coral Triangle,' roughly bounded by the Philippines to the north, Indonesia to the west, and Papua New Guinea and Australia's Great Barrier Reef to the southeast. For many Indo-Pacific marine species, the Philippines is situated at or near the center of their distribution range.³¹ The coverage of coral reefs is estimated at around 25,000 km², roughly 10 percent of the country's total land area. The country's coral reefs host about 400 species of corals, 970 species of benthic algae, and a third of the 2,300 fish species of Philippine waters. Coral reef areas also provide feeding grounds for larger pelagic species, including sharks and rays, whales and dolphins, and sea turtles.³²

4. Two other major associated marine coastal ecosystems, mangrove forests and seagrass beds, also contribute significantly to the country's total marine and coastal biodiversity. About 138,000 hectares of mangrove forest (1990 figure) occur in the Philippines,³³ containing about 370 species of plants and

²⁸ Ong, P.S., L.E. Afuang, and R.G. Rosell-Ambal (eds.) 2002. *Philippine Biodiversity Conservation Priorities: A Second Iteration of the National Biodiversity Strategy and Action Plan*. DENR-PAWB, CI-Philippines, UP-CIDS, and FPE. Quezon City, Philippines.

²⁹ Critical Ecosystems Partnership Fund (CEPF) 2002. *The Philippines Hotspot*.

³⁰ In 'The Global 200', a World Wildlife Fund (WWF) survey.

³¹ University of the Philippines-Center for Integrative and Development Studies/Protected Areas and Wildlife Bureau (DENR)/Conservation International Philippines (January 2000). *Highlights of the planning meeting: National Biodiversity Conservation Priority-Setting Workshop*. Eugenio Lopez Center, Antipolo.

³² Asian Development Bank (15 February 2000). Integrated Coastal Resources Management (ICRM) Project. GEF proposal for entry into pipeline and GEF Block B grant.

³³ DENR/UNEP 1997. *Philippines Biodiversity: an assessment and action plan*. Bookmark, Makati.

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animals.³⁴ Sixteen species of seagrasses have been recorded for the Philippines, a level of diversity, which is second only to Australia's.³⁵ No accurate estimates of the extent of coverage of seagrass beds in the Philippines are available.

5. In addition to the inherent biodiversity value of these important resources are also significant economic values. Coral reefs yield a range of products and generate economic benefits through: (i) harvest of products for direct food consumption, including fish, crustaceans, mollusks, and other aquatic organisms;³⁶ (ii) use of coral reef areas for scuba diving and other tourism and recreational activities; (iii) capture of live fish and other organisms for the live food fish trade and for aquariums; (iv) harvest of shells and other decorative materials; (v) gathering of coral materials used for construction; (vi) use of coral reef organisms for development of new drugs and chemical compounds in the pharmaceutical industry; and (vii) study of coral reefs for research and educational purposes. In addition to these uses and potential values, coral reefs also perform important physical functions by protecting shorelines from erosion, and adding coralline sand for the build-up of beaches. Shore protection and beach-building contribute significantly to the economic value derived from coral reefs. Estimates have been made of the potential sustainable annual economic benefits for coral reefs in the Philippines, and are presented in Table 1.

Table 1: Sustainable Coral Reef Resource Use Values by Habitat Quality/Condition for the Philippines, in 1998 Terms

Resource Use	Production Range			Range of Potential Annual Revenue (\$)		
	Poor	Fair	Excellent	Poor	Fair	Excellent
Sustainable fisheries (local consumption), tons	2 - 6	4 - 12	10 - 30	3,000 - 9,000	6,000 - 18,000	15,000 - 45,000
Sustainable fisheries (live fish export), tons	0.1 - 0.5	0.25 - 0.75	0.5 - 1.0	1,000 - 5,000	2,500 - 7,500	5,000 - 10,000
Tourism (on-site residence), number of visitors	20 - 200	40 - 400	100 - 1,000	400 - 4,000	800 - 8,000	2,000 - 20,000
Tourism (off-site residence), number of visitors	100 - 200	200 - 400	500 - 1,000	500 - 1,000	1,000 - 2,000	2,500 - 5,000
Coastal protection (prevention of erosion)				1,000 - 5,000	2,000 - 10,000	5,000 - 25,000
Aesthetic/biodiversity value (willingness-to-pay)			600 - 2,000	480 - 1,600	960 - 3,200	2,400 - 8,000

Source: White, A. T. and A. Cruz-Trinidad. 1998, *The Values of Philippine Coastal Resources: Why Protection and Management are Critical*, Cebu City, Philippines: Coastal Resource Management Project

6. Despite the obvious importance of the Philippines' marine biodiversity, these resources are being severely threatened by a range of inappropriate activities and their damaging effects. As of 1997 surveys, less than 5 percent of coral reefs in the Philippines were observed to be in excellent condition (i.e., having 75 to 100% live coral cover, including both hard corals and soft corals), 28 percent in good condition (50-

³⁴ Calumpong, Hilconida P., and Ernani G. Meñez (1997). *Field guide to the Common Mangroves, Seagrasses and Algae of the Philippines*. Bookmark, Makati.

³⁵ Fortes, M. 1994.

³⁶ Annual fish yield from coral reefs ranges from 5 to 20 metric tons/ km² depending on reef condition. Coral reef fish account for 55 percent of fish consumed by the average Filipino family, and contribute 11-29 percent to total fish production. (Burke, L., et al. 2002. *Reefs at Risk in Southeast Asia*. World Resources Institute.)

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75% live coral cover), 42 percent in fair condition (25-50% live coral cover), and 27 percent in poor condition (less than 25% live coral cover). This represents a significant decline in live coral coverage from surveys conducted in the 1970s, especially in some areas of the country (most notably, the Visayas).³⁷ A similar picture is seen for associated coastal ecosystems. With annual losses of around 2,000 hectares/yr, only about 138,000 hectares of mangroves exist today, as compared to 450,000 hectares that existed in 1920.³⁸ It is estimated that about 20 to 30 percent of the country's original seagrass beds have been lost.³⁹ Data compiled over many years indicate that the threats to biodiversity stem from multiple causes. The key threats include (i) pollution and siltation in coastal areas; (ii) habitat destruction; (iii) unsustainable harvest of resources, and (iv) global climate change. These threats, and their underlying root causes, are discussed in more detail in a separate appendix.

C. BASELINE DEVELOPMENT PATH

7. As part of its country strategy to assist the Philippines, and in line with the national priorities for biodiversity conservation mentioned above, the Asian Development Bank (ADB), with counterpart support from the GOP and beneficiary communities, will contribute to a 'sustainable baseline' development path through the strategic interventions of the Integrated Coastal Resource Management Project (ICRMP). The project seeks to improve the management and condition of coastal and marine resources and biodiversity, and to reduce poverty in coastal communities that in a cyclical fashion contributes to further resource depletion and degradation. Project interventions will be in the areas of (i) policy and institutional strengthening and development, (ii) coastal resource management and biodiversity conservation, (iii) enterprise development and poverty reduction, and (iv) social services and small-scale infrastructure for environmental protection.

8. Proposed baseline activities of the ICRMP will contribute significantly to the effectiveness of ICRM and biodiversity conservation efforts nationwide, and will help to raise the existing national 'realistic baseline' to the level of a 'sustainable baseline.' Achievement of this sustainable baseline level implies that management and protection of valuable coastal and marine resources and biodiversity will be improved within the implementation areas, to a level sufficient to meet national objectives for sustainable development.

9. Baseline activities of the ICRMP will help to remove barriers to effective coastal resource management and will reduce threats to resources that are important not only for the continued integrity of natural ecosystems but also for supporting sustainable economic development. The principal project activities that will have a beneficial impact in these areas are: (i) harmonizing policies and strengthening DENR and other institutions to facilitate improved management of coastal resources; (ii) establishment of a nationwide performance-based incentive and disincentive system linked to CRM certification; (iii) strengthening of ICRM planning and management at the local level, including promotion of ICRM 'best practices'; (iv) providing necessary infrastructure and equipment to strengthen CRM-related enforcement activities; (v) utilizing a municipal coastal database (MCD) as a standardized format to evaluate CRM efforts; (vi) conducting community organizing activities; (vii) facilitating the development of environmentally-sustainable enterprises; (viii) undertaking pilot eco-tourism activities; (ix) conducting an aggressive program to promote family planning and population initiatives to reduce human pressure on finite coastal and marine resources; and (x) providing social and environmental infrastructure to raise the standard of living in coastal communities.

10. Many of these activities will also contribute directly or indirectly to promoting biodiversity conservation. However, it should be noted that in developing countries such as the Philippines,

³⁷ Burke, L., et al. (2002) *Reefs at Risk in Southeast Asia*. World Resources Institute.

³⁸ DENR 2001.

³⁹ Fortes, M.D. 1994. Philippines seagrasses: status and perspectives. In: Wilkinson, C., et al (eds.). *Proceedings 3rd ASEAN-Australia Symposium on Living Coastal Resources*. Vol. I: Status Reviews. pp. 291-310.

