



Completion Report

Project Number: 33276-013
Loan Number: 2311
Grant Number: 0071
September 2018

Philippines: Integrated Coastal Resources Management Project

This document is being disclosed to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

Currency unit – peso (₱)

		At Appraisal (15 November 2006)	At Project Completion (30 June 2014)
₱1.00	=	\$0.0200481	\$0.0228415
\$1.00	=	P49.8800	₱43.7800

ABBREVIATIONS

ADB	–	Asian Development Bank
BFAR	–	Bureau of Fisheries and Aquatic Resources
DENR	–	Department of Environment and Natural Resources
DMF	–	design and monitoring framework
EGI	–	eco-governance index
EIRR	–	economic internal rate of return
GAP	–	gender action plan
GEF	–	Global Environment Facility
GSA	–	guided self-assessment
ha	–	hectare
ICRM	–	integrated coastal resources management
IEC	–	information, education, and communication
IEE	–	initial environmental examination
LGU	–	local government unit
MDFO	–	Municipal Development Fund Office
METT	–	management effectiveness tracking tool
MPA	–	marine protected area
MPAN	–	MPA Networking
O&M	–	operation and maintenance
PMC	–	project management consultant
PMO	–	project management office
SRG	–	self-reliant group

NOTES

In this report, "\$" refers to United States dollars.

Vice-President	Stephen Groff, Operations 2
Director General	Ramesh Subramaniam, Southeast Asia Department (SERD)
Director	Jiangfeng Zhang, Environment, Natural Resources, and Agriculture Division, SERD
Team leaders	Leonard Leung, Natural Resources and Agriculture Economist, SERD Lorna Enjaynes, Senior Project Officer, SERD
Team members	Cecile Ramiro, Senior Operations Assistant, SERD Caroline Velasquez, Operations Assistant, SERD

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

	Page
BASIC DATA	i
I. PROJECT DESCRIPTION	1
II. DESIGN AND IMPLEMENTATION	1
A. Project Design and Formulation	1
B. Project Outputs	2
C. Project Costs and Financing	5
D. Disbursements	5
E. Project Schedule	6
F. Implementation Arrangements	6
G. Consultant Recruitment and Procurement	7
H. Gender Equity	7
I. Safeguards	8
J. Monitoring and Reporting	8
III. EVALUATION OF PERFORMANCE	8
A. Relevance	8
B. Effectiveness	9
C. Efficiency	10
D. Sustainability	11
E. Development Impact	11
F. Performance of the Borrower and the Executing Agency	12
G. Performance of Cofinanciers	13
H. Performance of the Asian Development Bank	13
I. Overall Assessment	13
IV. ISSUES, LESSONS, AND RECOMMENDATIONS	14
A. Issues and Lessons	14
B. Recommendations	14
APPENDIXES	
1. Design and Monitoring Framework	16
2. Output A: Policy and Institutional Strengthening and Development	31
3. Output B: Integrated Coastal Resources Management and Biodiversity Conservation	34
4. Output C: Enterprise Development and Income Diversification	39
5. Output D: Social and Environmental Services and Facilities	42
6. Project Cost at Appraisal and Actual	45
7. Disbursement of ADB Loan and Grant Proceeds	48
8. Funds Flow Mechanism	50
9. Projected and Actual Implementation Schedule	51
10. Project Management Framework	55
11. Contract Awards of ADB Loan and Grant Proceeds	56
12. Summary of Gender Equality Results and Achievements	58
13. Status of Compliance with Loan Covenants	68
14. Economic Assessment	74
15. Terminal Evaluation Report for Global Environment Facility	82

BASIC DATA

A. Loan and Grant Identification

1.	Country	Philippines
2.	Loan number and financing source	2311 – ordinary capital resources
	Grant Number	0071 – Global Environment Facility
3.	Project title	Integrated Coastal Resources Management Project
4.	Borrower	Republic of the Philippines
5.	Executing agency	Department of Environment and Natural Resources
6.	Amount of loan	\$33.80 million
	Amount of grant	\$9.00 million
7.	Project completion report number	1708
8.	Financing modality	Project loan

B. Loan and Grant Data

1.	Appraisal	
	– Date started	7 August 2006
	– Date completed	31 August 2006
2.	Loan and grant negotiations	
	– Date started	24 November 2006
	– Date completed	24 November 2006
3.	Date of Board approval	23 January 2007
4.	Date of loan and grant agreement	28 March 2007
5.	Date of loan and grant effectiveness	26 June 2007
	– In loan and grant agreement	29 June 2007
	– Actual Number of extensions	1
6.	Project completion date	
	– Appraisal	31 December 2012
	– Actual	30 June 2014
7.	Loan and grant closing date	
	– In loan and grant agreement	30 June 2013
	– Actual	30 June 2014
	– Number of extensions	1
8.	Financial closing date	
	– Actual: Loan	26 May 2017
	Grant	5 June 2017
9.	Terms of loan	
	– Interest rate	London interbank offered rate-based (floating)
	– Maturity (number of years)	25
	– Grace period (number of years)	6
10.	Terms of relending (if any)	
	– Interest rate	10% per annum
	– Maturity (number of years)	12
	– Grace period (number of years)	3
	– Second-step borrower	Various participating local government units

11. Disbursements

a. Dates

Initial Disbursement	Final Disbursement	Time Interval
16 June 2008 (loan)	26 May 2017	108.9 months
16 June 2008 (grant)	5 June 2017	104.2 months
Effective Date	Actual Closing Date	Time Interval
29 June 2007 (loan)	30 June 2014	84 months
29 June 2007 (grant)	30 June 2014	84 months

b. Amount (\$ '000)

Category	Original Allocation (1)	Cancelled during Implementation (2)	Last Revised Allocation (3=1-2)	Amount Disbursed (4)	Undisbursed Balance (5 = 3-4)
Loan L2311					
Civil works	9,380	5,367	4,013	4,013	0
Equipment, materials, and vehicles	2,630	273	2,357	2,354	3
Consulting services	1,710	106	1,604	1,604	0
Resource management	6,090	289	5,801	5,761	40
Disseminations, demonstrations, and trials	4,570	870	3,700	3,616	84
Survey, investigation, design, and mapping	490	0	490	312	178
Monitoring and evaluation	1,820	0	1,820	1,626	194
Interest and commitment charge	6,270	4,905	1,365	1,365	0
Unallocated	840	840	0	0	0
Subtotal	33,800	12,650	21,150	20,651	499
Grant G0071					
Civil works	220	(62)	282	264	18
Equipment, materials, and vehicles	810	74	736	735	1
Consulting services	1,100	0	1,100	1,046	54
Capacity building	640	425	215	205	10
Resource management	2,850	500	2,350	2,331	19
Disseminations, demonstrations, and trials	280	59	221	218	3
Survey, investigation, design, and mapping	1,540	542	998	971	27
Recurrent cost	1,150	1,052	98	61	37
Unallocated	410	410	0	0	0
Subtotal	9,000	3,000	6,000	5,831	169
Total	42,800	15,650	27,150	26,482	668

12. Local costs (financed) – Not applicable

C. Project Data

1. Project cost (\$'000)

Cost	Appraisal Estimate	Actual
Foreign exchange cost	15,910	8,870
Local currency cost	46,410	27,158
Total	62,320	36,028

2. Financing plan (\$'000)

Cost	Appraisal Estimate	Actual
Implementation cost		
Borrower financed	19,520	9,545
ADB financed	27,530	19,286
Other external financing (GEF)	9,000	5,831
Total implementation cost	56,050	34,662
Interest during construction costs		
Borrower financed	0	0
ADB financed	6,270	1,365
Other external financing (GEF)	0	0
Total interest during construction cost	62,320	36,028

GEF = Global Environment Facility.

Note: Total may not sum up due to rounding off.

3. Cost breakdown by project output (\$ '000)

Output	Appraisal Estimate	Actual
A. Policy, institutional strengthening and development	1,380	181
B. ICRM and biodiversity conservation	29,860	16,632
C. Enterprise development and income diversification	6,110	4,218
D. Social and environmental services and facilities	12,970	5,461
E. Support for project implementation	3,000	8,171
Subtotal	53,320	34,663
F. Contingencies	2,730	0
G. Interest and other charges during construction	6,270	1,365
Total	62,320	36,028

ICRM = integrated coastal resources management.

4. Project schedule

Item	Appraisal Estimate	Actual
Date of contract with consultants	June 2007	1 December 2009
Civil works contract		
Date of award	January 2008	13 June 2012 ^a
Completion of work	31 December 2012	30 June 2014
Equipment and supplies		
Dates		
First procurement	September 2007	3 December 2008
Last procurement	December 2012	9 January 2014
Other milestones		
Mobilization of assisting institutions (for regions 5, 7, and 11)		22 February 2009
Mobilization of assisting institutions (for regions 2-3)		20 March 2009
Completion of 79 ICRM plans		June 2011
Establishment of ICRM centers	January–December 2008	June 2010–June 2013
Establishment of enterprise development units	December 2007	July 2009–June 2010

ICRM = integrated coastal resources management.

^a First civil works contract award for Calayan municipality in Cagayan province (Region 2).

5. Project performance report ratings

Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From 30 Jun 2007 to 31 Dec 2010	Satisfactory	Satisfactory
	Single Project Rating	
From 1 Jan 2011 to 31 Dec 2011		On track
From 1 Jan 2012 to 31 Dec 2012		Potential Problem
From 1 Jan 2013 to 31 Mar 2013		On track
From 1 Apr 2013 to 30 Sep 2013		Potential Problem
From 1 Oct 2013 to 31 Dec 2013		Actual
From 1 Jan 2014 to 30 Sep 2017		On track

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Fact-finding	19 Apr–25 May 2004	3	30	a,b,i
Appraisal	7 Aug–31 Aug 2006	5	42	a,b,c,d,e
Inception	21 Aug–3 Sep 2007	2	20	a, h
Review 1	12 Mar–25 Mar 2008	2	16	a,h
Review 2	4 Dec–8 Dec 2008	3	11	a,b,h
Review 3	1 Sep–9 Sep 2009	3	15	a,b,h
Review 4	12 Apr–20 Apr 2010	4	14	a,b,g
Review 5	15–27 Oct 2010	4	14	a,b,f,h
Midterm review	18 Feb–15 Mar 2011	3	20	a,h,j
Review 6	2 Dec–14 Dec 2011	2	24	a,k
Review 7	17 May–19 May 2012	2	4	a,h
Review 8	19 Mar–26 Mar 2013	2	8	a,h
Review 9	21 Oct–29 Oct 2013	2	10	a,h
Review 10	19 Mar–3 Apr 2013	2	9	a,h
Review 11	27 May–4 Jun 2014	3	15	a,e,h
Project completion review	21 Sep–6 Oct 2015	2	20	a,h

a = project specialist, b = economist, c = counsel, d = financial analyst, e = environment specialist, f = engineer, g = control officer, h = project analyst, i = staff consultant (natural resources economist, j = staff consultant (integrated coastal resources management).

I. PROJECT DESCRIPTION

1. The Asian Development Bank (ADB), at the request of the Government of the Philippines, approved a loan of \$33.8 million from its ordinary capital resources and the administration of \$9.0 million grant financing from the Global Environment Facility (GEF) on 23 January 2007.¹ The project aimed to promote sustainable management of coastal resources and increase income for local communities. The Department of Environment and Natural Resources (DENR) was the executing agency for the project with implementation responsibilities assigned to DENR, the Department of Agriculture, and local government units (LGUs).

2. The project covered six priority marine biodiversity corridors and ecosystems covering 79 LGUs in the provinces of Cagayan, Cebu, Davao Oriental, Masbate, Romblon, Siquijor, and Zambales. These LGUs surround four corridors which are rated *extremely high* for marine biodiversity and are of national and global importance: (i) the Babuyan corridor along the northern coast of Luzon; (ii) the Ticao Pass–San Bernardino Strait–Samar corridor; (iii) the Daanbantayan corridor straddling the Visayas Sea and the Tanon Strait; and (iv) the Pujada Bay corridor, an important point of convergence of bioregions of the Pacific Ocean and the Celebes Sea. A total of 68 LGUs were proposed at appraisal. During project implementation, eight LGUs withdrew, and 19 additional LGUs participated, thus increasing the number of LGUs to 79.

3. The project aimed to (i) improve laws and regulations governing coastal resource management through harmonization and interagency coordination; (ii) institutionalize an integrated coastal resource management (ICRM) system in all participating LGUs; (iii) manage 50 marine protected areas (MPAs) including 5,000 hectares (ha) of sanctuary areas, with 10% increase in fish catch outside the protected areas; (iv) improve management of about 50,000 ha of coral reef with 10% improvement in hard coral cover; (v) reforest 7,000 ha of existing mangroves and reestablish 2,000 ha of mangrove, with 20% improvement in density; (vi) reforest about 3,000 ha in watersheds and rehabilitate 4,000 ha of denuded watershed, contributing to the reduction in soil erosion and flash floods; (vii) reduce the incidence of illegal fishing by 50%; (viii) establish 340 aquatic and land-based enterprises and 32 ecotourism enterprises; (ix) enhance women's participation in coastal resource management and provide alternative livelihood options; and (x) improve access to safe water, sanitation and community services to coastal communities.

II. DESIGN AND IMPLEMENTATION

A. Project Design and Formulation

4. The project was consistent with the government's development priority to address poverty and population concentration in the coastal communities by creating livelihood opportunities, reversing degradation of natural resources, and balancing the use of aquatic resources and the country's Framework for Sustainable Philippine Archipelagic Development.² It was also consistent with the Medium-Term Philippine Development Plan, 2004–2010 and the

¹ ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Grant from the Global Environment Facility to the Republic of the Philippines for the Integrated Coastal Resources Management Project*. Manila.

² Department of Environment and Natural Resources, United Nations Development Programme and Marine Environment and Resources Foundation, Inc. 2004. *ArcDev A Framework for Sustainable Philippine Archipelagic Development: Revaluing our Maritime Heritage and Affirming the Unity of Land and Sea*. Manila.

2006 Executive Order 533 for adopting integrated coastal management strategy to ensure sustainable development.³

5. ADB's country strategy and program for the Philippines was closely aligned with the government's development objectives of reducing poverty and geographical inequalities, protecting the environment, and promoting good governance, among other things.⁴ The project fitted under group II of the priority classification of ADB's Medium-Term Strategy II, 2006–2008, supported environmental management and biodiversity conservation, and promoted regional cooperation in the management of public goods such as natural resources including marine and coastal resources.⁵ The conservation and management impact of priority biodiversity corridors and marine ecosystems under the project went beyond Philippine waters, benefiting other countries in the region. The project provided an important complementary activity to ADB work with neighboring countries to support the sustainable development of the Sulu–Sulawesi Marine Ecoregion.

6. The project design identified five key risks associated with project implementation and potentially affecting project outcomes and success: (i) degradation of the global environment and macroeconomic conditions, (ii) lack of political will to support the ICRM project, (iii) institutional weaknesses, (iv) peace and order situation, and (v) governance and corruption issues. It had proposed manageable mitigation measures so that project management staff could take the necessary steps to avoid or minimize any adverse impacts on project achievements. Risk mitigation measures adopted in project design for addressing degradation of the global environment included focusing on threatened species and habitats and promoting the establishment of networks or corridors of MPAs to ensure that the risks are dispersed. The municipal council resolutions and memorandum of agreement between the DENR and the Municipal Development Fund Office (MDFO) with binding commitments over the project period was expected to address risks associated with lack of political commitments. To mitigate institutional weaknesses, the DENR had agreed to redeploy staff and enhance their skills through in-house training and hiring of casual contract staff and using the existing DENR institutional set-up rather than creating a new one just for the project. Redeployment of project staff to secure areas was considered appropriate to counter the risk posed by the deteriorating peace and order situation in the project areas. Information, education, and communication (IEC) campaigns were expected to minimize risks associated with weak governance and corruption. In addition, ADB's Anticorruption Policy (1998, as amended to date) was included in its entirety as an annex to the project administration manual.

B. Project Outputs

7. Appendix 1 compares the actual achievements against the planned output and outcome targets. At the output level, the project fully achieved seven of the 11 original targets. Of the remaining four targets, two were partly achieved, and two cannot be assessed due to insufficient data. Appendixes 2–5 provide detailed description of achievements under each of the four outputs.

8. **Output A: Policy and institutional strengthening and development.** This output aimed to (i) rationalize government policy for ICRM and improve coordination mechanisms, (ii) strengthen national and local government institutional capacity, and (iii) develop a performance-

³ National Economic Development Authority. 2004. *Medium-Term Philippine Development Plan 2004–2010*. Manila. Office of the President of the Philippines. 2006. *Executive Order No. 533: Adopting Integrated Coastal Management Policy*. Manila.

⁴ ADB. 2005. *Country Strategy and Program: Philippines, 2005–2007*. Manila.