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conserving biodiversity has associated high opportunity costs and a shortfall of local benefits.⁴⁰ Thus, it may not always be in the national interest to pursue biodiversity conservation objectives, especially if these are global in scope and where they may impede national economic development goals. In addition, the GOP lacks the financial, material and human resources that would be needed to achieve the higher objectives for conservation and management of globally-important biodiversity resources. It is therefore appropriate that funding from GEF will be utilized to cover the incremental costs of implementing the necessary interventions to achieve such global benefits.

D. GEF ALTERNATIVE

11. The GEF Alternative will build on the national ‘sustainable baseline’ to secure the sustainable conservation and management of globally significant marine and coastal biodiversity. In particular, it will seek to: (i) mainstream biodiversity policies and programs within the context of harmonized national integrated coastal resources management (ICRM) policies and coordinated national and local institutions; (ii) generate awareness on the value of biodiversity resources nationally and globally in areas of high priority; (iii) develop a national research agenda to strengthen biodiversity conservation and undertake specific research at selected biodiversity sites; (iv) establish ICRM centers to support public education, research, and conservation activities; and (v) pursue conservation measures at selected sites, especially the creation of networks of marine protected areas (MPAs) along marine biogeographic corridors and migration paths.

E. INCREMENTAL COSTS OF THE GEF ALTERNATIVE

12. The incremental cost analysis, together with breakdowns of itemized costs for the proposed ICRM project are shown in Table 2. The total cost for the GEF Alternative is \$60.21 million (before interest and commitment charges). Of this amount, \$51.21 million (before interest and commitment charges) is expected to come from baseline sources: local governments and communities, \$10.82 million; national government, \$7.31 million; and ADB, \$33.08 million. Approximately \$9.00 million is requested from GEF, representing the incremental investment.

13. With the baseline activities primarily focusing on sustainable management of marine and coastal resources, support from GEF will help achieve global environmental benefits. Cost savings and efficiencies are achieved by combining complementary baseline and incremental activities together in an integrated package. If activities aimed at achieving global benefits were conducted in isolation from sustainable baseline activities, achieving global benefits would be far more costly (due to addition of ‘sunk costs’, lack of sustainability, etc.), and not likely attainable.

14. By ensuring that globally significant species and ecosystems remain viable, especially in areas that are important marine migratory pathways or breeding sites, GEF support will contribute to global environmental benefits (existence values). Direct and indirect economic use benefits will be derived from such activities as eco-certification of marine products and conservation-friendly ecotourism. Options values (potential uses not yet known, e.g., pharmacological properties of some coral species) will be enhanced through the GEF-supported activities. Finally, bequest benefits will be ensured, as the conservation of globally significant species will continue to benefit future generations of humanity.

⁴⁰ Panayotou, T. and D. Glover. 1995. Economic and Financial Incentives for Biodiversity Conservation and Development. In ADB/IUCN-World Conservation Union (1995). *Biodiversity Conservation in the Asia and Pacific Region: Constraints and Opportunities*.

Table 2 Incremental Cost Analysis

Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
A. Policy and Institutional Strengthening and Development			
<u>A-1: Policy Aspects</u>	a. Establish and implement institutional framework for coordinating ICRM and biodiversity conservation b. Finalize ICRM Policy c. Clarify the roles of DENR, DA, LGUs and other stakeholders in implementing the new ICRM policy and institutional frameworks d. Develop means of sustainable financing for ICRM and biodiversity conservation operations e. Undertake ICRM and biodiversity conservation policy awareness and advocacy campaigns		
Cost (in US\$ millions)	0.52	0.52	--
<u>A-2: Capacity Building and Institutional Development</u>	a. Develop and implement human resources and institutional development strategies for DENR, DA and LGUs	b. Develop the ICRM and marine biodiversity research agenda for DENR and DA c. Undertake biodiversity conservation and resource enhancement related capacity building for DENAR, DA and LGUs	
Cost (in US\$ millions)	0.67	1.25	0.58
<u>A-3: Performance based Incentive and Disincentive System</u>	a. Identify and pilot test appropriate incentive systems for ICRM that link to ICRM certification systems adopted by DENR's Coastal and Marine Management Office b. Design and implement an effective incentive system linked to ICRM certification		
Cost (in US\$ millions)	0.31	0.31	--

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Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
Domestic/National Benefits	<ul style="list-style-type: none"> Enhanced food security and improved economic status of critical coastal areas as a result of policies, jurisdictions, roles and responsibilities clarified and streamlined for effective management of resources Improved management of coastal resources with strengthened institutions and community organizations Leveraged support for accepted resource management plans and synergistic effects synchronized initiatives among key players. 		
Global Environmental Benefits	<ul style="list-style-type: none"> Improved state of ecosystems that support global biodiversity with harmonized policies, strengthened institutions, and coherent and streamlined delineation of jurisdictions and assignment of roles and responsibilities among capacitated key players (DENR, other NGAs, LGUs, NGOs, communities, and donor agencies) enhancing the level of efficacy in the enforcement and implementation of biodiversity conservation programs and activities 		
Component Cost (in US\$ millions)			--
Local governments and communities	--	--	--
GOP	0.70	0.76	0.06
ADB	0.80	0.80	--
TOTAL	1.50	2.08	0.58
GEF	--	0.52	0.52
B. ICRM and Biodiversity Conservation			
<u>B-1: Integrated coastal resource management (ICRM)</u>	<p>a. Undertake awareness and education campaign</p> <p>b. Undertake the coastal resources assessment through participatory coastal resources assessment (PCRA) and</p>		

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Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
	scientific observations c. Develop and strengthen ICRM organizations d. Prepare participatory ICRM plans and institutionalize these in LGU planning and budgeting e. Participatory implementation of ICRM plans f. Rehabilitation and management of mangroves and watersheds through community participation g. Design and implement participatory enforcement mechanisms		
Cost (in US\$ millions)	21.51	21.51	--
<u>B-2: Biodiversity Conservation</u>		a. Establishment of ICRM centers b. Conduct targeted research on critical biodiversity resources c. Identify, establish, and manage marine protected areas (MPAs), link MPAs within networks or along critical marine corridors d. Prepare and implement integrated management and rehabilitation plans e. Habitat rehabilitation, restoration and stock enhancement f. Establish and strengthen eco-certification of sustainable harvesting activities	
Cost (in US\$ millions)	--	10.55	10.55

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Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
Domestic/National Benefits	<ul style="list-style-type: none"> Illegal activities are minimized and pressure on coastal resources due to exploitation and unregulated utilization reduced with a developed and effective enforcement system. Improved awareness of the sustainable management of coastal and marine resources as a means to perpetually support the human and economic needs of local coastal communities. Sustainable resource management of upland, lowland and coastal areas following an integrated, coherent, and comprehensive landscape approach. Improvement/ restoration of the life sustaining values and properties of coastal habitats and resources with the effective management/ restoration of mangrove forests, waste management, watershed management, etc. 		
Global Environmental Benefits		<ul style="list-style-type: none"> Enhanced knowledge and information on the behavior of species and habitats and the impact of human-induced stresses as well as natural occurrences allowing for systematic and effective long-term, sustainable biodiversity conservation. Increased opportunities to practice conservation and management in critical marine biogeographic areas with the creation of MPA networks along 	

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Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
		marine biodiversity corridors. <ul style="list-style-type: none"> Integrated resource management provides sustainable foundation for effective conservation in coastal ecosystems that harbor globally significant biodiversity 	
Component Cost (in US\$ millions)			
Local governments and communities	5.19	5.31	0.12
GOP	2.00	3.94	1.94
ADB	14.33	14.33	--
TOTAL	21.51	32.06	10.55
GEF	--	8.48	8.48
C. Enterprise Development and Income Diversification			
	a. Mobilize self-reliant community groups b. Environment friendly land and sea based enterprises identified, pilot tested and developed in participating municipalities c. pilot ecotourism initiatives undertaken		
Cost (in US\$ millions)	6.69	6.69	--
Domestic/National Benefits	<ul style="list-style-type: none"> Alleviation of poverty of people living in the coastal zone reduces pressure on the exploitation of coastal resources. Higher family incomes as a result of the development of environmentally friendly and gender-responsive enterprises. 		

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Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
Global Environmental Benefits	<ul style="list-style-type: none"> Improved economic status of local communities in threatened areas of high biodiversity reduces exploitation of habitats of globally significant species. Bequest and existence values enhanced with conservation-friendly enterprises that harness the economic value of biodiversity resources and stocks. 		
Component Cost (in US\$ millions)			
Local governments and communities	0.78	0.78	--
GOP	1.89	1.89	--
ADB	4.03	4.03	--
TOTAL	6.69	6.69	--
GEF	--	--	--
D. Social and Environmental Services and Facilities			
	<p>a. Assess need and feasibility for social and environment related infrastructure</p> <p>b. Provide social and environment infrastructure addressing priority environmental and social needs</p> <p>c. Design and implement population management program</p>		
Cost (in US\$ millions)	12.79	12.79	--
Domestic/National Benefits	<ul style="list-style-type: none"> Managed population growth allows for the adequate provision of social services. Cleaner coastal environments improve quality of life of local communities. 		
Global Environmental Benefits	<ul style="list-style-type: none"> Pollution and erosion control allow for improved recovery of ecosystems that support globally significant biodiversity within carrying capacities, enhancing existence and bequest values Reduced population pressure resulting in reduced harvesting allows recovery of valuable biodiversity resources 		

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Project Components/Activities	Sustainable Baseline (A)	GEF Alternative (B)	Increment (B – A)
Component Cost (in US\$ millions)			
Local governments and communities	4.73	4.73	--
GOP	0.07	0.07	--
ADB	8.00	8.00	--
TOTAL	12.79	12.79	--
GEF	--	--	--
E. Support for Project Implementation			
	<ul style="list-style-type: none"> Support provided for efficient management and implementation of project activities 		
Cost (in US\$ millions)	6.59	6.59	--
Domestic/National Benefits			
Global Environmental Benefits			
Component Cost (in US\$ millions)			
Local governments and communities	--	--	--
GOP	0.66	0.66	--
ADB	5.93	5.93	--
TOTAL	6.59	6.59	--
GEF	--	--	--
TOTAL PROJECT COST (in US\$ millions)			
Local governments and communities	10.70	10.82	0.12
GOP	5.31	7.31	2.00
ADB	33.08	33.08	--
TOTAL	49.08	60.21	11.13
GEF	--	9.00	9.00
Interest During Implementation	2.73	2.73	--
Commitment charges	0.53	0.53	--
PROJECT TOTAL (with interest, charges, and fees)	52.35	63.47	11.13

*NOTE: Sums may have inaccuracies due to rounding.

RESPONSE TO PROJECT REVIEWS

I. CONVENTION SECRETARIAT COMMENTS AND IA/EA RESPONSE

II. STAP EXPERT REVIEW

TECHNICAL REVIEW OF PROJECT PROPOSAL TO THE GLOBAL ENVIRONMENT FACILITY (GEF)

Project Title:	INTEGRATED COASTAL RESOURCES MANAGEMENT PROJECT (ICRMP), THE PHILIPPINES
Reviewer:	Wim Giesen, Mezenpad 164, 7071 JT Ulf, The Netherlands tel.+31.315.630316 email: 100765.3312@compuserve.com ; or w.giesen@arcadis.nl
Date:	4 th July 2004
Contact:	M. Jamilur Rahman, Principal Project Specialist, Asian Development Bank, Manila, tel +632.632.6914; email: mjrahman@adb.org

A. Key Issues

1. Assessment of scientific and technical soundness of the project.

- a) On the whole, the ICRMP proposal appears both technically and scientifically sound. An integrated, holistic approach to CRM is needed that not only addresses the coast itself, but looks beyond this (e.g. via catchment management). The corridor approach to biodiversity conservation – although innovative and new in the Philippine context – is sound and appears well developed. The combination of policy/institutional strengthening, biodiversity conservation, promotion of sustainable development, and improvement of social services appears well balanced. The threats analysis correctly identifies root causes and targets these with appropriate responses. The logframe provides a clear and logical project framework with verifiable achievement indicators and an appropriate means of monitoring. There do not appear to be any controversial issues, or flaws that would severely impede implementation. However, there are a few issues that need to be addressed (see below).
- b) Para. 28 and 29 (of the RRP) state that ‘coastal resources in 65 municipal waters will be assessed’ and ‘management plans <for about 50 MPAs> will be supported by focused research on critical biodiversity resources, including sensitive ecosystems, threatened and flagship species’. Does this mean that at present the proponent does not have enough information upon which to identify biodiversity? i.e. there is insufficient ecological and technical information available to give the project a sound scientific base, or does this serve to complement existing information?
- c) The ICRMP aims at identifying about 50 MPAs (para. 29 of RRP; some of which will be new) and putting management plans and functional organizations in place in these. This seems highly ambitious. Perhaps management plans and functional organizations already exist in many, which would make the task less formidable – if this is the case it should be stated. In any case, establishing management plans and functional organizations in anything more than in about 10-20 new MPAs would seem unrealistic, unless the proponent can provide a compelling case for this.
- d) Monitoring (outlined in the Executive Summary) focuses on the PPMS; the proponent should be aware that GEF is in the process of developing a Project Information Form for Biodiversity (PIFB). All approved GEF 3 biodiversity projects will be required to fill in the PIFB – which is for monitoring or project results. How will monitoring of biodiversity in the 50 targeted MPAs be

implemented in a reliable way? Management of these areas is to be (largely) community based; while community members are likely to very knowledgeable about exploitable resources, they may be less so when it comes to non-utilized species.

- e) Para. 18 of the RRP states that a comprehensive policy on coastal resources management has been drafted with USAID assistance (presumably under the 9year CRMP project) and needs to be finalized through a consultative process and enactment into law. At various points, however, the proposal mentions shortcomings in ICRMP policies (e.g. para.'s 10, 25 and 65 mention 'policy weaknesses'). What are these? If a comprehensive policy has been developed by the USAID project, why does this need to be done again by the ICRMP (para. 25 of RRP: 'A comprehensive national policy on ICRM will be developed...') ?
- f) Para. 30 (of RRP): environmentally friendly sustainable enterprises and livelihoods will be developed; presumably any potential environmental impact of these enterprises will be regulated by the IEE and EMP?
- g) Linked with (e): para. 65 (of RRP): ICRMP calls for the establishment of an institutional framework for ICRM – this has already been established, to some degree, by past projects. Need to explain shortcomings of present situation, as ICRMP will not be establishing the framework 'from scratch'.
- h) Some of the indicators of achievement in the Logframe/Project Framework may need to be revisited or revised; for example:
 - i. Increased stakeholder participation in major policy decisions (indicator/target of Output 1). This should be increased by how much? and how can this be verified? (Perhaps the number of regional workshops addressing major policy decisions?)
In some cases, targets have been set that appear too ambitious, e.g.:
 - ii. At least 30% increase in fish density ... in selected sites by year 6. It will take some years before improved management is established, and then several more years for it to take effect. How realistic is 30% how many sites will be 'selected'?
 - iii. Management plans established for 50 MPAs by year 2; by year 6 management activities undertaken in all 50 MPAs. How realistic is this figure (see below), which may stretch project resources too thinly?
 - iv. Establishing 780 enterprises seems ambitious, and, given the high rate of failure expected (60% 'survival rate' after 1 year), perhaps it would be better to lower the target and increase the rate of success.

i) Minor points:

- *Abbreviations are incomplete (add at least CMMD, CMMO, DAO, EIRR, FIRR, IEC, LGC, LGU, MOA, NGA, OCR, O&M, PSC, RPIU).*
- *Para. 5 (of RRP): what is the poverty level in the Philippines, in Peso's ?*
- *Para. 6 (of RRP): what is the direct effect on the coastal environment of the limited social infrastructure? this can be guessed, but is this supported by hard data?*
- *Para. 8 (of RRP): is this decline in catch per unit effort a main cause of poverty in the coastal regions, or simply one of many contributing factors? Is the decline in catch per unit effort much affected by increase in the coastal population over the same 20 year period?*
- *Para. 13 (of RRP): GEF assistance to the sector needs to be elaborated – now the elaboration is largely limited to ADB-funded projects.*
- *Para. 29 (of RRP): eco-certification: mention the link with the GEF Marine Aquarium Market Transformation Initiative.*
- *Para. 32 (of RRP): link with the new Annex B of the GEF Ex. Sum. explaining marine biodiversity corridors.*
- *Para. 44 (of RRP). GEF financing of a large portion of the local currency costs is justified (according to the proponent) on the basis of poverty. This is only partly true, as costs need to be for conservation of globally important biodiversity in order to be covered by GEF (under the biodiversity focal area), and GEF funds cover agreed to incremental costs only. Because of poverty, the baseline in the ICA would show a low local input.*

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- *Para. 52 (of RRP): (last line) 'imprest account funds should not normally exceed \$100,000.'*
Perhaps the word 'normally' should be removed?
- *Para. 55 (of RRP): the ICRMP makes provisions for large domestic consulting inputs (598 pm)*
-- is this (amount of) expertise available locally?