⁵ ADB. 2006. *Medium-Term Strategy II, 2006–2008*. Manila.

based incentive–disincentive system for local governments. The project (i) reviewed and recommended corrective measures to address policy weaknesses and legal gaps in the management of coastal zones and habitats; (ii) developed an institutional framework for the national and local government coordination of ICRM; (iii) finalized a comprehensive national policy on ICRM and undertook IEC campaigns; (iv) clarified the roles of the DENR, Department of Agriculture, local governments, and other national government agencies in ICRM and related activities; (v) made operational the imposition and collection of user fees and resource rents for MPAs, mangroves, coral reefs, beaches, and foreshores as a sustainable means for financing ICRM operations; (vi) trained 1,715 Department of Agriculture, DENR, and municipal government staff in various aspects of ICRM including basic practices of coastal resources management, resource enhancement, social preparation, environmental management, and biodiversity conservation; and (vii) developed and strengthened multisector local government ICRM organizations, including fisheries and aquatic resources management committees, *bantay dagat* (marine watch teams), and nongovernment organizations.

9. Overall, the project’s work in policy and institutional strengthening and development exceeded the output targets. Based on guided self-assessment (GSA) of the participating LGUs, the eco-governance index (EGI) increased from 76% in year 4 to 91% in year 6, which exceeds the 80% target.⁶ The LGUs prepared and adopted ICRM plans applicable to 411 subprojects in coastal areas on law enforcement and the management of MPAs.

10. Output B: Integrated coastal resources management and biodiversity conservation. The project intended to promote basic ICRM practices covering adaptive planning and budgeting; municipal water zoning; law enforcement; pollution control and environmental management; resource use licensing; and management of foreshores, beaches, and mangroves. The project supported the development of a national coastal resources database based on a participatory assessment of coastal waters and scientific assessment of sites of high biodiversity. The LGUs developed and integrated ICRM into their municipal planning processes. Key outputs included (i) mangrove rehabilitation (3,094 ha) and reforestation (1,286 ha); (ii) watersheds rehabilitation (4,355 ha) and reforestation (6,250 ha); (iii) training and provision of basic equipment and facilities to the local fisheries and aquatic resources management committees, marine watch teams, and nongovernment organizations on participatory enforcement mechanisms for fisheries laws and regulations; (iv) selection of threatened areas of high biodiversity networks of 75 MPAs covering 24,908 ha and development of 5,432 ha of no-take zones in the six priority biodiversity corridors and marine ecosystems;⁷ (v) development and strengthening of 77 MPA management plans and putting in place functional organizations, supported by targeted research on critical biodiversity resources including sensitive ecosystems and threatened flagship species; and (vi) establishment of the five regional ICRM centers in the existing marine science institutions for biodiversity monitoring, research, training, and demonstration activities.

11. All 79 participating LGUs developed and adopted ICRM plans and integrated in their municipal development plans. All LGUs also established integrated information management systems and environmental impact monitoring mechanism frameworks for enterprise development and income diversification and social and environmental services and facilities. The effectiveness of MPAs based on the management effectiveness tracking tool (METT) score was confirmed as this score increased from 70% in 2011 to 75% in 2013.

⁶ GSA is a participatory process designed to help LGUs and local stakeholders quickly and objectively track over time their progress in the practice of environmental governance, and the project institutionalized this process.

⁷ Targets at appraisal were 50 MPAs for effective management with at least 5,000 ha of sanctuary (no-take) areas identified.

12. Although not specified in the design and monitoring framework (DMF), other notable achievements include (i) successful restocking of sea cucumbers and giant clams in Ronda, Cebu, that provides ecotourism potential; (ii) establishing a 20 ha mangrove plantation in Cordova, Cebu with an average 80% survival rate, providing a good breeding ground for marine life; (iii) establishing an ecotourism project in Bojo River in Aloguinsan, Cebu that demonstrates how a well-vegetated mangrove river course area can be transformed into an attractive eco-tourism site that provides employment opportunities to fisherfolk and promotes environmental protection as well as biodiversity conservation; (iv) institutionalizing coastal biodiversity research conducted by the ICRM centers in Cebu and Davao Oriental involving students in coastal programs and IEC campaigns in partnership with the academe; (v) considering the MPA in Tamsan, Davao Oriental, as a model where core and buffer zones are well demarcated, and constructing a monitoring station and establishing an eco-tourism center close to the MPA, providing livelihoods to people's organizations as incentives to protect the MPA.

13. **Output C: Enterprise development and income diversification.** The project intended to establish 400 enterprises, comprising 345 aquatic and land-based enterprises and 55 ecotourism enterprises.⁸ The enterprises would provide alternative and supplementary livelihoods to 6,800 people (33% women). At completion, the project supported the establishment of 322 enterprises comprising 267 aquatic and land-based enterprises and 55 eco-tourism enterprises. The achievement is less than the revised target because of delays in the preparation of ICRM plans, which determined the suitable types of enterprises to be established. The enterprises provided employment opportunities to 12,647 people (44% women).

14. It was envisaged that 60% of the established enterprises would remain operational after one year. However, only 85 or 26.4% of the 322 established enterprises (72 aquatic and land-based enterprise, 13 ecotourism enterprises) remained operational after one year of their establishment. This has significant implications on the related target on alternative and supplementary livelihoods, as well as on the project's effectiveness and sustainability ratings.

15. The project accorded priority to people affected by the restricted use of coastal resources. The project (i) undertook the social preparation including community organization, needs and resource assessment, and savings mobilization; (ii) established an enterprise development unit in each province, identifying appropriate livelihoods and enterprises, and undertook feasibility and market studies; (iii) trained 9,143 fisherfolk including 48% women (against the appraisal target of 6,800 including 33% women) on technical and managerial aspects of enterprises; (iv) assisted community groups in preparing bankable business plans and accessing credit facilities from the formal banking system; (v) helped develop partnerships between coastal communities and private entrepreneurs in enterprise operation, management, and marketing; and (vi) promoted and developed ICRM-related eco-tourism. The project ensured that intended activities were aligned and connected with those existing in the project area. The project could establish only 322 enterprises because of the late start resulting from delays in the preparation of ICRM plans, but despite the reduction the number of people employed exceeded the target by 86%.

16. **Output D: Social and environmental services and facilities.** The project design included helping households in at least 68 participating LGUs to benefit from social and environmental facilities. The assumption is that each of the 68 LGUs would build such facilities in at least one of its *barangays* (smallest administrative division in the Philippines). The project adopted a demand-driven approach by providing, at the request of participating LGUs, technical

⁸ Targets at appraisal were 340 aquatic and land-based enterprises and 22 ecotourism enterprises. Both targets were revised during midterm review.

and investment support for improving water supply, health, and sanitation improvement, solid waste management, coastal pollution control and erosion mitigation. Among the 30 LGUs that submitted letters of interest, 27 prepared project proposals and 18 were qualified to enter into agreements with the MDFO through a subproject financing agreement. The remaining 9 LGUs were unable to complete the documentary requirements. Of the 18 subprojects, only 14 LGUs were able to proceed with the construction of facilities, with a total disbursement of \$4.01 million against a \$9.38 million allocation at appraisal. Of the 14 subprojects, one project was only 54% complete at the time of project completion.⁹ All subproject beneficiaries received training on operation and maintenance (O&M) to ensure sustainability. At completion, social and environmental facilities were constructed in 13 LGUs, benefiting 59,326 households in 134 *barangays*, which exceeded the assumed target of 68 *barangays* at appraisal.

17. The successful facilities include (i) the Carmen River flood control structure in Cebu, which reduced the periodic flooding in agricultural areas and the adjacent national highway; (ii) the Boston water supply system in Davao Oriental, which supplies potable water to 900 households, enhancing the health of the coastal population and reducing the work required to obtain potable drinking water; and (iii) the Cateel municipal drainage system in Davao Oriental, which addressed the perennial flooding that affected several households.

C. Project Costs and Financing

18. The original project cost was estimated at \$62.32 million of which \$33.80 million was financed by ADB, \$9.00 million by the GEF, and \$19.52 million by the government (central and local) (Appendix 6). At completion, the total project cost was \$36.03 million, 42.2% lower than the appraisal estimate, and it comprised \$20.65 million in ADB loan, \$5.83 million in GEF grant, \$8.53 million in government counterpart funds, and a \$1.02 million contribution from the LGUs. The substantial difference is due to overestimation of the demand from the local LGUs and savings of \$4.9 million from the interest during construction. The government canceled \$12.65 million of ADB loan and \$3.0 million of GEF grant. A comparison of the project cost breakdown is in Appendix 6.

19. In 2011, the project adjusted some of the output targets in response to changing needs. Several activities were not implemented, as follows: (i) policy studies on user fees and resource rents for mangroves, coral reefs, and beaches; (ii) joint department administrative orders to implement new ICRM policy; (iii) revision of the National Integrated Protected Area Systems Act; and (iv) an incentive–disincentive system endorsed by at least three national government agencies. Furthermore, the project did not pursue eco-certification and conducted only one of the 68 envisaged legal seminars for local judges.

D. Disbursements

20. The first disbursement for the loan and grant was on 16 June 2008, nearly 1 year after the loan and grant became effective. At financial closing, the cumulative loan disbursement was \$20.65 million (61% of the loan) and cumulative grant disbursement was \$5.83 million (65% of the grant). The pace of disbursement was slow due to several factors. Since no advance actions were taken, it took some time for the government to open an imprest account. Other contributing factors included delays in the recruitment of project management consultants (PMCs), mobilization of the project management office (PMO) in the DENR, and the time taken by LGUs to meet government requirements to tap financing of infrastructure subprojects. In addition, the government financed the majority of preparatory work using its own internal resources.

⁹ The Palauig subproject was partially completed (54% of target) but has continued with financing from the MDFO.

Appendix 7 shows projected and actual disbursement. ADB approved the extension of the winding-up period until June 2017 to complete the liquidation and return the unused loan and grant advances. The refunds for the loan and grant were received by ADB on 26 May 2017 and 5 June 2017, respectively.

21. The Department of Agriculture and DENR received the ADB loan and GEF grant proceeds through budgetary allocations. The municipal governments relied on joint financing coming from the LGUs and the national government allocated through the MDFO as a mix of ADB loan and government grant. Three imprest accounts were established—two for the DENR (ADB loan and GEF grant) and one for the MDFO (ADB loan). The funds flow mechanism is in Appendix 8. The project design, with a mix of ADB loan and GEF grant for each expense category (except the construction of ICRM centers and social and environmental services and facilities), resulted in complex documentation to liquidate and replenish imprest fund advance. This led to slow disbursements and delays in some project activities. Despite this constraint and the initial delays, 86% of the physical project activities were completed.

E. Project Schedule

22. The project closing date was originally scheduled for 30 June 2013. However, because of lack of provision for advance actions and limited project preparatory tasks in the first year after loan effectiveness, the implementation of several project activities was delayed. At the government's request, ADB granted a one-year extension until 30 June 2014. Implementation delays were caused by almost 3 years setback in recruiting and mobilizing the PMC; late setup of the project management structure; administrative problems in appointing suitable staff to the project; and delay in the preparation of the ICRM plans, which is required for the livelihood activities. Consequently, two key outputs (enterprise development and income diversification, and social and environmental services and facilities) could not proceed well until year 3 or 4. The financial closing dates for the loan and grant were on 26 May 2017 and 5 June 2017, respectively. There was a gap of 35 months between the dates of project closing and financial closing because of the time taken by (i) LGUs to submit liquidation documents to MDFO for the infrastructure component; and (ii) DENR and its regional offices to gather the supporting documents to liquidate the advances. Liquidation and refunds were required for three accounts, one administered by MDFO and two by DENR. In the case of MDFO, ADB received the full refund in October 2015. However, in the case of DENR, there was a large volume of liquidation documents, and the amount to be returned was not determined until December 2015. ADB received a partial refund from DENR in March 2016, but the balance must be covered from the government's 2017 budget. Final and full refund was received only in the second quarter of 2017. Appendix 9 presents the planned and actual implementation schedules.

F. Implementation Arrangements

23. The PMO was located at central office of DENR. The DENR and participating municipal governments had overall project implementation responsibilities. The Department of Agriculture designated its Bureau of Fisheries and Aquatic Resources (BFAR) central office as the focal point of its functions and responsibilities and conducted field activities through its regional offices. The DENR offices in regions 2, 3, 4-B, 5, 7, and 11, the environment and natural resources offices and community environment and natural resources offices in the subprovinces carried out the DENR's activities. Likewise, the municipal governments undertook all coastal resource management activities through the community-based fisheries and aquatic resources management councils, *bantay dagat*, and other people's organizations. The LGUs implemented the activities related to the social and environmental infrastructure with the support of the MDFO under the Department of Finance on a cost-sharing basis. Appendix 10 shows the project management structure. Because of the complex project design and multiple layers of

implementation agencies involved, it took 2 years to establish the full institutional setup at the national, regional, and provincial levels.

24. The project applied the GEF monitoring and evaluation framework using GSA for the GEF-funded activities and outputs. The project also adopted the GEF-endorsed METT to monitor MPAs.¹⁰ The project supported all LGUs in conducting METT assessment.

G. Consultant Recruitment and Procurement

25. Consultants were recruited using ADB's Guidelines on the Use of Consultants (2006, as amended from time to time). There was no advance recruitment of the consultants, and due to the slow mobilization of the PMO, the consultant recruitment process extended over two and half years after loan effectiveness. While the advertisement for the recruitment of PMC was posted in July 2007, a shortlist was not submitted to ADB until March 2008, an elapsed period of 8 months. There were inconsistencies in the shortlisting which delayed ADB approval until October 2008, a further elapsed period of 7 months. Requests for proposals were issued in November 2008, with a proposal submission date extended once to January 2009. While the evaluation of technical proposals was submitted to ADB in February 2009, ADB's no-objection approval only occurred in May 2009, after DENR fully addressed questions raised by ADB. Financial evaluation of proposals and final ranking were submitted to ADB and approved in July 2009. Following contract negotiations in August 2009, the PMC contract was signed in December 2009, some 4 months after contract negotiations, and mobilization of the PMC occurred in January 2010. Recruitment of the PMC was conducted at the DENR central office. Some individual consultants were recruited by the Protected Areas and Wildlife Bureau and DENR regional offices.

26. The project followed ADB's Procurement Guidelines (2006, as amended from time to time) and the PMO procured all equipment, except for ordinary day-to-day supply needs of the field offices. ADB conducted a procurement-related review in October 2012 to identify project strengths, vulnerabilities, and risks in the areas of procurement, asset verification, and internal controls. The review highlighted the inherent complexity and difficulties in managing such a highly decentralized project. It found (i) significant irregularities surrounding the contract awarded for the supply of 29 motorboats; (ii) lapses in procurement processes, contract implementation, and records management in the DENR regional offices that resulted in loss of funds or lack of transparency; and (iii) the need for strengthening central coordinating and project management functions in the PMO to support LGUs and reduce most of the delays and bottlenecks encountered. An action plan to address the report's findings was agreed with ADB and satisfactorily implemented. Appendix 11 shows the projected and actual contract awards of the loan and the grant. Overall, the performance of the consultants was *satisfactory*, as reflected in the ADB review missions' back-to-office-reports.

H. Gender Equity

27. The project was categorized as *effective gender mainstreaming* at entry, and its performance in gender action plan (GAP) implementation is rated *successful*. All of the four GAP activities were completed with 89% of the nine GAP targets achieved. By project completion, 5,506 women (44% of 12,647) were employed in alternative and supplementary livelihood enterprises.¹¹ A total of 8,838 (41% of 21,367) women participated in various capacity

¹⁰ The METT score card monitors the status, appropriateness, and effectiveness of MPA management planning and implementation schemes.

¹¹ Important to note that after 1 year of the establishment, only 87 of 322 livelihood enterprises remain operational. Updated figures on women employed in these enterprises are yet to be determined.

building sessions, such as trainings on coastal and marine resources conservation and laws, and livelihood and enterprise development. Women's representation in decision-making bodies was high (49% in policy dialogues), and as officers of both marine protected area management boards and self-reliant groups (SRGs) (37%). Among ICRM organizations that were mobilized or revitalized under the project, female membership reached 40%, and in SRGs 40%. Appendix 12 provides details on the gender results.

I. Safeguards

28. The project was classified *category B* for environment, *category C* for involuntary resettlement, and *category B* for indigenous peoples. No resettlement plans were prepared as the project did not require land acquisition or limitation of access. An initial environment examination (IEE) was conducted taking into consideration the nature of the project output. Because of the extensive and varied geographic scope of the project, the IEE was not carried out on a site-specific basis, but rather on the type of intervention and potential impacts. A summary of impacts and mitigation measures (including a monitoring plan) for activities with some adverse impacts were identified and described in the IEE. There were no reported adverse project impacts or indigenous peoples affected during project implementation.

J. Monitoring and Reporting

29. The project had 22 conditions and covenants—two related to environment, five related to social aspects, and 15 on project management including procurement, monitoring, and reporting. The project did not have any significant negative impact on indigenous peoples, land, inland waters, coastal areas, or other natural resources. The project did not adversely affect any informal settlers and all lands utilized were either unoccupied or had evidence of ownership. While providing livelihood options, the project accorded priority to the people adversely affected by project activities. The project complied with all 22 covenants, although six were delayed because of start-up delays, timely release of counterpart funds, and late submission of audited project accounts. Appendix 13 lists the status of the conditions and covenants at project completion.

III. EVALUATION OF PERFORMANCE

A. Relevance

30. The project design was rated *relevant* in addressing the critical issues of sustainable management of marine and coastal resources. From appraisal to completion, the project was consistent with the government's development objectives and the ADB's country strategy and program (2005–2007) (footnote 4), which called for natural resource management, development of sustainable enterprises and livelihoods, and development of basic social services and rural infrastructure. The project was also in line with ADB's Medium-Term Strategy II (2006–2008), which supported environmental management and biodiversity conservation (footnote 5).