2. Evaluation of the identification of global environmental benefits and/or drawbacks and risks of the project.

- a) Marine biodiversity in the Philippines is of global significance to conservation. In the initial document submitted for review, the case of biodiversity significance and the reasoning for site selection was understated and incomplete. This has now been revised and significantly improved by adding a new Annex B and a new paragraph 4 to the GEF ExSum. There are no apparent drawbacks or added risks to biodiversity because of the ICRMP.
- b) Para. 3 (of the RRP) states that the "Philippines lies in the global epicenter of marine biodiversity that contains the richest assembly of marine and coastal ecosystems and habitats". The last sentence of this paragraph is more accurate, as it states that the Philippines "has one of the richest assemblies of marine and coastal ecosystems". The Great Barrier Reef (Australia) has >500 reef forming coral species, compared to 430 species in the Philippines; Indonesia has 40 true mangrove species, compared to about 30 in the Philippines; Australia has 20 seagrass species, compared to 13 in the Philippines (note that according to Fortes, 1994, there are 16 seagrass species recorded in the Philippines). Biodiversity is more than just species (and ecosystem) richness, but also a matter of uniqueness of assemblages, ecosystems and species (e.g. endemism, rarity).

3. Evaluation of the project's compliance or fulfillment of the goals of GEF

The Philippines ratified the CBD on 8 October 1993 and is therefore eligible for GEF assistance. The Integrated Coastal Resources Management Project meets GEF eligibility criteria under Operational Program #2 "Coastal Marine and Freshwater Ecosystems", as it promotes conservation and sustainable use of biodiversity of marine ecosystems. The approach outlined is also fully in accordance with the GEF-OP2 Criteria, and (as outlined in para. 10 of the ExSum) supports three GEF strategic priorities, namely BD-1, Catalyzing Sustainability of Protected Areas; BD-2 Mainstreaming Biodiversity in Production Landscapes and Sectors; and BD-4 Generation and Dissemination of Best Practices for Addressing Current and Emerging Biodiversity Issues.

4. Assessment of how the project fits within its regional context

The ICRMP is fully focused on the Philippines, targeting 6 out of 76 provinces. However, the project will be of regional importance to biodiversity conservation as (if successful) it will positively affect migratory and wide ranging marine species such as whales, dolphins, marine turtles and waterfowl. Because of this, links should be established with Ramsar and Bonn conventions, and with the Asia-Pacific Migratory Waterbird Conservation Strategy (see 8, below). The Philippines is one of the largest fish producers in the world, and improvement in sustainability of this industry will have regional ramifications, for example in reducing possible pressures on resources of neighboring states.

5. Evaluation of the replicability of the project

- a) According to the ICRMP proposal (para. 10, GEF ExSum), the project will (i) support research that will improve and strengthen ICRM and biodiversity conservation best practices; (ii) pilot-test innovative methods for biodiversity conservation; and (iii) establish ICRM centers to disseminate information on marine biodiversity conservation. Opportunities exist for replication of successful methodologies within the 65 target communities of the project (para. 12, GEF ExSum), and lessons learned at selected sites could readily be replicated at similar sites on a national, regional, or global scale. Also, the project's strategic focus on 'networking' of MPAs places extra emphasis on replicability of results from one site to another.
- b) This strategy seems reasonable and likely, provided that mechanisms are put in place for sustainability of the ICRM centers, and for facilitating information exchange between MPAs. For the

latter, it is recommended that a project establishes a website (see 10.c.2) for information exchange. While models and examples are excellent, it may be useful to develop manuals for future use and replication.

6. Evaluation of the sustainability of the project

- a) According to the ICRMP proposal, the project will (i) establish networks of MPAs as a means to strengthen and extend the conservation benefits of MPAs; (ii) work towards strengthening MPAs in the existing national PA network; (iii) build capacity for more effective MPA management; (iv) emphasize participation of the local community as a means of achieving sustainability; and (v) promote replication of the MPA as an effective management and conservation tool. Other factors that contribute to sustainability are: (i) strong commitment and desire of the GOP, regions, provincial and municipal LGUs, and community stakeholders to achieve sustainable management of globally-important biodiversity resources; (ii) capacity-building within communities, and among national agencies, to promote effective long-term resource management; (iii) development of a framework for sustainable financing of conservation efforts from a variety of sources (national, provincial and LGU budget allocations, user fees, private sector contributions); (iv) harmonization of policies and improvement of coordination across different levels of jurisdiction (especially between DENR, DA and LGUs); and (v) promotion of community-based implementation and management methodologies.
- b) The ICRMP aims to establish EDUs in each province (para. 30 of RRP) and numerous enterprises (780), of which 60% are to remain operational beyond the first year of operation (logframe/project framework). How are the EDUs to be funded beyond the life of the project? A 60% success rate of the enterprises means a 40% failure rate – which after a 6 year project may be much higher. Perhaps it would be better to aim at less enterprises, but with a higher success rate, and set a target for the end of the project rather than a 1-year ‘survival rate’.
- c) ICRMUs are to be established in project municipalities, and activities of these units to be funded beyond the life of the project through user fees and resource rents (para. 71 of RRP). Given that many resources are over utilized, doesn’t this constitute an extra pressure on already scant resources?
- d) ICRMP aims at identifying about 50 MPAs (para. 29 of RRP; some of which will be new), of which many will be new, and putting management plans and functional organizations in place. As mentioned in A.1.d (above), this seems overly ambitious; – how will management continue after the project? These MPAs are to be locally managed, according to the by now well established MPA model in the Philippines. One of the issues regarding sustainability is that of financial sustainability, as outlined in a recent paper on MPAs (White & Green) this will require “creative use of financial mechanisms to create long-term self-supporting MPAs”.
- e) Five provincial ICRM centers are to be established by the project for the provision of information, education, awareness and training. How will these continue to function after the life of the project?
- f) Environmentally friendly enterprises and livelihoods are to be created under the ICRMP (para. 30 of RRP) – how will the further development of these be promoted after the life of the project?

B. Secondary issues

7. Evaluation of linkages to other focal areas (international waters, climate change)

There are no – or only weak – linkages to the other GEF focal areas. There is a weak link with the international waters focal area via conservation of migratory species (esp. whales, migratory waterbirds), and a negative link with climate change (global warming appears to be contributing to coral bleaching). There is no apparent link with the other focal areas (ozone depletion, POPs), and negative impacts in focal areas outside the focus of the project are not expected.

8. Evaluation of linkages to other programs and action plans at the regional and sub-regional level

- a) In the light of the many past/ongoing GEF-funded marine biodiversity projects, such as the ACC/ACF, CEFP, CPPAP, TRNMP and CMBC (as indicated in para 8 of the GEF Executive Summary), how does the ICRMP distinguish itself?
- b) The ICRMP itself extends over 6 provinces in the Philippines and already has a broad geographic range, but does not link up with regional or sub-regional programs or action plans. Programs/strategies with which the project should link up with or make use of are:
Asia-Pacific Migratory Waterbird Conservation Strategy (coordinated by Wetlands International).
 - The East Asian Migratory Flyway that includes the Philippines is one of the most important shorebird and waterbird migratory flyways in the world. A total of 77 species of migratory birds use this flyway, and at least 2/3's have been recorded in the Philippines.
 - ASEAN Regional Marine Turtle Conservation Program.
 - The EU-funded ASEAN Center for Biodiversity Conservation, based in the Philippines, which has developed a Biodiversity Information Monitoring System (BIMS) that might be a good repository for information collected under the ICRMP.
 - Ramsar Convention. The Philippines is a signatory to the Ramsar Convention and has four Ramsar wetlands of international importance, including two marine wetlands (Olango Island Wildlife Sanctuary, Cebu and Tubbataha Reefs National Marine Park, Sulu). The Directory of Asian Wetlands lists 63 important wetlands, of which about half are marine.
 - Convention on the Conservation of Migratory Species of Wild Animals (also known as CMS or Bonn Convention). The Philippines is the only ASEAN country that is party to the Convention, and where possible, a link should be made with ICRMP.

9. Assessment of other beneficial or damaging environmental effects

- a) Other coastal areas will also benefit from the ICRMP due to improved conservation legislation, increased capacity of DENR in managing coastal resources (including biodiversity), and from possible project replication in other areas (including MPAs).
- b) Damaging environmental effects as a result of the project are unlikely, as the ICRMP aims to promote conservation and other benign forms of resource utilization. Those forms of utilization that have the potential to have a (mildly) negative impact, such as ecotourism, are dealt with in the SIEE, in which mechanisms for avoiding and minimizing impacts are outlined.

10. Evaluation of the degree of involvement of stakeholders in the project

- a) Mechanisms for participation and influencing the management of the project:
 1. The project is largely decentralized, as most of the project activities will be implemented at the municipal level, whereby municipal governments are directly involved in project management.
 2. Local stakeholders, through FARMCs, bantay dagat, and other municipal- and village-level people's organizations, will be the principal implementers of the ICRMP (para. 14 of GEF ExSum). Their continued involvement throughout future information-gathering, planning, implementation, and dissemination of design will be ensured through a range of interventions and activities, such as: (i) community needs assessments; (ii) IEC; (iii) participatory community mapping and planning; (iv) participatory preparation of ICRM and MPA plans; (v) incentive programs designed to reward active stakeholder participation; and (vi) formation of various coordinating committees to give stakeholder groups effective representation.
- b) Provisions for the establishment of appropriate lines of communication:
 1. The ICRMP proposes the following lines of communication (para. 45-49 and Appendix 10 of RRP): DENR will establish a Project Steering Committee to oversee and coordinate implementation. Participating LGUs will be invited to attend meetings on issues that require their participation. Regional Steering Committees will also be established in five regions to coordinate implementation within the region. A PMO will be established within the CMMO in DENR central office, and (Regional) PIUs will be established in the regional CMMO offices.

In addition, an ICRM Unit will be established in each participating municipality. The ICRMUs and municipal governments will be the focal points for field implementation and will coordinate project activities with FARMCs, Bantay Dagat and other relevant people's organizations.

2. In principle, the above lines of communication are sufficient to guarantee adequate transfer of information in both directions (up and down). However, if project organization at a certain level decides to ignore bottom-up criticism or suggestions, there does not appear to be an alternative line of communication. Holding of national level workshops with representatives from participating municipalities might ensure that local voices can be heard at the higher levels; at present there is no provision for this, as all workshops are to be held locally or regionally.
- c) Exchange of technical information between communities and stakeholders:
1. The project's ICRM centers will disseminate information on marine biodiversity conservation, through public awareness, research, training and outreach, and international workshops and symposia. They will also produce guidance, awareness and training materials and manuals and will implement training for all key target groups.
 2. The ICRMP should establish a web site (in Tagalog and English languages) as a means to more widely share important project results, experiences and other pertinent information that will add to the project's demonstration value and may generate interest for replication of its approach. As the project is geographically widely spread, this form of information exchange may prove to be crucial. It will also facilitate networking between the various MPAs. The website could also be used to publish community and other experiences of the project, for instance by summarizing experiences with the MPAs, minutes of ICRMU and RSC meetings. This will enhance the overall transparency of the project and will increase its value for demonstration and replication. The website should not be a specific project website, but be so designed that it remains useful (e.g. for information exchange between MPAs) and can be updated after the life of the project.
- d) Participatory schemes and conflict issues
1. Conflicts regarding land resources are largely avoided, as ICRMP will require only very small plots of land for establishing social and environmental facilities, which will be obtained in the open market, or as unoccupied public land.
 2. Conflicts regarding marine resources will need to be addressed, especially where new MPAs are to be established. The *Local Government Code* of 1991 (Republic Act 7160) has empowered local government units (LGUs) to manage key resources contained within their municipal waters, and to establish and manage municipal MPAs. Establishing new MPAs may lead to conflicts, but the Code provides sufficient detail on how these are to be resolved.

11. Assessment of the capacity building aspects

a) General

1. There is adequate attention in the ICRMP proposal on capacity building, which forms a major part of components A, B and C (see b, below). One possible drawback is that trained NGA staff may be transferred to other posts where the acquired skills may no longer be put to use. If at all possible, the project should strive to obtain a commitment from trainees that lasts beyond the life of the project.

b) Human capacity to tackle the issues addressed in the project

1. The ICRMP will address human resources and institutional development of DA, DENR and local governments in the project area, and aims to train about 600 persons in ICRM. This will begin with a needs assessment, followed by a targeted response. Given the current moratorium on recruitment of new personnel in government agencies, this is the only sustainable solution.
2. In addition to the above, 650 members of local communities and municipalities will be trained in resource management, and 6500 community members will be trained in small scale enterprise development.

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3. In addition to capacity building, a large amount of TA is anticipated, including 46 pm international and 598 pm domestic consulting services.
4. The above should be sufficient to achieve the outputs targeted under the ICRMP.

12. Innovativeness of the project

- a) Many of the proposed approaches are 'tried and true' (e.g. MPAs), based on a long pedigree of coastal resources management projects in the Philippines (see 8.a for a list of key projects).
- b) The corridor approach, while quite widespread within terrestrial systems, is relatively innovative in marine systems, certainly in the Philippines, and is of significant interest.
- c) The adoption of a performance-based incentive system to encourage good coastal resource management is an innovation that has been proposed before⁴¹, but has yet to be tried on a wide scale in the Philippines.
- d) Establishing an eco-certification of sustainable harvesting activities in coral reef-associated species is new in the Philippines, at least at this level (it is already being tried for aquarium trade species).

Concluding remarks

Overall, the ICRMP proposal is very interesting and well developed. There are highly innovative elements, such as the corridor approach, the adoption of a performance-based incentive system, and establishing an eco-certification of sustainable harvesting. The project is therefore expected to have a high demonstration value for the rest of the Philippines, as well as in adjacent countries. The project design is sound and feasible, based largely on existing institutions and local practices. Where necessary, provisions are in place for capacity building, and there is ample scope for replicability, given GOP's targets for MPAs. No major problems envisaged – the ones outlined above can easily be rectified in the design.



Wim Giesen
Ulft, the Netherlands, 4th July 2004

⁴¹ White, A.T. & Chua Thia-Eng (2003) – Coastal Management in the Philippines: Lessons of 20 years. EastAsian Seas Congress 2003. Workshop 1, Session 1: Implementation of Integrated Coastal Management (ICM): Achievements, Constraints and Lessons learned.

III. EA (ADB) RESPONSE TO STAP EXPERT REVIEW

(The response follows the order of STAP Expert Comments in Section II)

A. Key Issues

1. Assessment of Scientific and Technical Soundness of the Project

- a) No response required.
- b), c) The Philippines Biodiversity Conservation Priorities identified the selected corridors as of "extremely high" to "high" biodiversity priority and their biodiversity characteristics are well-documented. Within these corridors, the Project will strengthen 30-35 existing MPAs and establish about 15-20 new MPAs. Management plans for the existing MPA already exist; however, proper implementation is lacking mainly due to insufficient technical capacities. The plans will be revised through community workshops to ensure that these are comprehensive and adequately reflect community's views and needs. The new MPAs will be established at strategic locations in the corridors to complete the networks. The management plans for these new MPAs will be prepared by local government and communities with technical assistance from the national government agencies concerned and consultants and NGOs. Management planning for MPAs will be an ongoing process where plans will be reviewed and refined periodically. The findings of focused research and monitoring activities will provide the basis for these refinements.
- d) The Project will provide for the development of a Project Performance Monitoring System (PPMS) that will include monitoring of biodiversity at the MPAs. Project will coordinate with GEF in designing the monitoring and evaluation of biodiversity. Once developed, PIFB form and relevant GEF targets will be incorporated in the monitoring program. The five ICRM centers, supported by Biodiversity Conservation Specialists, will oversee the monitoring and evaluation programs in their respective corridors.
- e) As mentioned in para. 21 of the draft RRP, a national policy and institutional framework for integrated coastal resources management was drafted in 2003. The national coastal resources management policy drafted in 2001 under the USAID-assisted CRMP needs to be revised and updated to conform with the framework. Additionally, the draft CRM policy needs to be broadened to provide for a holistic and integrated approach. The project provides support for updating and finalizing the policy through a consultative process.
- f) Environmental screening is part of the selection criteria for sustainable enterprises and livelihoods (Appendix 5 of the draft RRP) and adequate mitigation measures will be incorporated in the enterprise/livelihood design to mitigate any potential adverse impact.
- g) Absence of a comprehensive ICRM policy and an institutional framework for its implementation often resulted in conflicting actions and initiatives by national government agencies and local governments (paras 10 and 11 of draft RRP). At times, national regulations and department administrative orders were in conflict with the interest of local governments.
- h)
 - (i) No numerical targets have been set for participation. Increased participation will be through a consultative process and will monitor for number of workshops and seminars held before finalization of the policy elements and types and number of stakeholders participated.
 - (ii) The 30% increase in fish density refers to the "no-take" zones within the MPAs. Outside the "no-take" zones, the target increase is 10% (para. 62 of the draft RRP).
 - (iii) The management plan for 30-35 existing MPAs already exist and need some improvement. Plans for 15-20 new MPAs will be prepared by year 3, which is an achievable target (para Project Framework, B-2.d)
 - (iv) The enterprise/livelihood development target is based on the establishment of two enterprises/livelihoods per year per municipality, and is not considered overly ambitious. 60% success rate is based on the consideration that there are several factors such as market conditions, overall economic conditions, etc., that are beyond Project control and can lead