31. The project also responded to the need for the creation of livelihood opportunities for the coastal communities trapped in the vicious cycle of poverty. It was consistent with (i) Presidential Executive Order 533 issued in 2006, which instructed the DENR to take appropriate steps; and (ii) the local government code to devolve the implementation of coastal infrastructure projects to LGUs with technical assistance and capacity building support from the Department of Agriculture, DENR, and other government agencies. The government's strategies under the Medium-Term Philippine Development Plan (2011–2016) also called for plans to improve food

security and increase incomes of coastal people.¹² The project's focus on improving capacity of LGUs for devolved responsibilities, including for the management of natural resources and strengthening the capacity of community-based organizations and local institutions, aligned with the policies and strategies of the government and ADB to develop coastal communities sustainably and reduce their vulnerability, build resilience, and reduce poverty.

32. The project design was also relevant to the GEF's objectives of reducing threats to and sustainable use of biodiversity. A GEF technical review team had noted that the project design was sound and feasible, based on existing institutions and local practices. It also recognized the project had adequate provisions for capacity building and had scope for replicability.

33. Although the project had complex implementation arrangements and involved a large number of stakeholders, the overall project design was appropriate and necessary in view of the broad project objectives. The project had incorporated relevant lessons from the government's more than 20 years of experience in coastal resource management and the fisheries segment. It also applied lessons from the experiences of projects assisted by other development partners.

B. Effectiveness

34. The project performance is rated *less than effective* in achieving outcome and outputs, because of non-verifiability or partial achievements of several important targets. At the time of preparation of the project completion report (PCR), there is insufficient information to assess achievements at the outcome levels, which are more realistically ready for assessment over the medium to long term.

35. At the output level, significant progress was made regarding Output A. Although only 68 LGUs were identified at appraisal, a total of 79 LGUs participated in the project. They prepared and adopted ICRM plans with funding for 411 projects related to coastal areas resources, law enforcement, management of MPAs, and alternative livelihoods for the affected communities. Also, the improvement in GSA-based EGI from 76% in year 4 to 91% in year 6 of the project is indicative of the potential positive contribution to the project outcome. There is also strong buy-in from LGUs since 11 additional LGUs participated in ICRM, which demonstrates strong community interest and engagement in protecting coastal resources.

36. For Output B, the project met the targets concerning rehabilitation and reforestation of mangroves and watersheds, but significantly fell short in terms of coral reefs coverage. It was envisaged that 50 MPAs would be established and on average each MPA would cover 1,000 ha of coral reefs. The total coral reefs coverage would, thus, be 50,000 ha. While 77 MPAs were established, the total coral reefs coverage is only 24,908 ha (49.8%) of the appraisal target due to the smaller size of the MPAs than anticipated. In addition, several other targets relating to increase in fish density, increase in fish species diversity, and reduction in illegal fishing incidence cannot be assessed, either because of insufficient data or difficulty in compiling the data.¹³ Given that the METT score increased from 70% in 2011 to 75% in 2013, it is likely that progress was made towards restoring marine life density and biodiversity in the participating LGUs. However, further studies are required to measure the actual achievements. On the other

¹² National Economic Development Authority. 2006. *Medium-Term Philippine Development Plan 2011–2016*. Manila.

¹³ Under Output B, the project supported 32 baseline studies on habitat condition, population dynamics of threatened species, and trends in coastal resources. Although envisaged at project design, no follow-up studies were conducted to monitor changes during implementation. In addition, data in unprotected areas are normally not collected by DENR. While individual LGUs might collect data, the methodology and the range of data collected are not universal, rendering data compilation difficult.

hand, the last target on reducing illegal fishing by 50% is over ambitious and is unlikely to be achieved.

37. Targets set for Output C were partly achieved. The revised DMF set a target of 400 enterprises to be established, 60% of which would remain operational after 1 year of operation. At project completion, 322 enterprises (267 aquatic and land-based enterprises and 55 eco-tourism enterprises) were established. The lower achievement in the number of enterprise established was due to delay in the preparation of the ICRM plans, which must be approved by LGUs before the Department of Agriculture's BFAR could implement the livelihood activities. Of the 322 enterprises, only 26.4% (85 enterprises) remained operational. Defects in the fund flow arrangement was a significant reason for the low survival rate. Since BFAR was not assigned a separate imprest account, fund disbursements must be sourced from DENR. Many of the aquatic and land-based enterprises were subject to seasonality and received funds in tranches. Delay in release of funds from DENR to BFAR created liquidity stress that resulted in the winding-up of enterprises. It was also envisaged that the new enterprises would create 6,800 employment opportunities. Although the enterprises created 12,647 positions at the start, the number of permanent positions created is likely to be less in view of the enterprises' low survival rate.

38. Regarding Output D, 59,326 households in 134 *barangays* under 13 LGUs have benefitted from the project's social and environmental facilities, as compared to the appraisal target of 68 *barangays*. The achievement at completion demonstrates that the project had selected health and social interventions strategically to benefit a larger number of community members.

C. Efficiency

39. The project is rated *efficient*. The economic assessment of the project using the methodology and assumptions adopted at appraisal, supplemented by actual project cost and perceived project benefits, yielded an overall economic internal rate of return (EIRR) of 15.7%, slightly lower than at appraisal (16.1%) but exceeding the benchmark discount rate of 12.0% (Appendix 14).¹⁴ However, it should also be noted that the assessment result is sensitive to downside risks, especially the gradual diminishing or shortening duration of the expected project benefits stream, which may result if some project achievements cannot be sustained. The base case analysis assumes an analytical timeframe of 26 years (from 2007–2032), with positive net benefit flows from year 9 (2015). If the benefit streams are reduced by 5% from 2017, the EIRR would decrease to 10.9%. Similarly, if the benefit stream ceases in 2027 due to project sustainability issues, the EIRR would decrease to 12.6%.

40. Start-up delays led to a one-year extension of the project which could have been avoided with advance actions. The project effectiveness date did not align with the government's planning and budgeting cycle, which adversely affected the establishment of the PMO and subsequent recruitment of the PMC. Progress picked up during the last 2 years of the

¹⁴ The economic benefits of the project were derived from (i) coral reef management and conservation, (ii) mangrove rehabilitation and management, (iii) watershed rehabilitation and management, and (iv) livelihoods and enterprise development. The quantifiable benefits from coastal habitat (reef and mangrove) included (i) fishery values (the net value of sustainably managed commercial reef and mangrove fishery), (ii) local-use value (marketed and nonmarketed uses from reefs and mangroves that are not associated with commercial fishery, e.g., aquarium trade, gleaning of coral reef flats, small-scale capture fishery, and hunting in mangroves), (iii) erosion control and waste management (coral reefs and seagrass acting as barriers to destructive wave actions on coastlines, mangroves protecting coastal zones against destructive typhoons and tidal waves, and managing wastes through assimilation), and (iv) global use values (sustainable export of live fish, international tourism, and aesthetic and biodiversity values of reefs).

project. The total project cost was substantially lower than appraisal estimates because of cost containment adopted by the government. The project underutilized the civil works allocation by \$5.38 million. Lastly, the interest during construction was substantially overestimated, by \$4.91 million.

D. Sustainability

41. The project is rated *less than likely sustainable*. The national government's institutionalization of the Coastal and Marine Division under the DENR's Biodiversity Management Bureau (formerly the Protected Areas and Wildlife Bureau) is an indication of its strong commitment to continue and strengthen the project initiatives and gains. Another indicator of sustainability is the adoption of MPA Networking (MPAN) under the Coastal and Marine Ecosystems Management Program as a result of the project experience. This is a major nationwide government-funded project implemented by the DENR. At the municipality level, the current budget and expenditure patterns show that during the post-project period, the annual funding requirements to support recurring costs for project-led initiatives, including O&M of infrastructure facilities, will be 1% of municipal revenues and 6% of the present development expenditures. Currently, O&M of completed infrastructure are funded by the LGUs while project post completion recurring costs are mostly covered by the government's Coastal and Marine Ecosystems Management Program which promotes the adoption of the MPAN, and is currently working towards the development of the MPAN policy framework that will define the roles of the government agencies and LGUs in the implementation. The capacity of municipal governments for sustainable financing of ICRM has been augmented by developing appropriate policy for user fees and resource rents for MPA, mangroves, coral reefs, beaches, foreshore fisheries, and mariculture.¹⁵ The enhanced capacity of the staff at the national, regional, and municipal levels is likely to help sustain the project benefits.

42. Despite the aforementioned achievements, implementing agencies will have to seek a more effective method of ensuring that the resources are available for enforcement aimed at protecting the environment. The status of nonfunctioning patrol boats is a matter of concern. At project completion, 53 of the 79 patrol boats were nonfunctional, posing a challenge to effective monitoring and enforcement of sustainable management practices to protect the environment.

43. Strong ownership was demonstrated by the local communities (e.g., formation of SRGs with more than 25,000 members) and LGUs which were an integral part of the project design based on participatory principles for MPAs and coastal resource management. While alternative and supplementary livelihood opportunities and improvement of local economic and social infrastructure facilities will result in income enhancement for the local communities and LGUs, the low survival rate of the established enterprises makes it questionable how long the additional income stream will continue.

E. Development Impact

44. Project design assumed that the project's impact on enhanced coastal resources would take 20 years to fully materialize. At the time of preparation of the PCR, an assessment at the impact level was premature. The project contributed to human resource development at the Department of Agriculture's BFAR, DENR, and the coastal participating LGUs. All 79 participating LGUs established integrated information management systems supported by procurement of equipment, database software and geographic information system applications. The project introduced participatory monitoring plans (namely the GSA-based EGI) to the LGUs and an environmental impact monitoring mechanism to the communities. In addition, the project

¹⁵ The user fee was piloted in major coastal habitats of the project sites in Masbate and Cagayan in 2011.

trained 4,608 local community members (36% women) in 73 SRGs on ICRM and biodiversity conservation, and 1,865 *bantay dagat* members in 26 SRGs on fishery and coastal laws and enforcement. These community members form a core group committed to the management of coastal natural resources. These initiatives have prepared the agencies and local community members to carry out their responsibilities effectively. A combination of SRGs, marine watch teams, and alternative livelihood provided by the enterprises have contributed to environmental protection.

45. A social development assessment after the midterm review of the project in 2011 found that there were no significant issues associated with land acquisition, resettlement of affected population, and indigenous people's assets including ancestral domains. Women's participation in the project was higher than targeted (about 40% against 33% at appraisal). While the project did not assess its impact on poverty reduction, anecdotal evidence at project completion suggested that most of the affected people had adopted sustainable income-generating activities.

46. Despite these significant achievements, there are indications that they may not lead to long term development impact. For example, just after a few years of operations, the majority of patrol boats were already nonfunctional due to typhoons and boat quality. They may not be immediately replaced considering the total cost of the boats is close to \$670,000. Similarly, of the 322 enterprises established, only one-third remained operational after 1 year, which limited local employment opportunities and local economic development potential. While the project made some immediate and significant achievements, a prudent evaluation would call for a *less than satisfactory* rating on development impact in view of concerns over sustainability.

F. Performance of the Borrower and the Executing Agency

47. The DENR (i) followed ADB procedures for the procurement of goods and equipment and the recruitment of the PMC; (ii) maintained and managed separate accounts for the project; (iii) managed project finances, as confirmed in audited financial reports with an exception;¹⁶ (iv) submitted implementation and progress reports to ADB on schedule (with the exception of audited statements which encountered delay); and (v) facilitated timely provision of counterpart funds to the implementing agencies, with some exceptions beyond the control of the DENR.

48. The DENR's performance improved as a result of the training and capacity building delivered under the project, as well as the adherence to periodic ADB action plans designed to speed up project implementation, and support from consultants. However, there is still room for improvement on financial management capacity, which could have shortened the 35-months gap between loan closing and financial closing dates. This notwithstanding, and in view of the project's complex implementation arrangement and involvement of multiple stakeholders, DENR's overall performance was *satisfactory*.

49. In addition, the performance of the BFAR as supporting executing agency, particularly at the regional and provincial levels, was *satisfactory*. The BFAR provided valuable implementation assistance under outputs A, B, and C, playing a key role in the support and implementation activities in generating the aquatic and land-based enterprises.

¹⁶ Audit opinion for the 2014 audited project accounts for both loan and grant were adverse because of recording flaws—direct payments by ADB to suppliers and contractors still reported as accounts payable (₱5.27 million grant and ₱8.77 million loan); incorrect calculation of depreciation; unaccounted or unlocated assets during physical inventory; and unserviceable assets of ₱0.29 million classified as property, plant, and equipment instead of other assets under the loan.

G. Performance of Cofinanciers

50. The performance of the joint cofinancier, the GEF, was *satisfactory*. It continuously allocated annual funding for the project. It also provided funds to support regular review missions. There were no cofinancing issues encountered during project implementation.

H. Performance of the Asian Development Bank

51. ADB's performance in project design, implementation, and completion was *satisfactory*. It fielded 11 review missions, one midterm review, and one project completion review mission between March 2008 and October 2015. During the review missions, ADB provided advice on technical issues, procurement procedures, bid document preparation, documentation, bid evaluation, civil works quality assurance, and loan administration. It responded favorably to the government's request for the reallocation of loan proceeds and effecting part of loan cancellation, and approval of civil works subprojects. After the midterm review, it also included a social development specialist in the project review team to strengthen the project delivery. ADB helped the project by conducting due diligence in the recruitment of the PMC and procurement review. It tried to help the project speed up its implementation by providing needed support. In December 2015, ADB conducted a follow-up review on the implementation of project procurement-related review and offered a set of recommendations.¹⁷ The government is satisfied with the level and quality of support provided by ADB during the implementation of the project.

I. Overall Assessment

52. The overall project performance is rated *less than successful* based on the core evaluation criteria as *relevant, less than effective, efficient, and less than likely sustainable*. The project was relevant based on its consistency with ADB's country strategy and program, the government's development objective and plans, the Presidential Executive Order 533 issued in 2006, and importance from the subregional perspective to sustainably manage coastal natural resources. The economic assessment indicates that the EIRR is sufficiently high to justify an efficient rating, primarily based on the environmental benefit streams. However, concerns over sustainability, particularly the low survival rates of enterprises, and non-measurability of several DMF targets adversely affect the ratings for effectiveness and sustainability.

Overall Ratings

Criteria	Rating
Relevance	Relevant
Effectiveness	Less than effective
Efficiency	Efficient
Sustainability	Less than likely sustainable
Overall Assessment	Less than successful
Development impact	Less than satisfactory
Borrower and executing agency	Satisfactory
Performance of Asian Development Bank	Satisfactory

Source: Asian Development Bank.

¹⁷ ADB. 2015. *Follow-up review on the implementation of project procurement-related review recommendations Loan 2311-PHI and Grant 0071-PHI: Integrated Coastal Resources Management Project*. Manila.

IV. ISSUES, LESSONS, AND RECOMMENDATIONS

A. Issues and Lessons

53. Major lessons are as follows:

- (i) The timing of a project's processing need to be aligned with the government's planning and budgeting process so that adequate provision is made for mobilizing resources so that project start-up is not significantly delayed.
- (ii) Project costs need to be based on realistic assumptions. Actual needs for funds were far less than appraised amounts. Consideration should also be given to absorptive capacity of the executing and implementing agencies for timely completion of outputs.
- (iii) Given the project's objectives, it is almost inevitable to engage two implementing agencies, DENR and BFAR under the Department of Agriculture. BFAR's involvement is necessary since it implemented alternative livelihood activities in conjunction with the LGUs. However, given the project's complex implementation arrangements and extensive stakeholder involvement, it would be beneficial if the project had piloted key activities in one proactive region during the first 2 years, and then replicating the activities in other regions. There was also merit in clearly mapping out the sequencing of different planned activities, which would have made coordination more effective.
- (iv) Disbursement delay caused for slow implementation. A separate advance account could have been assigned to BFAR to execute the activities under its responsibility (such as aquatic, land-based and ecotourism enterprises), without having to liquidate through DENR. In addition, the allocation which specified different funding mix for different categories slowed down liquidation. It could have been simplified, by assigning a single funding source for every expense category.
- (v) In addition, the project design would have further benefitted from provision for the establishment of the PMO before loan effectiveness, and advance actions on recruitment of the PMC and the procurement of goods and equipment to facilitate timely project implementation and completion.
- (vi) The implementation of ICRM plans under a devolved governance structure requires careful selection of implementing partners and delegation of implementation responsibilities across government agencies at the national, provincial and municipal level. The project demonstrated that this is possible. A clear line of responsibilities between the Department of Agriculture's BFAR and the DENR facilitated this achievement, along with establishment of enterprises and employment opportunities for the people in the local communities.
- (vii) Future project design needs to address vulnerability arising from natural disasters such as typhoons and storm surges in the coastal areas and build resilience in local communities. Furthermore, since the intensity and frequency of these natural disasters are common in the coastal areas of the Philippines, the project should have insured high-value items like patrol boats and enforcement equipment to avoid financial losses and ensure timely assets replacement.