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- to failures. Concentrating on a lower number of enterprises will not address these external factors or improve the success rates.
- i) ? GEF assistance to the marine and coastal resources sector in the Philippines is mentioned in para. 15 of the draft RRP.
 - ? The linkage of the project support for eco-certification of sustainable harvesting with the GEF-assisted Marine Aquarium Market Transformation Initiative is mentioned in footnote 2 of the draft RRP.
 - ? The corridor approach to biodiversity conservation is mentioned in the revised para. 35 of the draft RRP.
 - ? The project will require services of 17 domestic consultants with expertise in institutional development, human resource development, communication, environment, biodiversity, gender development, community development, enterprise development, monitoring and evaluation, and project management. Domestic consulting services are well-developed for above expertise.
- 2. Evaluation of the Identification of Global Environmental Benefits and/or Drawbacks and risks of the Project**
- a) Noted.
 - b) The relevant sentence in para. 3 of the draft RRP has been rephrased.
- 3. Evaluation of the Project's Compliance or Fulfillment of the Goals of GEF.**
- No response required.
- 4. Assessment of How the Project Fits within its Regional Context.**
- No response required. Linkages discussed in item 7.
- 5. Evaluation of the Replicability of the Project.**
- a) No response required.
 - b) The prospect of attaching ICRM centers to existing research institutions in the sector is being examined for long-term sustainability of the centers. The project provides for annual corridor level workshops to enable information exchange. Provision has also been made in the Project design for wider dissemination of project initiatives and exchange of information between ICRM centers and project offices through a website to be housed at DENR (draft RRP, para. 61).
- 6. Evaluation of the Sustainability of the Project.**
- a) No response required.
 - b) Sustainability of EDUs is an issue and the possibility of basing these at Provincial Livelihood Offices for this purpose is being examined. EDUs will be working in conjunction with provincial and municipal Government staff which will enhance their long-term sustainability. The rationale for the assumed 60% enterprise success rate is given in 1(h)(iv) above.
 - c) ICRMUs at municipal level do not envisage any recruitment of incremental staff. ICRMU will comprise exiting staff at municipal agricultural office who will be trained on ICRM.
 - d) The Republic Act 8550 (Fisheries Code) requires each municipality to devote at least 15% of municipal waters for MPAs. The Project provides for development and implementation support for sustainable financing mechanisms covering user fees and resource rents for mangroves, coral reefs, benches, foreshores, fisheries and mariculture.
 - e) See 5(b) above.
 - f) See 6(b) above.

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B. Secondary Issue

7. Evaluation of Linkages to Other Focal Areas (International Waters and Climate Change)

- a) The Project seeks to preserve functionality within marine biodiversity corridors, which serves as migratory pathways for a number of species that migrate transnationally including whale sharks and cetaceans, and the Project link to the international waters focal area is stronger than the comment suggests. In addition, to a limited extent, there is a beneficial link to the climate change focal area, since the project will promote reforestation in upper watersheds (6,500 ha) and mangrove areas (6,000 ha) helping to mitigate climate change impacts.

8. Evaluation of Linkages to Other Programs and Action Plans at the Regional and Subregional Level.

- a) Unlike other GEF-assisted ongoing marine biodiversity projects in the country, ICRMP will adopt a holistic approach in marine and coastal resources management and biodiversity conservation. ICRMP design follows an innovative approach where networking of MPAs will promote protection over an extended ocean area within priority biodiversity corridors which will result in greater exchange of fish and larvae. Another important feature is that ICRMP will promote a performance-based incentive/disincentive system to encourage good coastal resources management that has so far not been tried in the country.
- b) The potential linkages between ICRMP and other ongoing GEF-assisted projects in the country are described in the GEF Executive Summary, para. 20. The potential linkages with ongoing regional programs for the sector will be explored during further processing of the Project.

9. Assessment of Other Beneficial or Damaging Environmental Effects

- a), b) No response required.

10. Evaluation of the Degree of Involvement of Stakeholders in the Project.

- a) No response required.
- b)
 - 1. No response required.
 - 2. Annual feedback workshops at national level for representatives from project municipalities have been provided and costed for in the Project design. Additionally, the project website will also provide for registering feedback from the communities or other stakeholders.
- c)
 - 1. No response required.
 - 2. Provision for the website has now been incorporated (draft RRP, para. 61).
- d) No response required.

11. Assessment of the Capacity Building Aspects.

- a) The Project provides for the development of human resource strategy for DENR and DA which will identify appropriate incentives and career paths for improving staff commitment to coastal resources management.
- b) 1, 2, 3, and 4: No response required.

12. Innovativeness of the Project.

No response required.

IV. GEF SECRETARIAT COMMENTS AND EA's RESPONSE

Summary

The project seeks to improve the management and conditions of coastal and marine resources and biodiversity, and to reduce poverty in coastal communities that in a cyclical fashion contribute to further resource depletion and degradation. Through a participatory approach the project will support: (i) policy and institutional strengthening and development; (ii) reduce the extensive poverty prevalent among coastal communities through provision of alternative livelihood and enterprise development, social services and infrastructure, (iii) promote sustainable management and use of coastal resources and related ecosystems, and conserve coastal resources and globally significant biodiversity, (iv) control coastal environmental pollution and erosion, and (v) strengthen the capabilities of Government agencies, NGOs and local communities on coastal resource management and social development.

Expected Outputs

1. Policy environment and legal framework for integrated coastal resources management (ICRM) rationalized, institutional capacities strengthened, and improved governance.
2. ICRM institutionalized and functional at the local level, and coastal ecosystems and resources in key biodiversity threatened areas are protected and managed.
3. Alternative livelihoods provided.
4. Improved health and social conditions in coastal communities in the project areas.

Scheduled Project Review Dt : Target Work Program Date :

Country Eligibility:

The country is eligible as recorded in the proposal.

Country Drivenness:

Substantive cofinancing through lending from ADB, improvements in policy and regulatory frameworks as needed, interest in strengthening institutional capacity, extensive stakeholder consultation.

Letter of endorsement dated July 6, 2004. The letter does not mention the proposed cofinancing not its support for the proposed executing agency. ADB should make efforts to improve the content and specificity these letters.

Response: A revised Government endorsement with concurrence to the proposed cofinancing and Executing Agency arrangements is attached (Annex H).

1. COUNTRY OWNERSHIP

2. PROGRAM AND POLICY CONFORMITY

The project conforms well with proposed OPs and strategic priorities.

Program Designation and Conformity

Project Design

The draft proposal is well written and designed. The following point would help to improve it:

1. The Secretariat notes the large size of the project, the number of PAs, acreage and biodiversity resources to be managed, and the likelihood of being able to replicate this project in other areas. It sets a very high bar. The PM made a back of the envelop calculation and estimated that the government of Philippines and the international community would need to invest approximately US\$4.7 billion to secure the 75 proposed MPAs at the proposed costs of this project. Is this realistic? Please comment.

Response: The cost of achieving the Government's long-term goal of having 3.4 million hectare-marine protected areas, following an integrated management approach as adopted in this project with multiple benefits in addition to conservation, will indeed be in the order of \$4.7 billion. Not all these areas will have equal biodiversity values and their implementation needs to be prioritized in the short- to medium-term. The Project forms part of the Government's medium-term development program focusing conservation activities in marine biodiversity corridors of extremely high to high biodiversity significance. The Project follows a holistic and innovative approach where protection will be promoted over an extended ocean area within the corridors to provide pathways for migration of flagship species and facilitate dispersal of larvae of corals and other organisms to depleted areas. The approach requires a critical mass of MPAs networked within the corridors to form the pathways. About 50 MPAs (of which 15-20 will be new and 30-35 will be existing ones), will be established/strengthened. Through economies of scale achieved in such aspects as management, service delivery, capacity building/backstopping and knowledge dissemination, the Project interventions will be more cost-effective than small-scale interventions made so far. The greater cost-effectiveness will enhance sustainability and lead to higher replicability of project initiatives. This will be further elaborated in Section C of GEF Executive Summary (para. 13).

2. Sustainable use: The proposal will manage biodiversity resources through certification schemes. However, some of these schemes do not fully incorporate biodiversity components. Please make sure that biological resources are closely monitored so natural populations are not severely impacted, threatening the objectives that the project is trying to secure.

Response: Agreed. The project provides for the development of an eco-certification system that will take into account Project's biodiversity objectives and will be linked to the biodiversity monitoring, and provide for adjustment based on monitoring feedbacks. The dynamic nature of sustainable use of resources and link to biodiversity monitoring will be more explicitly stated in para 5 the Executive Summary.

3. Absorptive capacity. The size of the project seems to be quite substantive in relation to the existing absorptive capacity. The project should make sure to put the right building blocks of the right size in the right sequence in order to achieve project objectives and preserving its lasting impacts.

Response: Unlike most of the previous initiatives in the sector, the implementation responsibility of ICRMP will be shared by the national and local governments in a decentralized framework, with 65 municipal governments being directly responsible for implementation of most of the field activities. The institutional capacities at national and local government levels were assessed during the feasibility study, and provision has been made in the Project design for strengthening implementation capacity. Additionally, the Project provides for developing long-term human resources development strategies at national and local Government level.

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4. Underlying causes of biodiversity loss; Baseline funding is substantive to address these issues. However, greater clarity is needed on how these will be pursued during project implementation.

Response: The underlying causes of biodiversity losses can be attributed to: (i) uncoordinated developments and policy gaps and inconsistencies; (ii) lack of an integrated approach to coastal resources management and biodiversity conservation; (iii) lack of awareness and stakeholder participation; (iv) high poverty incidence among coastal communities; and (v) population pressure. The baseline design provides for addressing these underlying causes systematically. The policy and institutional strengthening and development component of the project will help finalize the national policy and institutional framework to provide mechanism for an integrated approach to development. The draft coastal resources management policy will be expanded and finalized incorporating a holistic management approach to coastal ecosystems and addressing policy gaps relating to biodiversity conservation, marine pollution, mangrove management, foreshore management, coastal tourism, environmental impact assessment, and trade in reef-associated species. The policy initiatives will be supported by institutional strengthening at national, regional and local levels, and a policy advocacy campaign. Additionally, a system to recognize and reward conservation programs of local governments will be developed and institutionalized. Awareness among stakeholders will be enhanced through an information, education and communication campaign spanning the full project period. The Project will support a progressive population management program which will also highlight the link between population growth and deteriorating coastal ecosystems. To reduce their dependence on coastal resources, the Project will foster development of alternative and supplemental livelihoods. The poverty will also be addressed through provision of social and environmental infrastructure and facilities. Above activities are detailed in the Project Logical Framework and in the draft RRP, and will be further highlighted in Section A of the Executive Summary (para. 3).

5 (a). Level of restoration and rehabilitation of key areas. Please clarify the levels of rehabilitation needed, particularly for coral reefs, as this process can be time consuming and costly, depending on technologies and approaches used.

Response: The overall condition of the coral reefs in the Philippines is not good: only 2.4% are considered in excellent condition, 22.4% good, 51.7% fair, and 23.5 poor. In the selected corridors, the condition of coral reefs ranges from fair to excellent at initial sites. The primary thrust of rehabilitation will be through improved management which will have sustained impact over time. Studies have shown that prevention of destructive harvesting techniques and improved management can reverse the degradation of coral reefs. Additionally, the Project provides for species restocking and pilot testing of innovative rehabilitation/restoration activities such as coral and giant sea clam transplanting. In case of mangroves and watershed, the baseline funding provides for restoration through improved management and reforestation.

5 (b). Adaptation issues: The proposal highlights that one of the key threats facing coral reefs relates to climate change and the need to find measures to adapt to this threat. Please clarify which measures are being taken to address the issue.

Response: The proposal recognizes climate change (including coral bleaching) as a potential risk to the Project success. The risk has been reduced by selecting high biodiversity corridors from various biodegraphic regions in the Philippines that are expected to respond differently, or not be exposed to the same regional or global conditions. During further processing and implementation, links will be established to coordinate with ongoing and future national and regional programs on climate change, and this will be reflected in E. Core Commitment and Linkages Section of the Executive Summary.

6. The proposal clearly highlights the need to address governance issues. However, there is no reference to this aspect in the log frame. What issues would be addressed? What are the indicators to measure projects on this topic? Please clarify and include in the log frame.

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Response: Governance risks will be mitigated through participatory management at the national, regional, and field level, thus improving transparency and accountability. Cost-sharing mechanism will motivate local government to strive for economy and efficiency in project implementation and avoid corrupt practices, and the performance of implementing agencies will be measured against an eco-governance index that takes into account planning, budgeting, implementation (including procurement and issuance of permits and licenses), and control or enforcement (including monitoring, reporting, sanctioning, etc). The index will be applied in measuring performance of DA, DENR and local governments and specific targets will be set to be achieved and maintained during and after the project period for each of these agencies. The relevant targets and indicators (see Output 1 in the logframe) will be further highlighted in the logframe.

7. The project is said to be executed in two phases. Please include benchmarks and indicators to determine when the project would be ready to move from phase I to phase II.

Response: The word “phase” is perhaps misleading here, as it is meant just to refer to a staggered commencement of activities. The activities for first phase MPAs will commence by the beginning of Year 2 and the activities for Phase 2 MPA will commence by Year 3. The lag will provide opportunities to improve the implementation of later phase MPAs with experience from the initial ones. The relevant paragraphs in the Executive Summary will be rephrased appropriately.

8 (a). Other Biodiversity-related conventions: The project addresses issues related to Ramsar and Bonn Conventions. However, the Philippines does not seem to be Party to these conventions. It may be worth considering this issue and whether or not the country may consider joining them.

Response: The aspect would be further looked into during Project appraisal.

8 (b). The project will have important components on environmental education and awareness. It should probably broaden these to include a communication strategy that brings them together. All these efforts should be linked to national and international (CBD) environmental education, communication, and awareness programs.

Response: An IEC strategy will provide for comprehensive coverage of policy aspects, ICRM and biodiversity conservation, and will extensively use print and broadcast media with benefits extending beyond the project boundaries. The development of the strategy will be undertaken in close cooperation with regional and national initiatives under CEPTA Programmes (paras. 3 and 5 of Executive Summary).

9. The proposed livelihood option would include incentives that address social development and environmental management. These positive incentives should be performance based and closely linked to achieve project biodiversity conservation and sustainable use objectives.

Response: The livelihood and enterprise development under Component Part C addresses an underlying causes of coastal resources degradation as confirmed in previous and ongoing projects indicated (RRP paras 17 and 18). The Component D: Social and Environmental Services and Facilities will, indeed, serve as an incentive for performing municipalities/communities. In a broader and far reaching context, the Project will develop and institutionalize a performance-based incentive-disincentive system for the local governments/ municipalities (RRP, para, 30, Logframe: Activities, A-3).

10. Proposed institutional set-up for project execution seems fine. However, given project emphasis on decentralization and management by local communities, adaptive management strategies will be needed.

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Response: As an integral part of the Project design, the initial plans will be refined and updated annually through planning workshops taking into account feedbacks from project monitoring and stakeholder consultants and findings of focused research.

11. Proposed website should be linked to the national and global Clearing House Mechanisms of the CBD.

Response: Suggestion noted and will be incorporated in consultation with Government (para. 15, Executive Summary).

Sustainability (including financial sustainability)

1. Measures to address sustainability of project outcomes are outlined. The secretariat has concerns that some of the recurrent costs may be regular costs of the executing agency. There should be the necessary policy and regulatory aspects addressed, key government support, and strong community involvement for this to be properly addressed. Please clarify.

Response: Only the incremental costs pertaining to the Project have been costed. Services to be rendered by existing staff and facilities have not been costed. The Project will address the relevant policy and regulatory issues under Component A. It has strong ownership at all levels of Government, local government ownership is manifested by their willingness to share project costs and implementation arrangements provide for active community participation.

2. Project risks are highlighted. However, the risk of decentralized action and the limited absorptive capacity on these communities will probably highlight the need to have the project categorized as high risk project.

Response: The Project design takes into account the requirements of decentralized management and needs for enhancing absorptive capacity at local level. Provision has been made for systematic strengthening of institutions at appropriate levels to successfully undertake Project implementation.

Replicability:

The project include components to replicate project experience in other parts of the country and region.

1. Please refer to points above on project costs and replicability potential, and on education and environmental awareness issues.

Response: Please refer to our response to comments on Project Design, Item 1, and IEC. More specifically, through the economies of scale achieved in such aspects as management, service delivery, capacity building/ backstopping and knowledge dissemination, the Project interventions will be more cost-effective than smaller initiatives of the past and will demonstrate that biodiversity cooperation is not necessarily costly. Para 15 of the Executive Summary details the replicability potentials.

2. There is an extensive number of projects in the country/region which have substantive lessons to build on.

Response: The pertinent lessons from similar completed and ongoing projects are summarized in paras 16-19 of the draft RRP, and the Project builds on these lessons.

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Stakeholder Involvement:

1. Key social actors have been identified and have been involved in project preparation and will be involved in project implementation. One of main objectives is to have community-based management of proposed sites.

Response: No response required.

2. Information on social issues is helpful in annex B. Social pressures should be mitigated as far as possible during implementation.

Response: Social pressures will be adequately addressed through information, education, and communication campaign, community mobilization, alternative and supplemental livelihoods, and social and environmental services and facilities.

Monitoring and Evaluation:

1. Please note the need to closely monitor sustainable use of resources as impacts of extractions can be significant. Refer to Chapter 2, GEF Operational Strategy, pages 18-19 to address the need for close monitoring and some key parameters that will need special attention (e.g., species selection, current occurrence, density and other demographic parameters, including yield studies and regeneration surveys, and actual impacts of harvesting).

Response: Agreed. In addition, the Project will coordinate with GEF to incorporate the Project information form for biodiversity (PIFB) and relevant GEF targets in the Project Performance Monitoring System. The following text has been added to para 19 of the GEF Executive Summary, “Consistent with GEF Operational Strategy, the biodiversity monitoring will pay special attention to species selection, current occurrence, density and other demographic parameters, including yield studies, and regeneration surveys, and actual impacts of harvesting”. This has been reflected in ADB draft RRP (para. 61).

2. Indicators of impact highlighted in log frame. Although the STAP reviewer suggest these are fine the PM wonder if these are not too conservative given the amount of resources being committed to the project. Please clarify.

Response: The logframe includes only the key indicators for monitoring the overall achievement of the Project. More detailed information on biodiversity-specific parameters will be collected through participatory coastal resource assessments (PCRAs) and scientific resource assessments (SRAs) and monitored periodically.