B. Recommendations

1. Project Related

54. **Future monitoring.** ADB should continue to engage the Government of the Philippines as well as other countries in the region on the sustainable management of coastal natural resources. There are critical needs in the areas for supporting efforts of LGUs in annual

monitoring of aquatic resources, including fish density and fish species richness, hard coral cover, mangrove density, and MPA effectiveness (as measured by METT scores). In addition, the LGU monitoring exercise should cover employment (duration, number, and type) generated, and the number, coverage, and economic viability of aquatic, land-based, and ecotourism enterprises.

55. **Covenants.** ADB should ensure that O&M requirements for civil works and equipment are included in the covenants to ensure project sustainability. ADB should also promote knowledge sharing and monitoring of MPAs at the subregional level by engaging the relevant countries.

56. **Timing of the project performance evaluation report.** ADB should prepare an in-depth performance evaluation of the project in 2021 and take a stock of improvements in coastal natural resources and find innovative ways of managing such challenges. It would also be opportune to assess the impact of the project on employment and income of local community members.

2. General

57. ADB and the government should agree to establish advance account(s) for each implementing agency within 30 days of loan effectiveness. The provision should also cover fast-tracking of disbursement requests and settlements. In addition, ADB should make provision for an advance action using time- and cost-efficient recruitment of consultants and encourage governments to fast-track the approval process by delegating approval authority for procurement based on the size of the project.

58. ADB, in agreement with the borrowers, should consider including locally adaptable interventions in future project designs to ensure communities' resilience and the protection of natural ecosystems to adverse weather conditions, particularly in the coastal areas.

59. ADB project appraisal teams should ensure that project cost estimates reflect realistic assumptions, taking into account local norms, projection of demand, and absorptive capacity of the executing and implementing agencies.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators at Appraisal	Revised Performance Targets/Indicators	Achievements
Impact Enhanced coastal resources	Depletion of coastal resources is arrested and 30% improvement in productivity and biophysical state of resources (year 20)		Insufficient information for an assessment
Outcome Sustainable management of coastal resources	10% improvement over baseline in fisheries resources, 10% improvement in hard coral cover, and 20% improvement in mangrove density in participating LGUs (year 7) 10% increase over baseline in fisherfolk household income (year 7)		Insufficient information for an assessment. Only baseline surveys were conducted. There was no follow-up survey to monitor progress. Insufficient information for an assessment. Preliminary evidence suggests that fisherfolks' income have increased due to the project.
Outputs A. Policy environment and legal framework for ICRM rationalized, institutional capacities strengthened, and governance improved B. ICRM institutionalized and functional at the local levels, and coastal ecosystems and resources in the	Increased stakeholder participation in major policy decisions, and resource and budget allocation for ICRM (year 4) Participating local government units (LGUs) score at least 75% on the ecogovernance index and the Project scores at least 80% (year 6) In the 68 participating LGUs and by year 6:	68 LGUs participated, altogether established by year of the following:	Achieved. Participating LGUs prepared and adopted ICRM plans which provide funding for 411 projects related to coastal, law enforcement, management of marine protected areas, alternative livelihood, etc. Achieved. LGU's EGI increased from 76.14% in year 4 to 90.85% in year 6. Achieved. 79 LGUs participated. Addition of the province of Romblon with 8 LGUs; addition of 11 LGUs in the provinces of Cebu, Davao Oriental, Masbate, Siquijor, and Zambales; Withdrawal of

Design Summary	Performance Targets/Indicators at Appraisal	Revised Performance Targets/Indicators	Achievements
threatened areas of biodiversity are protected and managed	<p>50,000 hectares (ha) of coral reefs established, with 5,000 ha of no-take zones</p> <p>7,000 ha of mangroves properly managed 2,000 ha of mangroves reforested</p> <p>3,500 ha of watersheds rehabilitated 4,000 ha of watersheds reforested</p> <p>Incidence of illegal fishing, threats to marine habitats, and encroachments to foreshore areas reduced by 50% (year 6)</p> <p>At least 30% increase in fish density and 5% increase in fish species richness over baseline in no-take zones (year 6)</p>	<p>50,000 hectare (ha) of coral reefs with 5,000 ha of no-take zones; 3,190 ha of mangroves rehabilitated</p> <p>1,260 ha of mangroves reforested Targets decreased due to limited mangrove areas</p> <p>6,313 ha of watersheds rehabilitated 4,399 ha of watersheds reforested Targets increased to compensate for reduction in mangrove areas to be reforested.</p>	<p>8 LGUs in the provinces of Zambales, Masbate and Cebu</p> <p>Partly Achieved. Coral reef coverage by year 6 were 24,908 ha with 5,432 ha no-take zones</p> <p>Achieved. 3,094 ha of mangroves rehabilitated 1,286 ha of mangroves reforested</p> <p>Achieved. 6,250 ha of watersheds rehabilitated 4,355 ha of watersheds reforested</p> <p>Insufficient information for an assessment</p> <p>Insufficient information for an assessment. The project supported 32 baseline studies, but no follow-up studies were undertaken to allow for comparisons.</p>
C. Alternative and supplementary	340 aquatic and land-based enterprises and 32 ecotourism enterprises are established. At	345 aquatic and land-based enterprises and 55	Partly Achieved. 267 aquatic and land-based enterprises and 55

Design Summary	Performance Targets/Indicators at Appraisal	Revised Performance Targets/Indicators	Achievements
livelihoods provided	least 60% remain operational beyond their first year of operation (year 6) The enterprises provide supplemental employment opportunities to 6,800 of whom at least 30% are women (year 6)	ecotourism enterprises are established. At least 60% remain operational beyond their first year of operation (year 6)	ecotourism enterprises were established. However, after 1 year only 72 aquatic and land-based enterprises and 13 ecotourism enterprises remained operational. Achieved. At start, the 322 established enterprises generated employment opportunities to 12,647 community members, of which 5,506 or 44% are women. However, the number of permanent positions created is likely to be less, considering the low survival rate of the enterprises.
D. Health and social conditions in the coastal communities improved	Households in at least 68 <i>barangays</i> benefiting from social facilities by year 6		Achieved. 59,326 households in 134 <i>barangays</i> in 12 LGUs are benefiting from social and environmental facilities.

Activities with milestones

A. Policy and Institutional Strengthening and Development

1. Policy Aspects

Undertake studies and other preparatory work contributing to finalization of ICRM policy

<ul style="list-style-type: none"> Institutional framework (ArcDev) reviewed and finalized in light of Executive Order 533 of 6 June 2006 on ICRM (year 1) 		<p>Partly Accomplished. The ArcDev was reviewed but not pursued; the basic principles and concepts were used in formulating the department memorandum circular on NICMP has been drafted; it has been presented to the DENR Executive Committee but has not been passed.</p>
<ul style="list-style-type: none"> Implementing rules and regulations for the Executive Order 533 finalized (year 1) 		<p>Not Accomplished. It was agreed at midterm review that Executive Order 533 (EO 533). EO</p>

		533 does not require an implementing rules and regulation and therefore not pursued.
<ul style="list-style-type: none"> National, regional, and provincial coordinating bodies established (year 2) 		Accomplished. The national, regional, and provincial coordinating bodies are incorporated in the NCIMP which remains to be passed.
<ul style="list-style-type: none"> Policy studies on marine and coastal water pollution, mangrove management, foreshore management, coastal ecotourism, environmental impact assessment, biodiversity conservation, trade in coral reef-associated fish and vertebrate species completed, and disaster management completed (year 3) 		Accomplished. Biodiversity conservation was excluded from the policy studies because of the existence of Executive Order 578, establishing the national policy on biological diversity and prescribing its implementation throughout the country particularly in the Sulu-Sulawesi Marine Ecosystem and the Verde Island Passage Marine Corridor. Policy studies were done on all the others.
<ul style="list-style-type: none"> Policy study on MPAs under the National Integrated Protected Area Systems Act completed (year 2) 		Accomplished. Schedule revised to June 2011 (year 4). A policy review was done and clarified by 2010 (year 3): (i) LGU's authority over marine waters in protected areas; (ii) authority of the Protected Area Management Bureau (PAMB) to grant fishery-related privileges in protected areas; and Integrated Protected Area Fund (IPAF) issues.
<ul style="list-style-type: none"> Policy study on delineation of responsibilities completed and recommendations implemented through joint relevant administrative orders (year 2) 		Not Accomplished. As stated in the MOU of the midterm review mission, the DENR has expressed that there is no longer a need for this study because of the existence of joint administrative orders between and among DENR, DA-BFAR, and

		DILG that clarify and harmonize the roles and responsibilities in implementing national ICM laws and policies.
<ul style="list-style-type: none"> Policy study on user fees and resource rents for mangroves, coral reefs, beaches, foreshores, fisheries and mariculture, and on appropriate implementation arrangements is completed and pilot tested (year 3) 		Accomplished. Schedule revised to March 2011 (year 4) and completed in December 2011. This study came up with proposed user fees for mangroves, coral reefs and foreshore areas within the project sites and recommendations to address the constraints in the implementation of the Department Administrative Order 2000-51. This was piloted in major coastal habitats of the project sites in Masbate and Cagayan. To estimate user fees and resource rents in other project sites not covered by the surveys, a training workshop was held.
<ul style="list-style-type: none"> Joint department administrative orders to implement new ICRM policy issued (year 3) 		Not Accomplished. Schedule revised to June 2011 (year 4); covered under NICMP which, however, remains to be passed.
<ul style="list-style-type: none"> National Integrated Protected Area Systems Act revised (year 3) 		Not Accomplished. This was not pursued because: (i) the integrity of the NIPAS Act should be maintained; (ii) the NIPAS Act IRR was just revised and approved in 2008. Revisions included coastal or aquatic concerns and incorporated more than 10 years of learnings and experiences in the implementation of NIPAS.
<ul style="list-style-type: none"> a. Undertake ICRM policy information, education, and communication (IECs) campaigns completed for DENR, Department of Agriculture, six provinces, and 68 LGUs (year 4) 		Accomplished. Policy studies were reproduced and disseminated to concerned offices, including 79 LGUs in

		2014 (year 7).
2. Capacity Building and Institutional Development		
Provide ICRM-related human resources and institutional development		
<ul style="list-style-type: none"> Assessment of human resources and institutions, and capacity-building requirements of DENR, DA, and LGUs; and develop strategies to address these (year 2) 		Accomplished. Strategies developed in 2010 (year 3).
<ul style="list-style-type: none"> 600 DENR, DA, and LGU staff (including at least 33% women) are trained in various aspects of ICRM (year 6) 		Accomplished. 1,715 staff from DENR, DA, BFAR and LGUs including 668 women (39%) were trained by 2013 (year 6).
Develop in-house ICRM and marine biodiversity research agenda for DENR and DA		
<ul style="list-style-type: none"> Research agenda and plans are formulated and approved (year 2) 		Accomplished. Research and development agenda for the national integrated coastal resource management and marine biodiversity formulated and approved by the Project Steering Committee (PSC) in July 2010 (year 3).
3. Performance-based incentive and disincentive system		
Develop incentive-disincentive systems for ICRM		
<ul style="list-style-type: none"> Existing local, national, international incentive and disincentive systems documented and promising systems identified (year 2) 		Accomplished.
<ul style="list-style-type: none"> Incentive-disincentive system endorsed by at least 3 national government agencies (year 3) 		Not Accomplished. Joint Administrative Order presented to DENR, DA-BFAR, and DILG but still to be endorsed by the three agencies.
<ul style="list-style-type: none"> IEC materials prepared and campaign undertaken (year 3) 		Accomplished. Schedule revised to January 2012 (year 5)
B. ICRM and Biodiversity Conservation		
1. ICRM		
Undertake IEC campaign		
<ul style="list-style-type: none"> IEC campaigns for communities, health workers, and LGU staff designed (year 2) 		Accomplished. All regions completed IEC on population, health and environment (PHE) in 2013 (year 5).
<ul style="list-style-type: none"> IEC campaigns implemented for coastal communities in the 68 LGUs (year 2 and thereafter every year) 		Accomplished. IEC campaign materials disseminated to coastal communities in the 80 LGUs; IEC campaigns

		on PHE are being implemented in regular regional ICRM activities.
<ul style="list-style-type: none"> IEC campaigns on linkages between population growth and deteriorating coastal resources, and population management are implemented for health workers, 25,000 community members (including at least 33% women) in the 68 LGUs (year 6) 		Partly Accomplished. Trained 4,166 persons, of which 1,956 or 47% were women, on IEC campaign. This included 2,583 persons, of which 1,257 or 49%, trained on IEC for population, health and environment.
Undertake participatory coastal resources assessment and scientific observations		
<ul style="list-style-type: none"> Participatory coastal resources assessments completed/updated in 68 LGUs (including MPAs), and coastal resource maps indicating location, extent, and use patterns (years 2 and 6) 		Partly Accomplished. First participatory coastal resources assessment of the 79 LGUs completed in 2011-2012 (years 4-5); 2 nd cycle of assessment was not undertaken due to limited BFAR budget.
<ul style="list-style-type: none"> Scientific assessments of resources and habitats in six provinces completed (years 1, 3, and 6) 		Accomplished. Completed in 2011-2012 (years 4-5).
Develop and strengthen ICRM organizations		
<ul style="list-style-type: none"> Multisector and community organizations including fish and aquatic resources management committees, NGOs, community organizations, <i>bantay dagat</i> (marine watch teams), and environment and natural resources protection committees strengthened/established in 68 LGUs (year 6) 		Partly Accomplished. Conducted training to 2,234 <i>bantay-dagat</i> and fish wardens, of which 518 or 23% were women, on various marine, coastal, and fisheries laws and regulations as of 2011 (year 4); produced and distributed handbooks on environmental and fisheries laws and regulations.
<ul style="list-style-type: none"> 200 members (including at least 33% women) of ICRM organizations trained in organizational aspects (year 3) 		Accomplished. BFAR conducted training for 451 people's organizations (POs) in 69 LGUs on organizational development and management in 2011 (year 4); 5,449 members including 2,639 women or 48% attended the trainings.
<ul style="list-style-type: none"> 1,000 members of ICRM organizations trained in ICRM (year 3) 		Accomplished. A total of 4,608 members, of which 1,645 or 36%

		were women, in 73 self-reliant groups were trained on ICRM and biodiversity conservation in 2011 (year 4).
Prepare participatory ICRM plans and institutionalize these in LGU planning and budgeting		
<ul style="list-style-type: none"> Participatory planning workshops undertaken in 68 LGUs (year 2) 		Accomplished. Planning workshops on preparation of municipal ICRM plans were conducted for the 79 participating LGUs in 2010 (year 3).
<ul style="list-style-type: none"> Integrated ICRM plans including the upland management developed and incorporated in municipal development plans in 68 LGUs and updated annually during project implementation (year 2 and thereafter every year) 		Accomplished. 79 LGUs completed and adopted their ICRM plans and integrated these in their municipal development plans by 2011 (year 4); LGUs conducted annual updating of ICRM plans as a continuing activity.
<ul style="list-style-type: none"> Each of the 68 LGUs provides an adequate annual allocation for ICRM activities (year 3 and thereafter every year) 		Accomplished. In 2011 (year 4), 70 of 79 LGUs allocated to ICRM activities annual budget ranging from ₱200,000 to ₱2 million from their development fund and general/regular fund. Some LGUs provide monthly pay to their marine watchers.
Implement ICRM plans		
<ul style="list-style-type: none"> Municipal coastal databases established/upgraded in 68 LGUs and national database established (year 2) 		Accomplished. Integrated Information Management System (IIMS) established in 79 LGUs in 2013 (year 6); database software (ArcGIS and Manifold) procured and delivered/distributed to LGUs; database with GIS application developed; training of trainers for IIMS completed.
<ul style="list-style-type: none"> Environmental impact monitoring mechanism established in 68 LGUs (year 2) 		Partly Accomplished. Schedule revised to 2011 (year 4); environmental impact monitoring mechanism (EIMM) framework for Outputs C and D was

		developed in 2013 (year 6). However, the EIMM tool was not cascaded to the regions due to limited time. Region 2 initiated the conduct of EIMM adopting the EMB guidelines.
<ul style="list-style-type: none"> Within the municipal water participatory delineation of zones for economic uses and implementation of a system of licensing in 68 LGUs (year 2) 		Accomplished. Schedule revised to 2012 (year 5); Regions 2, 3, 5, 7 and 11 are done with delineation of economic zones, maps completed; training of trainers and action planning workshop on Manifold GIS and basic mapping conducted in May 2012 (year 5).
<ul style="list-style-type: none"> Sustainable financing mechanisms (user fees, rents, and revenue generation) are introduced in at least 33% of the LGUs (year 6) 		Accomplished. Study/assessment on appropriate financing mechanism for MPA was completed in 2011 (year 4).
<ul style="list-style-type: none"> 7,000 ha of poorly managed/threatened mangroves are rehabilitated and 2,000 ha of mangrove areas reforested (year 6) 		Accomplished. Targets were revised to 3,190 ha rehabilitated, and 1,286 ha reforested; actual accomplishments 3,094.3 ha (97% of revised target) rehabilitated and 1,260 ha (98 % of revised target) reforested.
<ul style="list-style-type: none"> 3,500 ha of poorly managed/threatened watersheds are rehabilitated and 4,000 ha of watershed areas reforested (year 6) 		Accomplished. Targets revised to 6,313 ha rehabilitated and 4,399 ha reforested; actual accomplishments 6,249.87 ha (99% of revised target) rehabilitated and 4,355 ha (99% of the revised target) reforested.
Establish and conduct participatory monitoring and evaluation for ICRM activities.		
<ul style="list-style-type: none"> Participatory monitoring and evaluation systems involving community members and municipal governments established and stakeholders trained in 68 LGUs (year 2) 		Accomplished. Participatory monitoring and evaluation system (PMES) tool for MPA plan implementation was prepared and pre-tested in 2013 (year 6). Trainer's training on participatory monitoring

		and evaluation was conducted in November 2013 (year 6), attended by the regional ICRMP focal persons.
<ul style="list-style-type: none"> Annual monitoring surveys and annual monitoring workshops, and national feedback workshops (year 2 and thereafter every year). 		Partly Accomplished. In 2014 (year 7), Region 3 Regional Project Implementation Unit (RPIU) conducted focus group discussion on PMES in the 9 LGUs in Zambales.
Design and implement participatory enforcement mechanisms		
<ul style="list-style-type: none"> 680 <i>bantay dagat</i> members and 680 community members familiarized with fishery laws and regulations and trained in enforcement (year 3) 		Accomplished. 1,865 <i>bantay-dagat</i> members in 26 self-reliant groups were trained on fishery and coastal laws and enforcement by 2011 (year 4).
<ul style="list-style-type: none"> 80 patrol boats and 74 sets of enforcement equipment procured (year 2) 		Accomplished. 79 patrol boats and 74 sets of enforcement equipment procured and delivered to LGUs in 2010 (year 3); some patrol boats in Regions 3, 5 and 7 were damaged by typhoons. As of the end of project, at least 53 boats are non-functional.
<ul style="list-style-type: none"> 68 legal seminars conducted for local judges (year 2) 		Not Accomplished. One seminar conducted in Cagayan.
2. Biodiversity conservation		
Establish ICRM centers		
<ul style="list-style-type: none"> Five centers established and equipped (year 2) 		Accomplished. Five regional centers were established in 2013 and fully equipped in 2014 (year 7).
Conduct research on critical biodiversity resources		
<ul style="list-style-type: none"> 30 studies including baseline studies and follow-up studies on habitat condition, population dynamics of threatened species, trends in the coastal resources completed (year 6) 		Partly accomplished. 32 baseline studies completed in 2014 (year 7). However, no follow-up studies were conducted.
<ul style="list-style-type: none"> Five international evaluation symposia, each with up to 100 participants (year 6) 		Partly Accomplished. Participated in two international forums (UNEP Global and EAS congress).

Develop marine protected areas (MPAs) and tools		
<ul style="list-style-type: none"> MPA database and rating system incorporating GEF tracking tools for protected areas operationalized (year 2) 		Accomplished. Schedule revised to 2011 (year 4); database and rating system incorporating the GEF-METT tracking tools developed by 2011 (year 4).
<ul style="list-style-type: none"> 50 MPAs for effective management with at least 5,000 ha of sanctuary (no-take) areas identified (year 3) 		Accomplished. A total of 77 MPAs covering 24,908 ha covered identified in 2011 (year 11); 5,427.77 ha identified as no-take zone.
<ul style="list-style-type: none"> Management plans for the 50 MPAs developed (year 3) 		Accomplished. A total of 77 MPA plans prepared in 2011 (year 4).
<ul style="list-style-type: none"> At least five coordinating bodies to manage MPA networks and corridors operationalized (year 3) 		Accomplished. Five coordinating bodies operationalized in 2014 (year 7).
<ul style="list-style-type: none"> Conservation projects habitat rehabilitation, restoration, and stock enhancement activities emanating from management plans completed in 50 MPAs (year 6) 		Accomplished. A total of 49 MPA-based biodiversity conservation subprojects and 3 corridor-wide projects implemented in year 7.
<ul style="list-style-type: none"> Reporting using GEF MPA management tracking tool (year 1 and thereafter every year) 		Accomplished. LGUs started using the ICRMP enhanced management effective tracking tool in 2011 (year 4).
Establish and strengthen eco-certification/ eco-labeling of sustainable harvesting activities		
<ul style="list-style-type: none"> Appropriate eco-certification/eco-labeling instruments designed and 350 community members, 325 traders, and 350 municipal staff trained in eco-certification by year 6 		Not pursued.
<ul style="list-style-type: none"> In LGUs neighboring MPAs, trade of marine species regulated and managed through eco-certification (year 6) 		Not pursued.
C. Enterprise Development and Income Diversification		
Develop enterprise development support infrastructure		
<ul style="list-style-type: none"> Enterprise development units designated and equipped in six provinces (year 1) 		Accomplished. Enterprise development units (EDU) established in each of the 6 provinces (excluding Romblon) in 2010-2011 (year 3 to year 4); an EDU consist of 1 Enterprise Development

		Specialist and 5 Enterprise Development Assistants.
<ul style="list-style-type: none"> Enterprise development unit staff trained in planning and setting up business (year 1 and thereafter every year) 		Accomplished. All staff of enterprise development unit trained in 2011 (year 4).
Develop livelihood-related IEC		
<ul style="list-style-type: none"> Skills inventories completed in 68 LGUs (year 1) 		Accomplished. Skills inventories completed in 79 LGUs as part of the participatory coastal resources assessment in 2011-2012 (years 4-5).
<ul style="list-style-type: none"> Demand assessments and market studies completed (year 1 and year 2) 		Accomplished. Completed in 2011 (year 4).
<ul style="list-style-type: none"> IEC materials designed (year 2) and updated (year 3 and 4) 		Accomplished. Aquaculture and fish processing production technologies developed by year 2012-2013 (years 5-6). In addition, the training packages included the modules in gender analysis and sensitivity, population, health and environment including RA 9267.
Facilitate enterprise development		
<ul style="list-style-type: none"> 680 self-reliant groups (with at least 33% women members) strengthened (year 4) 		Accomplished. A total of 707 self-reliant groups were trained and coached on aquatic and land-based enterprises, bookkeeping, financial management, organizational development and management, and gender and development. 9,143 members of the self-reliant groups attended, including 4,379 women or 48% (years 5-6).
<ul style="list-style-type: none"> Internal savings mobilized in 75% of the community groups (year 5) 		Accomplished. Self-reliant groups put up counterpart for the implementation of their enterprises. All the self-reliant groups have opened their respective bank accounts for each

		enterprise (years 5-6).
<ul style="list-style-type: none"> 340 aquatic and land-based enterprise, and 32 ecotourism enterprise demonstrations and training established through community participation (year 6) 		Accomplished. A total of 267 BFAR-led aquatic and land-based enterprises, and 55 ecotourism enterprises established and operational by year 6.
<ul style="list-style-type: none"> 6,800 community members (including at least 33% women) trained in promising enterprises and entrepreneurial skills (year 6) 		Accomplished. A total of 8,721 members of self-reliant groups, of which 4,173 or 48% were women, were trained on livelihood, technical and enterprise development (year 6).
<ul style="list-style-type: none"> 50% of self-reliant groups linked to sources of credit (year 6) 		Accomplished but the numbers are missing. Self-reliant groups oriented on credit facilities available in the area by year 6; they were linked to Development Bank of the Philippines (DBP), Land Bank of the Philippines (LBP) and other micro-finance cooperatives.
Facilitate private sector investment		
<ul style="list-style-type: none"> Potential investment packages for private sector investment identified (year 3) 		Partly Accomplished. Partnership forum was held in July 2013 (year 6) for the ecotourism projects to link the self-reliant groups with nongovernment organizations (NGOs) and other national government agencies (NGAs).
<ul style="list-style-type: none"> IEC aimed at attracting private sector investment conducted (year 4, 5, and 6) 		Accomplished. IEC materials prepared; 2 ecotourism sites were featured in travel magazines.
<ul style="list-style-type: none"> Workshops for tourism operators and locally based tourism businesses undertaken (years 4, 5, and 6) 		Accomplished. The ICRMP ecotourism sites were introduced in several forums as follows: <ul style="list-style-type: none"> National ecotourism forum held on 16 July 2013 (Year 6) at La Breza Hotel in Quezon

		<p>City. The forum was attended by representatives from the Department of Tourism and various tour operators and tourism agencies.</p> <ul style="list-style-type: none"> • Workshop on ecotourism orientation for travel industry in Region 2, 24 January 2014. • Tour operators' orientation in Region 3, 10 December 2013. • Travel industry orientation in Region 7, 25 October 2013.
D. Social and Environmental Services and Facilities		
<ul style="list-style-type: none"> • Feasibility studies including initial environmental evaluations or environmental impact assessments and social safeguards screening completed for infrastructure in 68 LGUs (year 5) 		Accomplished. Target revised to 30 LGUs; 27 were able to prepare and submit proposals for 27 subprojects in 2012 (year 5).
<ul style="list-style-type: none"> • Agreements between 68 LGUs and municipal development fund on infrastructure financing reached (year 5) 		Accomplished. Target revised to 30 LGUs; 17 subprojects have the required SFAs and Accession Undertaking as some of the LGUs were not able to complete documentary requirements in year 5.
<ul style="list-style-type: none"> • Civil works completed for infrastructure in 68 LGUs (year 6) 		Partly Accomplished. Only 14 of the 17 subprojects with financing agreements were able to proceed to construction; by year 7 (2014): 3 were dropped due to political issues (San Andres, Romblon), procurement issues (Magdiwang, Romblon) and non-issuance of NOL by ADB (Alcoy, Cebu) since completion is beyond the loan closing date. 13 subprojects physically completed; 1 subproject in Palauig, Zambales 54% complete. The LGU

			continued construction using its own funds.
<ul style="list-style-type: none"> Communities in 68 LGUs trained in operation and maintenance (year 6) 			Partly Accomplished. 13 subprojects completed O&M training; training for 1 subproject in Mati, Davao Oriental not conducted due to unavailability of resource person and training design module from the Department of Tourism (DOT Region XI).
Inputs (million US\$):	Target		Achievements
ADB loan	27.53		19.28
(excluding IDC)			
GEF Grant	9.00		5.83
GOP	8.71		8.53
LGUs and Communities	10.81		1.02
Total	56.05		34.66
Resource Management	9.69		8.52
Capacity Building	2.79		0.85
Dissemination, Demonstration and Trials	5.28		3.99
PPMS, Studies, Surveys and Audits	4.22		8.04
Consulting Services	3.13		3.34
Equipment, Materials and Vehicles	3.79		3.44
Land Purchase	0.67		
Civil Works	10.66		5.32
Implementation and supervision	2.29		
Recurrent Costs	10.79		0.61

BFAR = Bureau of Fisheries and Aquatic Resources, DA = Department of Agriculture, DENR = Department of Environment and Natural Resources, DOT = Department of Tourism, EAS = East Asian Seas Congress, EDU = economic development unit, EGI = eco-governance index, EIMM = environmental impact monitoring mechanism, GEF = Global Environment Facility, ICRM = integrated coastal resources management, ICRMP = integrated coastal resources management plan, IEC = information, education and communication, IIMS = integrated information management system, LGU = local government unit, MDFO = Municipal Development Fund Office, METT = Management Effectiveness Tracking Tool, MPA = marine protected area, NGO = non-government organization, NICMP = National Integrated Coastal Management Program, NOL = no objection letter, PHE = population, health and environment, PO = people's organization, PPMS = Project Performance Management System, RPIU = regional project implementation unit, UNEP = United Nations Environmental Program.

Note: Costs of implementation and supervision include expenses for monitoring and evaluation.

OUTPUT A: POLICY AND INSTITUTIONAL STRENGTHENING AND DEVELOPMENT

1. This output focused on three key areas and addressed policy issues, institutional capacity building and coordination mechanism, and a mechanism for providing incentives to the local government units (LGUs) for coastal resource management.

2. **Policy work:** Major achievements in resource management policy area:

- (i) Reviewed existing policy and legal provisions for the management of coastal zones and habitats, identified major gaps/weaknesses, and recommended corrective measures for implementation by the Department of Environment and Natural Resources (DENR);
- (ii) Finalized a comprehensive national policy on integrated coastal resources management (ICRM) and a set of information, education and communication (IEC) campaigns to promote the policy;
- (iii) Consistent with the national ICRM policy, clarified the roles and responsibilities of key stakeholders – Department of Agriculture, DENR and LGUs and other relevant national agencies;
- (iv) Developed an institutional coordination framework for national, provincial and local governments as required under the Executive Order 533 on integrated coastal management coordination of ICRM.
- (v) Completed 10 policy studies covering biodiversity conservation, resource rents for marine protected areas (MPAs), mangrove and foreshore management, environmental hazards, community-based ecotourism, incentives and disincentives, live reef/food fish trade policy, and environmental and social impact assessment of ICRM activities. The recommendations from these studies contributed to the drafting of the National Integrated Coastal Management Program (NICMP) and necessary departmental orders and policy issuances in relation to ICRM as summarized below:
 - *The Need for Biodiversity Conservation Policy Study: An Assessment within the Purview of Executive Order 578* recommended a more general and inclusive biodiversity policy by consolidating scattered provisions in various laws such as NIPAs Act (Republic Act 7586), Wildlife Resources Conservation and Protection Act (Republic Act 9147), National Cave Resources Management and Protection Act (Republic Act 9072) and Fisheries Code (Republic Act 8550).
 - The study on *Community-Based Strategy in the Implementation of Ecotourism Projects* provided substantial inputs in the finalization of DENR Department Order 2013-19 “Guidelines on Ecotourism Planning and Management in Protected Areas.
 - The *Policy Study on Mangrove Management* resulted in the formulation of several department draft administrative orders (i) Guidelines on the Reversion of Abandoned, Undeveloped and Underutilized Fishponds under Fishpond Lease Agreements to the DENR through the National Convergence Approach (DAO); (ii) Classification of Illegally Titled

Fishponds and Constructed Fishponds in Classified Forestland and Reclassification of Intact Mangrove Forest in Classified Alienable and Disposable Land (DAO); (iii) Special Agreement for Mangrove Area Development as a Legal Instrument for the Development and Management of Mangrove Areas Including Beach Areas and Foreshore Areas under the Administrative Jurisdiction of the DENR; (iv) Policy Recommendation on the Implementation of Laws and Relevant Administrative Issuances Relating to Foreshore Areas that were actually Mangrove Areas; and (v) Policy Recommendation on the Repeal of the Policy Prohibiting the Cutting of Mangrove Forest and in the Collection of Forest Charges therefrom Embodied in RA 7161 (DAO).

- A review *Emerging Challenges of Foreshore Management* of the foreshore-related laws and policies, institutional arrangements and issues contributed to the draft DAO on Comprehensive Guidelines on Administration and Management of Foreshore Areas developed by the Land Management Bureau (LMB) under the Land Administration Management Project 2.
- The *Study on User Fees for Marine Protected Areas and Resource Rents for Major Coastal Habitats* provided recommendations to address the constraints in the implementation of DAO 2000-51 and recommendations on user fees for mangroves, coral reefs and foreshore areas within ICRMP sites based on the results of surveys conducted in Cagayan and Masbate involving the primary users of these ecosystems.
- The study on *Environmental and Social Impact Assessment* suggested the environmental and social impact assessment tool for the planning and regulation of small scale economic activities within the coastal zone that have continued to expand and proliferate and threatened the ecological integrity and productivity of coastal habitats and resources.
- The study on *Environmental Hazards Management* recommended vulnerability assessment tool and policy to equip the ICRMP stakeholders with supplementary policy-making instruments to rationalize local policies and management strategies—making their ICRM plans and programs risk adaptive.
- The study on *Live Reef/Food Fish Trade Policy* - policy reform study providing information on the issues of fish stocks and trade and appropriate policy and regulatory strategies for live reef fish food trade.
- The study on *Incentives/Disincentives System* offered recommendations on incentive/disincentives to motivate LGUs to adopt or to continue doing sound coastal management practices. The study results were presented to a technical working group composed of representatives from DENR, BFAR and the Department of the Interior and Local Government.
- *National Integrated Coastal Resources Management and Marine Biodiversity Research Agenda* provided a basis for the conduct of 32 research studies under providing guidelines to prioritize proposals related to the coastal and marine environment.

3. **Institutional strengthening and capacity development.** The project took into account existing moratorium on the creation of new regular staff positions in the national government agencies (including DENR) and supported human resource and capacity development in DA, DENR and LGUs. The agencies redeployed their staff to new responsibilities. For example, DENR addressed the shortage of qualified staff in marine and coastal resources management through staff redeployment and training. DA, DENR, and municipal government staff received training in (i) coastal management; (ii) watershed management; (iii) sustainable use of mangrove resources; (iv) MPA organization and networking; (v) biodiversity conservation; and (vi) subproject proposal preparation, social preparation, environmental management, resource management enforcement. The training provided by the project also extended strengthen the monitoring the capacity of multisector local government organizations relevant to ICRM such as fisheries and aquatic resources management committees, *bantay-dagat*, and nongovernment organizations. In all, the project strengthened the capacity of 1,715 (39% women) staff from the national, regional and local levels of DENR and Department of Agriculture's Bureau of Fisheries and Aquatic Resources (BFAR) and the LGUs.
4. **Incentives to LGUs.** The project operationalized the findings from the study on the imposition and collection of user fees and resource rents for MPAs, mangroves, coral reefs, beaches, and foreshores as sustainable means for financing ICRM operations. It also helped DENR to establish a certification benchmarking system for the LGUs' performance. The system was linked to the eco-governance index (EGI) developed under the eco-governance project at DENR, which was supported by United States Agency for International Development (USAID).
5. Overall, due to initial start-up delays including the establishment of project management office and mobilization of the project management consultant, the project accomplished majority of above activities in year 4 and year 5 of implementation.