3. FINANCING

Financing Plan

Given comment 1 under project preparation under program and policy conformity, the Secretariat is concerned about the cost-effectiveness of this project.

Response: Please see our response at Project Design, Item 1 and Replicability, Item 1 above.

Implementing Agency Fees

Project fees estimated at approximately 9% of GEF contribution. Considering that the Council did not discuss the issue of IA/EAs fees, the Secretariat may want to discuss the matter with ADB. Proposed

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project is a single country but area of project influence is significant. Community-based projects are likely to require more technical assistance too.

Response: A separate response is being provided.

4. INSTITUTIONAL COORDINATION AND SUPPORT

Core Commitments and Linkages

Brief comment on ADB program in country. Substantive lending from ADB.

Response: Recent ADB assistance to the sector is given in para. 20 of the Executive Summary.

Consultation, Coordination, Collaboration between IAs, and IAs and EAs, if appropriate

Brief reference to the GEF portfolio in country and region. Given project focus, the project should look careful and, if possible, work closely with the IFC/GEF Marine Aquarium recently approved project. Annex D is helpful with the overview of the portfolio.

Response: Agreed. Para. 21 of the Executive Summary highlights the potential linkages with other GEF initiatives including the Marine Aquarium Market Transformation Project.

5. RESPONSE TO REVIEWS

Council

None yet.

GEF Secretariat

Refer to above review.

Other IAs and RDBs

World Bank

Cost effectiveness. The project will cost \$63 million, with \$9million from GEF and \$36m from ADB. This is a very substantial investment in the context of (a) substantial existing experience with community management, (b) the small areas targeted for conservation and sustainable use (an average of 1,000 ha per MPA and average 100 ha of no-take core zone in each) and (c) support to areas benefiting from current or previous projects e.g. Sierra Madre, areas supported by USAID, etc. Just one example - purchase of 77 patrol boats and sets of enforcement equipment for 50 small MPAs - is a heavy infrastructure investment for a project that would seem to be advocating small-scale community initiatives. This raises doubts about replication and sustainability.

Response: ICRMP is a multi-objective project aiming at sustainable coastal resources management, biodiversity conservation and poverty reduction. The Project will support policy and institutional strengthening at the national, regional and local government levels, introduce a performance-based incentive system for coastal resources management and biodiversity conservation by local governments, implement integrated coastal resources management in the coastal areas of 65 municipalities, conserve biodiversity in priority marine corridors, facilitate development of alternative and supplemental livelihoods, and provide social and environmental services and facilities to disadvantaged coastal

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communities. The biodiversity conservation activities under the Project compare more favorably than other recent initiatives such as Bohol Marine Triangle, Tubataha Reef National Marine Park, and Coastal Marine Biodiversity Conservation Project. The Project costs are also comparable with the World Bank-assisted Community-Based Resources Management Project.

Addressing root causes. The root causes of much biodiversity loss are major development programs and related policy decisions e.g. unregulated tourism development, pollution, conversion of mangroves, watershed degradation and overfishing by commercial vessels from large ports. But the project seems to be doing relatively little to address these issues.

Response: The Project fully addresses root causes and threats to biodiversity in the Philippines (see Annex A to GEF Executive Summary). The policy and institutional strengthening and development component of the Project aims at improving the existing coastal resources management policy by integrating a holistic approach addressing policy gaps including those identified by the reviewer. Policy area specific studies will include marine pollution, mangrove management, foreshore management, coastal tourism, environmental impact assessment, biodiversity conservation, sustainable mechanism for financing biodiversity conservation, eco-certification, and trade in coral reef species (see Logframe). Also please note that the Republic Act 8550 of 1998 banned the operation of commercial fishing vessels in the 15 km municipal waters. The Project will provide institutional and infrastructure support (petrol boats) for community-based enforcement of this and other regulations relevant to coastal resources management.

Policy and strategy. A key policy gap with respect to marine resource management is that Philippines does not have a system of tenurial instruments for coastal waters, equivalent to that for forest lands. It is not clear if the project will address this shortcoming.

Response: See our response to “Addressing the Root Causes”.

DENR's institutional weaknesses. A recent WB report on natural resource management performance identified the following key problems in DENR - (a) inadequate devolution of staff to provincial and municipal governments (only 4% of DENR's staff have been transferred to local governments, although NRM responsibility has been substantially devolved to them); (b) a 45% budget cut in the last 5 years, most resources spent on HQ and regional staff, and donors paying for core functions; and (c) overall poor project implementation performance. The project does not seem to address these issues and instead seems likely to perpetuate them.

Response: The Project design acknowledges DENR's institutional weaknesses. Measures built in the Project design to address this weakness include: (i) sharing of Project implementation responsibility between DENR, DA and local governments; (ii) provision for human resources development strategies in coastal resources management for DENR; (iii) institutional capacity building for DENR, DA, local governments, NGOs, and coastal communities; and (iv) implementation of field level activities by local Government units in collaboration with NGOs and local communities, in a manner similar to the Community-Based Resource Management.

Sustainability and replicability. The project's large investments in a context of institutional weakness raises questions about its sustainability. It will set up several new institutions, including five provincial ICRM centers, provincial ICRMUs, 6 enterprise development units and numerous enterprises. How will these be sustained beyond the project lifetime or replicated elsewhere, given DENR's inadequate regular budget resources?

Response: To ensure sustainability of the ICRM Centers and the EDUs, the possibility of attaching these to existing institutions is being examined. ICRM centers may be attached to existing research institutions or universities active in marine and coastal resources research. Similarly, the EDUs may be based at the

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provincial Livelihood Offices. ICRMUs at municipal level do not involve any incremental staffing and will comprise existing staff of Municipal Agriculture Office that will be trained on ICRM. Moreover, the baseline funding will help develop and operationalize sustainable financing mechanisms such as user fees for various resource uses that will improve the sustainability of the Project activities.

The Project role in establishment of livelihood enterprises will be only that of a facilitator, and these enterprises will be owned and operated by project beneficiaries.

Review by expert from STAP Roster

Excellent STAP review. The reviewer should be congratulated. He seems to know GEF and its policies very well. The Secretariat agrees with the review substantively as well as with the response provided by ADB.

Convention Secretariat

None yet.

PDF-B

6. Terms of Reference

(relate to translating the pipeline entry criterion (met) to the WP inclusion criterion):

7. Budget line items related to the TOR (including schedule):

GENERAL COMMENTS

SUMMARY RECOMMENDATIONS BY PROGRAM MANAGER:

The Secretariat would like to request either an upstream consultation or a bilateral meeting with the EA to address issues highlighted above.

FURTHER PROCESSING:

A bilateral meeting took place on July 20, 2004 among ADB (names to be included) and Secretariat (M. Ramos) staff. ADB provided written responses addressing key issues raised by the Secretariat review and these form part of the project record. The meeting discussed remaining key issues and the meeting agreed to include the project brief in the work program upon reception of a revised project brief and executive summary by the agreed deadline.



Republic of the Philippines
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Visayas Avenue, Diliman, Quezon City
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929-70-41 to 43

06 July 2004

Mr. Daniele Ponzi
GEF Coordinator
Asian Development Bank
ADB Ave., Pasig City

Subject : **Proposed ADB/GEF-assisted Integrated Coastal Resources
Management Project**

Dear Mr. Ponzi:

We are endorsing the Integrated Coastal Resources Management Project for GEF Full Project Assistance. The Project supports the country's efforts to promote biodiversity conservation particularly in the coastal and marine areas of the country. It is also expected to help us in better meeting our commitments not only under the UN Convention on Biodiversity (UNCBD) but also in other coastal and marine-related multilateral and regional environmental agreements.

Thank you and best regards.

Very truly yours,

ELISEA G. GOZUN
Secretary and GEF Operational Focal Point



Republic of the Philippines
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929-86-20 • 929-86-33 to 35
929-70-41 to 43

19 July 2004

Mr. Daniele Ponzi
GEF Coordinator
Asian Development Bank
ADB Ave. Pasig City

Subject: Integrated Coastal & Marine Resources Project (ICRMP)

Dear Mr. Ponzi:

Further to our letter dated 06 July 2004 endorsing the ICRMP for GEF assistance, please be informed that the Government of the Philippines through the Department of Environment and Natural Resources (DENR) concur with the proposed co-financing arrangements in the implementation of the ICRMP project. Of the estimated total project cost of US\$63 Million, US\$36 M will be financed by Asian Development Bank (ADB), US\$9 M will come from the GEF while the remaining US\$ 18 M is being proposed as counterpart of the Government of the Philippines and the beneficiary communities.

We likewise agree that the ADB will be the Executing Agency for the GEF-support to this Project.

Thank you and best regards.

Sincerely yours,

Elisea G. Gozun
ELISEA G. GOZUN

Secretary and GEF Operational Focal Point

ANNEX H

Ramon Prudencio C. de Mesa
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