OUTPUT B: INTEGRATED COASTAL RESOURCES MANAGEMENT AND BIODIVERSITY CONSERVATION

1. This output was the dominant feature (core) of the project which covered integrated coastal resource management (ICRM) and biodiversity conservation. The ICRM included adaptive planning and budgeting, municipal water zoning, law enforcement, pollution, resource licensing, and management of foreshore, beaches and mangroves. It accounted for 56% of base total project cost and at completion it represented 46% of actual costs. The project envisaged the participation from 68 local government units (LGUs) and at completion 79 LGUs participated. Table A3.1 provides the distribution of the number of LGUs by region at design and completion. The government added Romblon province with eight LGUs in the project.

Table A3.1: Number of Municipalities by Region at Appraisal and Completion

Region	Province	No. of Municipalities	
		At Design	At Completion
2	Cagayan	12	12
3	Zambales	8	9
4B	Romblon	0	8
5	Masbate	19	16
7	Cebu	22	21
7	Siquijor	4	7
11	Davao Oriental	5	7
Total		68	79

Source: Government project completion report.

2. The major achievements under the ICRM and biodiversity output focused on both institutionalization and implementation as summarized in Table A3.2.

Table A3.2: Project Achievements in Institutionalization

A. <i>Institutionalization of ICRM practices:</i> LGUs produced 80 PCRAs, 79 ICRM plans, and 77 marine protected areas (MPAs) and integrated them into their municipal development plans. These plans helped LGUs attract funds for ICRM activities. The plans also helped in issuing the Sangguniang Bayan Resolutions and/or Ordinances to develop coastal natural resources.
B. <i>Establishment of MPAs:</i> Established or strengthened 77 MPAs and five MPA networks for the improvement and management of MPAs. At project completion, MPA coverage extended to 24,908 ha, of which 5,432 ha (about 22%) was under no-take zones. These measures will contribute to an increase of fish catch, thereby increasing the future income of the fisher folks in these regions. Regional distribution of MPAs are in Table A3.3.
C. <i>Establishment of Regional ICRM Centers (RICs):</i> Five RICs were established within marine science institutions to provide the hubs for biodiversity monitoring and research, training and demonstration and provided technical capacity building support. ^a
D. <i>Institutionalization of Monitoring and Evaluation Systems:</i> Facilitated the institutionalization of ICRM monitoring and evaluation to determine the level of LGU performance using the eco-governance index using GSA and the METT contributing to GSA score increase from 76.2% in 2011 to 90.9% in 2013 and METT rating of 70% to 75% over the same time period. The project's collaboration with the Partnerships for Environmental Management for the Seas of East Asia in the installation of IIMS has provided a municipal coastal database. Future enhancement to the IIMS will make it fully adoptable and operational at the LGU and DENR offices.

DENR = Department of Environment and Natural Resources, GSA = guided self-assessment tool, ICRM = integrated coastal resource management, IIMS = integrated information management system, LGU = local government unit, METT = management effectiveness tracking tool, MPA = marine protected area, PCRA = participatory coastal resources assessment, RIC = Regional ICRM Center.

^a The RICs were located within the marine science institutions (MSI): (i) Cagayan State University in Region 2; (ii) Ramon Magsaysay Technological University in Region 3; (iii) Masbate School of Fisheries in Region 5; (iv) Cebu Technological University in Region 7; and (v) Davao Oriental State College of Science and Technology in Region 11. Two assisting institutions (AIs), the University of the Philippines - Marine Science Institute and Silliman University.

Table A3.3: List of Marine Protected Areas by Region

Region	No. of LGUs with MPAs	No. of MPAs	MPA Size (ha)	MPA No-Take Zone (ha)	MPA Average Size (ha)	No-Take Zone Average (ha)	No. of MPA Plans Completed	No. of MPA Plans with Resolution
Region 2	8	8	6,621	589	834	74	8	6
Region 3	9	10	9,385	3,415	938	341	10	10
Region 4B	8	8	2,402	21	293	3	8	1
Region 5	12	11	5,586	757	506	69	11	3
Region 7	26	26	370	370	14	14	26	7
Region 11	7	17	544	280	49	24	11	6
Total	70	77	24,908	5,432	2,634	535	74	33

ha = hectare, LGU = local government unit, MPA = marine protected area.

Source: Government project completion report.

3. The project achievements in implementation are summarized in Table A3.4.

Table A3.4: Project Achievements in Implementation

A. Implementation of Mangrove/Watershed Conservation: Reforested and rehabilitated 4,355 ha of mangroves and 10,605 ha of watershed areas. ^a The reforestation provided extra income for 360 peoples' organization members. Within mangrove conservation areas, nine sites were used as ecotourism destinations offering river expedition boating activity, providing livelihood to 341 SRG members. Within the watershed areas, three sites were used as forest adventure destinations offering trekking, providing livelihood to 273 SRG members.
B. Implementation of Biodiversity Conservation Projects: Implemented 49 marine protected areas (MPAs)-based conservation projects and three corridor-wide conservation projects. ^b
C. MPA Networks: The project established five MPA networks ^c promoting partnership among the LGUs with MPAs for collective conservation, protection and management of marine ecosystems. The MPA network activities were initiated through surveys, meetings and cross visits to existing MPA networks. Workshops were conducted on foundational concepts of MPA networks, coordination procedures and MPA Network planning. Activities included the creation of a legal basis through the issuance of Sangguniang Panlalawigan Resolutions as well as designation of the Ad Hoc Committees and preparation of MPA network plans. These networks emerged out of mutual interest and the Provincial Governments actively participated and supported the formation, organization and operations
D. Research at RICs: The RICs completed eight research studies providing information on the condition of coastal resources and threatened species on selected critical ecosystems. The Cagayan State University in Cagayan Region 2, prepared proposals for small grants for possible funding by other institutions.
E. Researches on Critical Biodiversity Resources: Completed 32 studies including the assessment of coastal pelagic species to provide benchmarking on impacts of climate change. ^d The list of researches conducted is in Table A3.5.
F. Training: For strengthening LGUs' Capacity, the 80 LGUs received training on development planning, governance, project implementation, coastal management, resource management, biodiversity conservation, social facilities' project development, and feasibility study preparation.

LGU = local government unit, MPA = marine protected area, RIC = regional ICRM center, SRG = self-reliant group.

- ^a Very strong typhoons in 2012 and 2013 damaged some 2,911 ha of watershed plantations and 656 ha of mangrove plantations that had been rehabilitated.
- ^b The marine protected area (MPA)-based conservation projects included re-stocking of giant clams, abalones, sea cucumbers, sea hares, and other pelagic species. Corridor-wide conservation undertaking included humpback whale conservation and turtle conservation. There were ten MPA sites being used as ecotourism destinations offering surfing and diving experiences.
- ^c The five committed MPA Networks were (i) Cagayan MPA Network for Babuyan Corridor (Region 2); (ii) Zambales MPA Network (ZAMPAN) for the Zambales Marine Ecosystem (Region 2); (iii) Masbate MPA Network (MAMPAN) for Ticao Pass (Region 5); (iv) South West Cebu Cluster for Daanbantayan Corridor (Region 7); and (v) Pacific Seaboard MPA Network of Davao Oriental (PASEMPANDO) for Pujada Bay (Region 11).
- ^d The 10 baseline/research studies were contracted out to University of the Philippines-Marine Science Institute's Marine Environment and Resources Foundation, Inc. (UP-MSI MERF) covering Cagayan and Zambales. Eleven studies were contracted to Silliman University covering provinces of Masbate, Cebu and Davao Oriental. A further 11 studies were contracted to selected RICs and DENR's Ecosystems Research and Development Service.

Source: Government project completion report and ADB documents.

Table A3.5: Completed Scientific ICRM Research Supported by the Project

Institution	Title	Region
RIC	Aparri-Cagayan Estuary Assessment, Management and Governance	2
UP	Catch dynamics, effort, and socio-economics of filter-net fisheries in the Aparri-Cagayan River Estuary --preliminary study	2
UP	Growth, recruitment, reproductive periodicity, and feeding biology of selected dominant and economically important filter-net fishery species in the ACRE --preliminary study	2
UP	Baseline assessments of coral reefs/fish reef communities	2 & 3
UP	Model-Based Estimations of Sediment Load from Adjacent Watersheds	2 & 3
UP	Determination of the Historical and Present extent of mangroves and seagrasses -- initial assessment	2 & 3
UP	Characterization of the ecological and bio-economic factors associated with seagrass and mangrove management -- initial description	3
UP	Baseline assessments of fisheries resources in Sta. Ana, Cagayan, and Masinloc, Zambales	2 & 3
RIC	Biodiversity Monitoring and Assessment of Coastal Ecosystems in Selected Municipalities of Zambales	3
UP	Biological assessment and biodiversity mapping of coastal ecosystems in selected LGUs of Zambales	3
RIC	Biometric Analysis of the Scallop <i>Decatopecten Striatus</i> Stock between the Recodo Marine Reserve and Its Open Fishing Ground in Asid Gulf, Masbate	5
SU	Chemical Baseline Analyses	5 & 7
RIC	Status of Land Based and Off shore Aqua culture industries in Central Visayas	7
ERDS DENR	Bench marking Impacts of Climate Change to Coastal Communities in Cebu and Siquijor Provinces with Gender Lens	7
ERDS DENR	Documentation and Assessment of Coastal Law Enforcement Best Practice of Selected ICRMP Municipalities/Cities	7
RIC	Abundance species composition, association and habitat characterization of the mangrove Communities in Carmen, Cebu	7
UP	Preliminary assessment of coastal environments in selected LGUs of Zambales	3
UP	Pilot scan of socio-economics, anthropology, and policies on biodiversity and coastal resource management in selected LGUs of Zambales	3
SU	Baseline and monitoring assessments of fisheries resources in selected LGUs of Masbate, Cebu, and Davao Oriental	5
SU	Baseline and monitoring assessments of coral reefs and reef fish communities in selected LGUs of Masbate, Cebu, and Davao Oriental	5
SU	Monitoring and Evaluating the Socioeconomic Impact of ICRMP Interventions: The Cases of Masbate, Cebu and Davao Oriental	5 & 7
SU	Monitoring and Evaluating the Legal and Policy Enforcement Concerns Related to CRM in Selected Municipalities of Cebu, Masbate, Siquijor, and Davao Oriental	5 & 7
SU	Monitoring and Evaluating the Legal and Policy Enforcement Concerns Related to CRM in Selected Municipalities of Cebu, Masbate, Siquijor, and Davao Oriental	5 & 7
SU	Assessment of Biodiversity Resources in Marine Protected Areas for the Development of No-Take MPA Networking in Southern Cebu Island, Central Philippines	7
SU	Benchmarking Mangrove Extent, Species Composition, Community Structure, Soil and Secondary Productivity and Seagrass Composition	
SU	Biodiversity Assessment along the Pujada Bay Corridors for Marine Protected Area	11

Institution	Title	Region
	Management	
SU	Output 1: Assessment of Coastal Pelagic Fisheries	11
SU	Output 2: Assessment of Coastal Habitats	11
RIC	Willingness to pay and Perceptions of Resort Owners, Tourists and other Tourism related Resource Users on mangroves, seagrass beds and Coral Reefs in Mati, Davao Oriental	11
RIC	Nutrient Mapping of Pujada Bay, Mati, Davao Oriental	11
RIC	Status of Marine Threatened and Charismatic Species (Dugong, Dolphins, Whale Sharks & Marine Turtles) in Davao Oriental: Its implications to its Migratory Pathway, Habitat and Climate Change	11
RIC UP	Exploring the connectivity of reef fish populations and enhancement of community awareness on CRM along the Eastern Pacific seaboard	11
Mindanao	Status of Marine Threatened and Charismatic Species (Dugong, Dolphins, Whale Sharks & Marine Turtles)	4B
DENR 4B	Biometric Analysis of the Scallop Stock between the Recodo Marine Reserve and Its Open Fishing Ground in Asia Gulf	5
BU	Development and application of a bio-economic model towards EBM of seagrasses. Mangroves --first workshops	2 & 3

DENR = Department of Environment and Natural Resources, ERDS = Ecosystems Research and Development Service, ICRMP = Integrated Coastal Resource Management Project, RIC = regional ICRM centers, SU = Silliman University, UP = University of the Philippines.

Source: Department of Environment and Natural Resources.

4. **Biodiversity Conservation.** The project carried out biodiversity conservation activities through the marine protected area (MPA) and MPA networks within the marine corridors and ecosystems.¹ The project activities included training of peoples' organizations² (POs) in the planning, species stocking and after-stocking monitoring and evaluation. The community participation evoked "ownership" of the project, leading to the community voluntarily involving themselves in the monitoring and protection activities. The project originally targeted 50 MPA-based conservation subprojects. A total of 51 proposals were finalized for funding. Of the 51 proposals, the two giant clam subprojects were not pursued due to the lack of juveniles since the sources were affected by typhoon Yolanda in November 2013. As a result, the project implemented 49 MPA-based biodiversity conservation subprojects. Species replenished/re-stocked by the project included giant clams, abalone, sea cucumber and other species. The Project also undertook three coral transplantations. The subprojects were envisioned to facilitate the protection and effective local management of coastal ecosystems in selected threatened areas of high biodiversity. The re-stocking of particular species was expected to contribute to the rehabilitation of the related ecosystems. These sites were also expected to be the future source of species for re-stocking in other areas. Table A3.6 presents the summary of re-stocked biodiversity species.

Table A3.6: Summary of MPA-based Biodiversity Conservation Subprojects

Region	Total Target	Total Implemented	Giant Clam	Abalone	Sea Cucumber	Coral Transplant	Mixed Species	Self-Reliant Group Members	
								Male	Female
2	5	4		2	2			229	81
3	9	11	4		3	1	3	112	45
4B	2	2		1			1	NR	NR

¹ Biodiversity conservation activities were counter-measures to coastal degradation due to resource depletion and habitat losses.

² Peoples' organizations are independent, bona fide associations of citizens with demonstrated capacity to promote the public interest and with identifiable leadership, membership and structure, as stated in Section 15, Philippine Constitution of 1987.

5	9	12	1		5	2	4	334	159
7	21	15	5				10	189	110
11	5	5	1	1	1		2	114	38
Total	51	49	11	4	11	3	20	978	433

NR = no record.

Source: Government project completion report.

5. The project implemented three of the planned five corridor-wide biodiversity conservation subprojects for the conservation and protection of biodiversity corridors and promotion of an ecosystem-based approach to management of resources and MPA networking. These included humpback whale conservation supported by Babuyan corridor in Cagayan (Region 2), conservation of marine turtles in Zambales province supported by Zambales Marine Ecosystem in Zambales (Region 3), and local turtle conservation project supported by Ticao corridor in Romblon (Region 4B). The biodiversity conservation work mobilized 1,411 self-reliant group members (31% women) who would have generated additional income.

6. **Population, Health and Environment Information, Education and Communication Campaign.** The project conducted regional Information, Education and Communication (IEC) campaigns on the interdependent relationship of population, health and environment (PHE) in collaboration with the Population Commission (PopCom). About 4,400 community members and health workers attended seminars and workshops during project implementation. The estimated reach out was 39,500 community members through broadcasting media (e.g. radio and TV guest) and promotion through posters and major newspapers. The project completed a PHE Compendium, which presented the best practices and lessons learned from the project and other related PHE experiences in the coastal communities was completed.

7. Implementation of activities under ICRM and biodiversity mostly took place in years 4 and 5 due to reasons associated with initial start-up issues discussed earlier.

OUTPUT C: ENTERPRISE DEVELOPMENT AND INCOME DIVERSIFICATION

1. This output had about 10% of base cost allocation at the appraisal and at completion it accounted for 12% of total project cost. It focused on providing municipal fisherfolk with supplementary income and reduce their reliance on fishing by promoting environment-friendly sustainable enterprises and livelihoods. They received technical and institutional support to self-reliant groups (SRGs) to undertake viable livelihoods and enterprises identified from similar ongoing programs.¹ The project accorded priority to the people affected by the restricted use of coastal resources.

2. The Enterprise Development Framework emphasized the implementation of market-driven enterprises, with effective capacity building program and technical and institutional support mechanisms; resulting in environment friendly and sustainable demonstration projects. The project established six enterprise development units (EDUs) in provincial government offices and provided office equipment and training for the EDU staff. The EDUs functioned as the training units responsible for implementing capability building programs for the target SRGs. The demand-driven participatory approach was effective in facilitating the early identification of most appropriate enterprises for and by the SRGs and the enterprise development team assisted SRGs in the development and implementation of enterprise business development plans. First, the SRGs received technical and institutional support from the project to ensure viability and profitability of enterprises.

3. The EDUs conducted social preparation activities, training in community organization, needs and resource assessment and savings mobilization. A total of 617 SRGs in six regions received training in organization and management. The SRG members were provided with adequate technical skills which enabled them to seek livelihood activities or employment opportunities elsewhere. Of the 25,342 SRG members, 10,136 (40%) were women participants. Table A4.1 presents the breakdown of BFAR-led assisted SRGs.

Table A4.1: Self-Reliant Groups and Beneficiaries Supported by the Project

Region	SRGs Organized and/or Strengthened	Number Beneficiary Members
Cagayan	130	5,171
Zambales	83	1,376
Masbate	135	5,854
Cebu	125	4,728
Siquijor	62	5,338
Davao Oriental	82	2,875
Total	617	25,342

SRG = self-reliant group.

Source: Government project completion report.

4. The project supported the (i) social preparation including community organization, needs and resource assessment, and savings mobilization; (ii) establishment of an enterprise development unit in each province that identified appropriate livelihoods and enterprises, and

¹ Self-reliant group is a small group of people (5 to 30) from a shared social background who support each other. They were organized to learn livelihood skills and start small business to help them earn income and support themselves and their families.

undertook feasibility and market studies; (iii) establishment of enterprises and training fisherfolk on technical and managerial aspects of enterprises; (iv) community groups' preparation of bankable business plans and accessing credit facilities of formal banking systems such as Land Bank of the Philippines, Development Bank of the Philippines, rural and thrift banks, cooperatives and nongovernment organizations, or other existing and programmed credit facilities including the *Isang Bayan, Isang Produkto, Isang Milyong Piso* (One Town, One Product, One Million Pesos) programs; (v) development of partnerships between coastal communities and private entrepreneurs in enterprise operation, management, and marketing; and (vi) promoting and developing ICRM-related ecotourism. In developing livelihoods and enterprises, care was taken to ensure that intended activities were aligned and connected with those existing in the project area.

5. **Ecotourism enterprise development.** DENR's Biodiversity Management Bureau (BMB) implemented a series of ecotourism activities with an early establishment of ecotourism guidelines which facilitated the timely completion of activities. This involved promoting responsible travel with emphasis on experiences with nature through reef discovery (snorkeling and diving), forest adventure (trekking) and river/mangrove expedition (boating). BMB established 22 ecotourism sites and supported the establishment of 55 enterprises which provided income opportunities for 1,148 SRG members (33% women). A summary at the regional level appears in Table A4.2. These 55 enterprises received a total of ₱8.75 million and per enterprise support ranged from ₱185,000 to ₱677,000.

Table A4.2: Summary of Ecotourism Sites Assisted

Region	Reef Discovery	Forest Adventure	River/ Mangrove Expedition	Total Ecotourism Sites	Total Ecotourism Enterprises	Total SRG Members Benefitting
Region 2	Palau Island Matarra Reef Taggat Lagoon	Portabaga Falls	Cabicungan River	5	11	283 (32% women)
Region 3	San Salvador Island Hermana Menor Island		Panglit Island Dawey-dawey River	4	11	126 (43% women)
Region 5	Buntod Reef Matalang-Talang Reserve		Pawa Mangrove Tigbao Mangrove	4	8	198 (19% women)
Region 7	Olango Island	Cambais Falls	Bojo River Luyang Ecopark	4	11	242 (45% women)
Region 11	Dahican Beach Wariban Island	Mantunao Eco-park	Ban-ao Mangrove Luban Island	5	14	269 (29% women)
TOTAL	10	3	9	22	55	1,152 (33% women)

Source: Government project completion report.

6. **Aquatic and land-based enterprise development.** The Department of Agriculture's Bureau of Fisheries and Aquatic Resources (DA-BFAR) implemented the aquatic and land-based enterprise development effort. It supported the preparation and approval of 345 business plans, of which 267 (77%) were established. The aquatic enterprises included tilapia culture, fish processing, mud crab fattening and sea transport and land-based enterprises included duck raising, cattle raising, hog fattening, among others. Of the 267 enterprises, 226 (85%) received project's financial support and DA-BFAR supported the remaining 41 enterprises (15%) from its regular funds. Through this initiative, 11,525 SRG members could undertake livelihood activities and increase their income which ranged from ₱10,000 to ₱30,000 per SRG and between ₱500 to ₱2,000 at the time of project completion in June 2014. At project completion, 240 subprojects

(enterprises) had commenced their implementation and 44 had procurement ongoing, while 44 were yet to start procurement. Table A4.3 provides information on province-wide number of subprojects status.

Table A4.3: Aquatic and land-based Enterprise Development and Implementation

Province	Total Target/ Proposed (No.)	DA-BFAR (No.)			Approved Subprojects				
		Fisheries	Non-Fisheries	Total	Procurement yet to start	Ongoing Procurement	Started Implementation		
							Partial	Full	Total
Cagayan	60	43	17	60	0	1	23	36	59
Zambales	45	18	27	40	0	2	0	43	43
Masbate	75	56	19	75	0	34	30	11	41
Cebu	100	17	83	100	44	1	10	45	55
Siquijor	30	6	24	30	11	1	0	18	18
Davao Oriental	35	19	16	35	6	5	1	23	24
Total	345	159	186	345	61	44	64	176	240

DA-BFAR = Department of Agriculture's Bureau of Fisheries and Aquatic Resources.

7. Major activities under the enterprise development and income diversification commenced in year 4 of the project and progressed steadily over year 5 and year 6.

OUTPUT D: SOCIAL AND ENVIRONMENTAL SERVICES AND FACILITIES

1. This output accounted for almost 21% of base cost at appraisal and at project completion it comprised 15% of the total cost. The project adopted a demand-driven approach with the municipal governments being responsible for the identification, prioritization and selection of priority social and environmental services and facilities.¹ The local government units (LGUs) led the design, implementation and monitoring of the infrastructure facilities. In all, 13 LGUs constructed one subprojects (totaling 13), supporting the basic social services needs of the disadvantaged coastal communities, as well as the LGUs' efforts to mitigate coastal pollution and degradation of resources. The Department of Finance-Municipal Development Fund Office (MDFO) supported the implementation of the designated activities and also facilitated necessary Subproject Financial Agreements and the Accession Undertakings. The project completed all 13 social and environmental services facilities subproject and all of them were operational at project completion.

2. The project adopted a four-step process to facilitate the demand from the local governments, as follows: (i) organized orientation workshops for the LGUs to familiarize with the requirements for accessing the Integrated Coastal Resources Management Project (ICRMP) financing window through the MDFO; (ii) created subproject teams to facilitate the preparation and completion of all required documents, and implementation/ construction of social and environmental services and facilities; (iii) organized training to facilitate the LGUs' understanding of the project implementation guidelines including project development, procurement procedures (with emphasis on adherence to government requirements), financial management, construction supervision, operation and maintenance, as well as social and environmental aspects; and (iv) conducted workshops on the preparation of subproject proposals and provided templates to LGUs during the prequalification and development of subproject proposals. The LGUs, through their respective Municipal Planning and Development Offices, were involved in the identification and preparation of proposed facilities. Other government agencies including the National Economic Development Authority (NEDA) and the Department of Public Works and Highways also supported and facilitated subproject designs and subsequent approval of the subprojects by the Technical Working Groups of the respective Regional Steering Committees and by the NEDA Regional Boards.

3. The selection criteria for social and environmental infrastructure subprojects were both general and specific to subproject categories. The general criteria were as follows:

- (i) the social assessment for the community was complete and the subproject proposal was included in the municipal integrated coastal resources management (ICRM) plan;
- (ii) the land acquisition requirement for the subproject was minimal. The land to be acquisitioned was either unoccupied public land or had been paid for in cash and the proof of the transaction submitted prior to commencement of civil works;
- (iii) If the social assessment identifies the presence of indigenous people or ethnic minorities or other disadvantaged groups in the community, the scheme provided equitable benefits to these groups;
- (iv) Alternate designs had been considered and the proposed design is the least cost option;
- (v) The initial environmental examination was completed, with no significant adverse impact identified. If significant adverse impacts were identified, an environmental

¹ At appraisal, these were identified as improving water supply and sanitation, managing solid waste, providing add-on school classrooms and day-care centers, and mitigating coastal pollution and erosion.

- impact assessment must have been undertaken and mitigating measures identified and provided in the plan, along with cost estimates. The relevant Department of Environment and Natural Resources office revised and approved the initial environmental examination/environmental impact assessment as per the government environmental regulations; and
- (vi) The community was willing to share the cost of operation and maintenance.
4. Specific criteria for drinking water schemes were as follows:
 - (i) The scheme benefitted at least 25 households;
 - (ii) The majority of the beneficiary population were poor or had no ready access to safe drinking water; and
 - (iii) The scheme would reduce the average economic cost of water relative to the existing source.
 5. Specific criteria for sanitation schemes were as follows:
 - (i) The scheme benefitted at least 25 households; and
 - (ii) the majority of the beneficiary population were poor, or the prevalence of poor sanitation-related disease among them was high.
 6. Specific criteria for social facilities such as community centers and classrooms for existing schools were as follows:
 - (i) The facility served a community of at least 100 households; and
 - (ii) classrooms would be add-ons to existing school facilities.
 7. Among the 30 LGUs that submitted letters of interest, 27 prepared project proposals and 18 were qualified to enter into agreements with MDFO through a Subproject Financing Agreement or Accession Undertaking. This reduction in the number of subprojects was due to the (i) limited capacity of some LGUs to prepare the subproject documents, and (ii) limited subproject implementation period. Of the 18 subprojects, only 14 LGUs were able to proceed with the construction of facilities. Of the 14 subprojects with construction activities, 13 completed construction and these were operational at completion representing flood control (3), potable water supply (2), wharfs (2), fishermen's federation complex (1), materials recovery and composting facilities (2), hospital (1), slaughterhouse (1), and visitors' information center (1). The sanitary landfill subproject in Palauig, Zambales (Region 3) encountered delay in completion and was about half-way through at the end of the project. Several factors contributed to the delay included (i) change in location of the landfill cell; (ii) poor construction method and practice; (iii) a series of suspensions; (iv) contract amendments; and (v) delayed submission of request for variation orders. The project provided budgetary support for the operation and maintenance training for all facilities to ensure continued operations. The subprojects are likely to benefit 59,326 households in 134 *barangays* (Table A5.1).
 8. Activities under Output D commenced only in year 5 following the loan and grant effectiveness and the one-year project extension helped in completing these subprojects. The reasons for the delays included (i) slow project management office mobilization and the delayed recruitment of the project management consultant; (ii) LGUs needed more time to develop satisfactory social and environmental services and facilities subproject documentation and comply with MDFO financing requirements in terms of Subproject Financial Agreements as well as the Accession Undertakings; (iii) the LGUs did not have the technical staff competent to provide the necessary documentation; and (iv) the ICRM project team was somewhat slow in responding to the requests from the LGUs.

Table A5.1: Project Beneficiary by Region

Table A3.1: Project Beneficiary by Region					
Region-Province/ Municipality	Name of Subproject	ADB Loan		Beneficiary	
		PCSS No.	\$ Amount	No. of <i>Barangays</i>	No. of Households
Region 2 - Cagayan					
Calayan	Construction of Municipal Hospital	0100	341,992	7	3,240
Claveria	Construction of Cabcungan River Bank Stabilization Structure	0142	89,591	3	820
Subtotal			431,583	10	4,060
Region 3 - Zambales					
San Felipe	Relocation of Municipal Slaughterhouse	0113	137,652	11	4,264
Candelaria	Construction of Materials Recovery Facility	0134	70,839	16	4,321
Palauig	Establishment of Sanitary Landfill with Materials Recovery Facility	0136	194,350	19	6,149
San Antonio	Construction of Materials Recovery Facility	0137	62,319	14	6,489
Subtotal			465,160	60	21,223
Region 5 - Masbate					
Palanas	Expansion and Improvement of Palanas Level 3 Water System	0118	442,508	2	1,577
Mobo	Construction of Municipal Wharf	0119	224,092	1	590
San Pascual	Construction of Fishermen's Federation Complex	0177	124,047	22	8,463
Subtotal			790,647	25	10,630
Region 7 - Cebu					
Ronda	Extension and Rehabilitation of Municipal Wharf	0128	420,122	14	1,350
Carmen	Construction of Cantumog-Luyang River Flood Control Structure	0165	578,344	6	12,840
Subtotal			998,466	20	14,190
Region 11 - Davao Oriental					
Mati	Construction and Establishment of Visitor's Information Center	0141	256,974	1	2,000
Cateel	Construction of Municipal Drainage System	0140	628,432	16	6,622
Boston	Rehabilitation and Expansion of Municipal Water Supply System	0145	442,103	2	601
Subtotal			1,327,509	19	9,223
Grand Total		14	4,013,365	134	59,326

Source: Asian Development Bank.

PROJECT COST AT APPRAISAL AND ACTUAL
(\$ million)

Table A6.1: Project Cost by Expenditure Category

Item	Appraisal			Actual		
	Local Currency	Foreign Exchange	Total	Local Currency	Foreign Exchange	Total
A. Investment Costs						
Resource Management	9.51	1.03	10.54	7.76	0.76	8.52
Capacity Building	2.61	0.28	2.89	0.77	0.08	0.85
Dissemination, Demonstrations and Trials	5.18	0.56	5.74	3.59	0.40	3.99
PPMS, Studies, Surveys, and Audits	3.22	1.35	4.57	7.04	1.54	8.58
Consulting Services	1.64	1.57	3.21	1.84	1.51	3.35
Equipment, Materials and Vehicles	1.44	2.62	4.06	1.40	2.04	3.44
Land Purchase	0.69	-	0.69	-	-	-
Civil Works	8.96	2.23	11.19	4.15	1.17	5.32
Implementation and Supervision	2.37	-	2.37			
B. Recurrent Costs	10.79	-	10.79	0.61	0.00	0.61
Subtotal (A+B)	46.41	9.63	56.05	27.16	7.50	34.66
C. Financing Charges during Implementation						
Interest during Implementation and Commitment Charges		6.27	6.27		1.37	1.37
Total Project Cost	46.41	15.91	62.32	27.16	8.87	36.03
% of Project Cost						

PPMS = project performance management system, includes implementation and supervision under the government of the Philippines/ local government units (LGUs) and communities.

Notes:

1. Taxes and duties paid by the government of the Philippines and local government units are included in cost per item under government of the Philippines/local government units/communities.
2. Expenditures for monitoring and evaluation were included under project performance management system.
3. Estimated by multiplying the cost estimates by financier by the financing ratio inclusive of taxes.

Sources: Asian Development Bank and government estimates.

Table A6.2: Project Cost at Appraisal by Financier

Item	Asian Development Bank		Global Environment Facility		Government and Communities		Total Amount
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	
A. Investment Costs							
Resource Management	6.41	68.1%	3.00	31.9%			9.41
Capacity Building			0.65	25.5%	1.88	74.5%	2.53
Demonstrations and Trials	3.46	97.3%	0.10	2.7%			3.56
Dissemination Activities	1.36	83.1%	0.20	12.2%	0.08	4.7%	1.64
PPMS, Studies, Surveys, and Audits	2.42	59.4%	1.63	39.6%	0.04	1.0%	4.09
Consulting Services							
International	0.34	36.1%	0.60	63.9%			0.95
National	1.39	72.5%	0.53	27.5%			1.92
Subtotal	1.74	60.5%	1.13	39.5%			2.87
Equipment and Materials							
Equipment	1.18	62.4%	0.72	37.6%			1.90
Materials	0.30	97.0%	0.01	3.0%			0.31
Furnishing and Furniture	0.01	100%					0.01
Subtotal	1.49	67.4%	0.73	32.6%			2.22
Vehicles	1.27	90.9%	0.13	9.1%			1.40
Land Purchase					0.63	100%	0.63
Civil Works	9.38	97.6%	0.24	2.4%			9.62
Implementation and Supervision					2.06	100%	2.06
B. Recurrent Costs			1.20	10.9%	9.67	89.1%	10.86
C. Taxes and Duties					5.15	100%	5.15
Total Base Costs	27.53	49.1%	9.00	16.0%	19.52	34.9%	56.05
D. Interest during Implementation	5.75	100%					5.75
E. Commitment Charges	0.52	100%					0.52
Total Project Cost	33.80		9.00		19.52		62.32
% Total Project Cost		54.3%		14.4%		31.4%	100%

PPMS = project performance management system.

Sources: Asian Development Bank and government estimates.

Table A6.3: Project Cost at Completion by Financier

Item	Asian Development Bank		Global Environment Facility		Government and Communities		Total Amount
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	
A. Investment Costs							
Resource Management	5.76	67.6%	2.33	27.3%	0.43	5.0%	8.52
Capacity Building	-	-	0.21	24.1%	0.65	75.9%	0.85
Dissemination, Demonstrations and Trials Activities, PPMS, Studies	3.62	90.6%	0.22	5.5%	0.16	3.9%	3.99
Surveys, and Audits	1.94	22.6%	0.97	11.3%	5.67	66.1%	8.58
Consulting Services	1.60	47.9%	1.05	31.2%	0.70	20.9%	3.44
Equipment Materials and Vehicles	2.35	68.4%	0.74	21.4%	0.35	10.2%	5.32
Land Purchase	-	-	-	-	-	-	-
Civil Works Implementation and Supervision	4.01	75.4%	0.26	5.0%	1.05	19.7%	3.44
B. Recurrent Costs	-		0.06	10.0%	0.55	90.0%	0.61
C. Taxes and Duties							
Total Base Costs	19.28	55.6%	5.83	16.8%	9.54	27.5%	34.66
D. Interest and Commitment Charges	1.37	100%					1.37
Total Project Cost	20.65		5.83		9.54		36.03
% Total Project Cost		57.3%		16.2%		27.5%	100%

PPMS = project performance management system.

Sources: Asian Development Bank and government estimates.

DISBURSEMENT OF ADB LOAN AND GRANT PROCEEDS**Table A7.1: Actual Annual and Cumulative Disbursement**
(\$ million)

Year	Annual Disbursement		Cumulative Disbursement	
	Total (million)	% of Total	Total (million)	% of Total
2007	0.02	0.0%	0.02	0.1%
2008	0.68	3.0%	0.7	2.6%
2009	0.58	2.0%	1.28	4.8%
2010	5.37	20.0%	6.65	25.1%
2011	3.63	14.0%	10.28	38.8%
2012	6.31	24.0%	16.59	62.7%
2013	6.43	24.0%	23.02	86.9%
2014	3.83	14.0%	26.85	101.4%
2015	-0.13	0.0%	26.72	100.9%
2016	-0.22	-1.0%	26.50	100.1%
2017	-0.02	0.0%	26.48	100.0%
Total	26.48	100.0%		

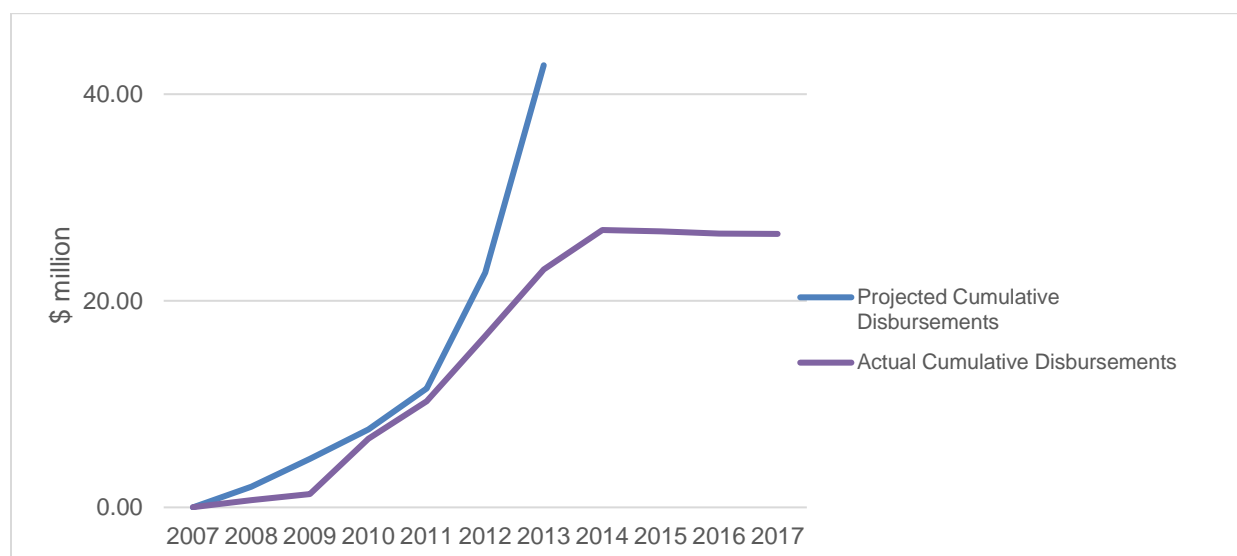
Source: Asian Development Bank.

Table A7.2: Projected Annual and Cumulative Disbursement
(\$ million)

Year	Annual Disbursement		Cumulative Disbursement	
	Total (million)	% of Total	Total (million)	% of Total
2007	0.00	0.0%	0.00	0.0%
2008	2.00	4.7%	2.00	4.7%
2009	2.70	6.3%	4.70	11.0%
2010	2.85	6.7%	7.55	17.6%
2011	3.95	9.2%	11.50	26.9%
2012	11.22	26.2%	22.72	53.1%
2013	20.08	46.9%	42.80	100.0%
Total	42.80	100.0%		

Source: Asian Development Bank.

Figure A7.1: Projected and Actual Cumulative Disbursement
(\$ million)

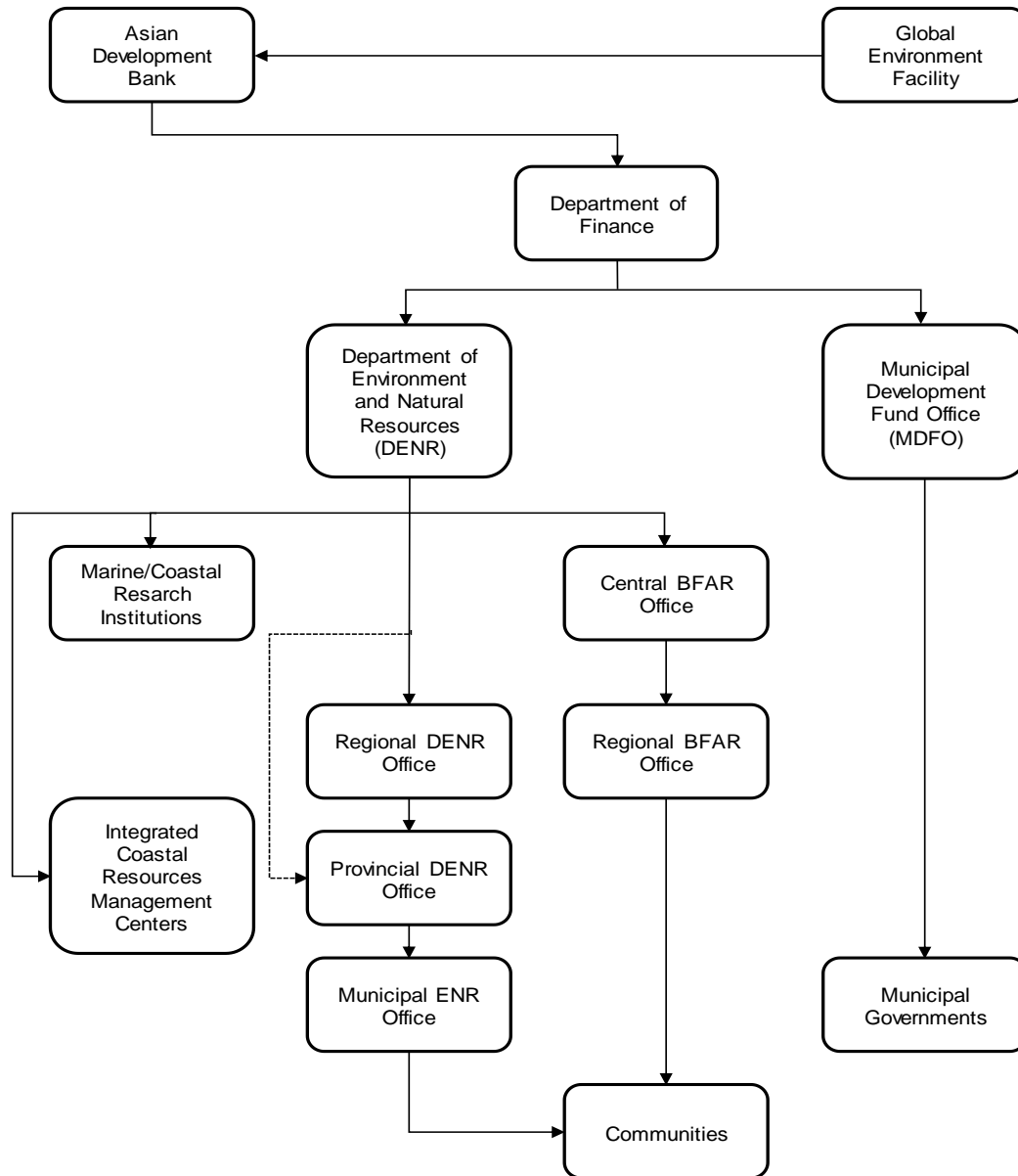


Source: Asian Development Bank.

- Projections based on LFIS and portfolio monitoring report.
- Partial cancellations were made in 2013 for \$7.41 million (including IDC of \$4.905 million); in 2014 for \$3.84 million and in 2015 for \$4.4 million.

FUNDS FLOW MECHANISM

Funds Flow Diagram



BFAR - Bureau of Fisheries and Aquatic Resources, DENR = Department of Environment and Natural Resources.

Note: "-----" means that in certain instances when funds flow is very much delayed, DENR release funds direct to the Provincial DENR, with the Regional DENR informed of the release. Liquidation of funds still goes through the DENR regional office.

Source: ADB. Report and Recommendation of the President to the Board of Directors. Proposed loan and Administration of Grant from the Global Environmental Facility Republic of the Philippines: Integrated Coastal Resources Management Project; and DENR

PROJECTED AND ACTUAL IMPLEMENTATION SCHEDULE

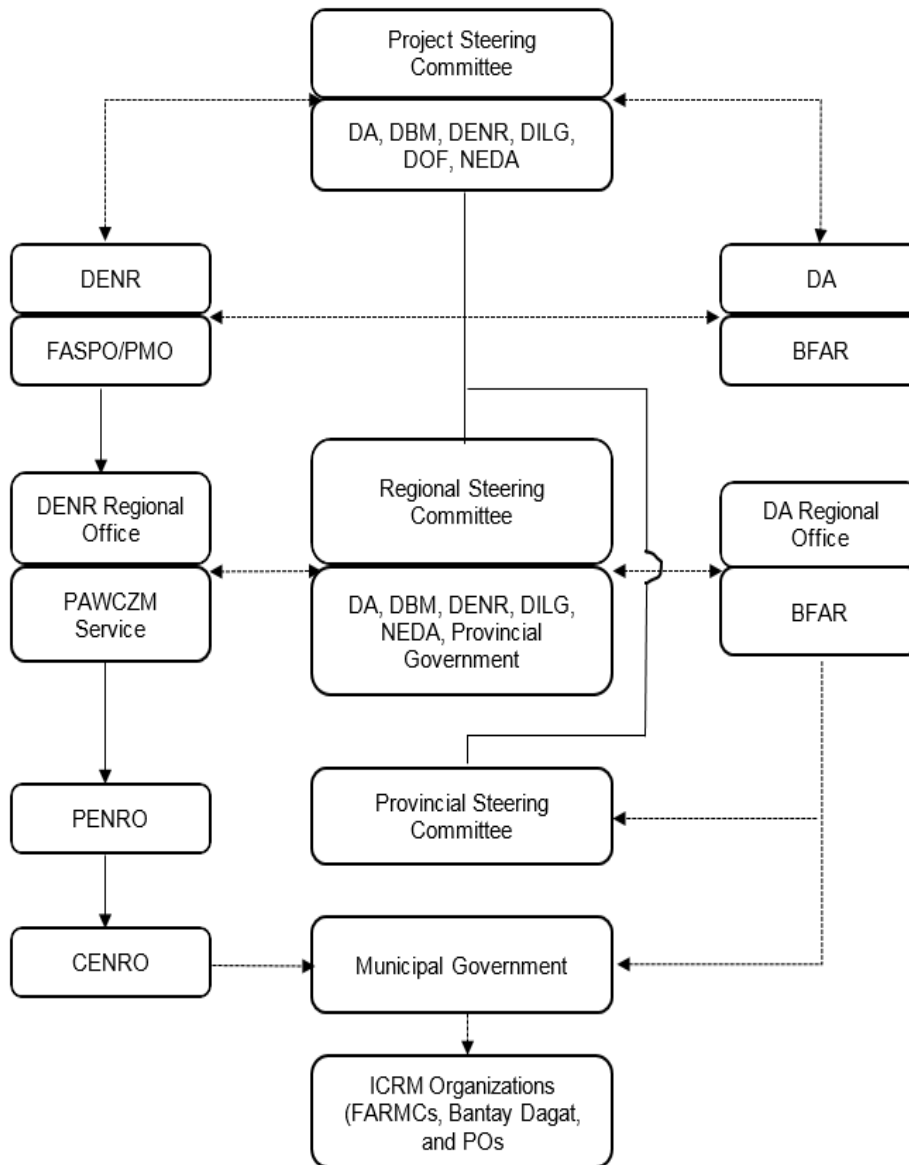
[illegible]

Activity	Year 1		Year 2				Year 3				Year 4				Year 5				Year 6				Year 7					
	2007		2008				2009				2010				2011				2012				2013				2014	
	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
Output D: Social and Environmental Services and Facilities																												
1. Conduct of feasibility studies, IEE or EIA, and implement interventions to address coastal pollution or erosion																												
2. Civil works																												
3. Training for operation and maintenance of infrastructure																												
4. Operation and maintenance																												

BFAR = Bureau of Fisheries and Aquatic Resources, DENR = Department of Environment and Natural Resources, EIA = environmental impact assessment, ICRM = integrated coastal resources management, IEE = initial environmental examination. LGU = local government unit, MPA = marine protected area.

Sources: ADB. Report and Recommendation of the President to the Board of Directors, and DENR. Project Completion Report.

PROJECT MANAGEMENT FRAMEWORK



Bantay Dagat = marine watch teams, BFAR = Bureau of Fisheries and Aquatic Resources, CENRO = Community Environment and Natural Resources Office, DA = Department of Agriculture, DBM = Department of Budget and Management, DENR = Department of Environment and Natural Resources, DILG = Department of Interior and Local Government, DOF = Department of Finance, FARMC = Fisheries and Aquatic Resources Management Council, FASPO = Foreign Assisted Special Projects Office, NEDA = National Economic and Development Authority, PAWCZM = Protected Area, Wildlife and Coastal Zone Management, PENRO = Provincial Environment and Natural Resources Office, PMO = project management office, PO = people's organization.

CONTRACT AWARDS OF ADB LOAN AND GRANT PROCEEDS**Table A11.1: Actual Annual and Cumulative Contract Awards**
(\$ million)

Year	Annual Contract Awards		Cumulative Contract Awards	
	Total (million)	% of Total	Total (million)	% of Total
2007	0.00	0.0%	0.00	0.0%
2008	0.09	0.4%	0.09	0.4%
2009	3.42	13.6%	3.51	14.0%
2010	2.52	10.0%	6.03	24.0%
2011	2.81	11.2%	8.84	35.2%
2012	7.23	28.8%	16.07	64.0%
2013	6.06	24.1%	22.13	88.1%
2014	2.45	9.8%	24.58	97.9%
2015	0.53	2.1%	25.11	100.0%
2016	0.00	0.0%	25.11	100.0%
2017	0.00	0.0%	25.11	100.0%
Total	25.11	100.0%		

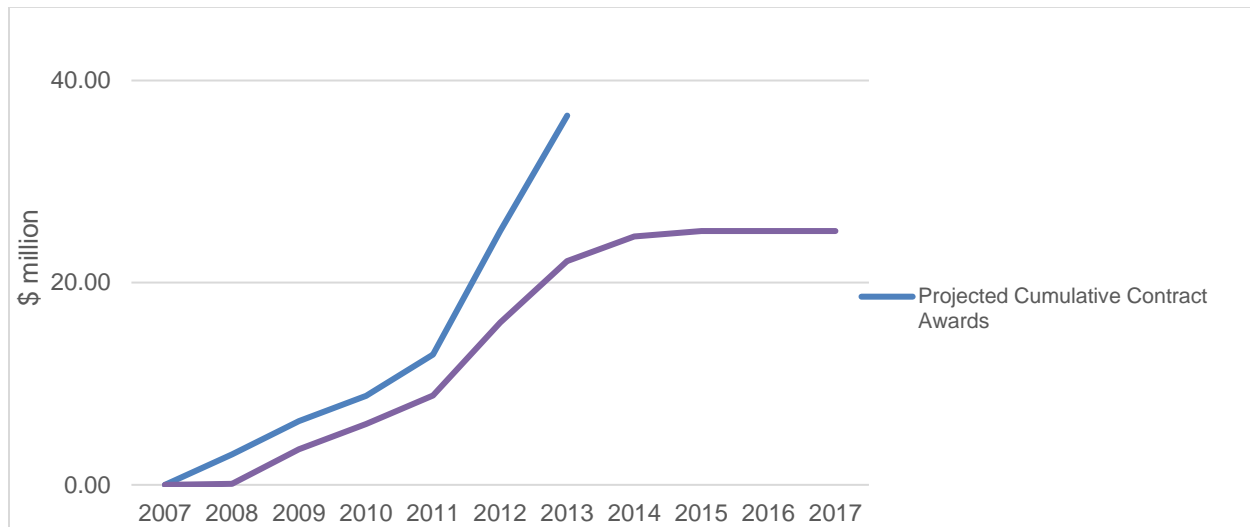
Source: Asian Development Bank.

Table A11.2: Projected Annual and Cumulative Contract Awards
(\$ million)

Year	Annual Contract Awards		Cumulative Contract Awards	
	Total (million)	% of Total	Total (million)	% of Total
2007	0.00	0.0%	0.00	0.0%
2008	3.00	8.2%	3.00	8.2%
2009	3.30	9.0%	6.30	17.2%
2010	2.50	6.8%	8.80	24.1%
2011	4.10	11.2%	12.90	35.3%
2012	12.20	33.4%	25.10	68.7%
2013	11.43	31.3%	36.53	100.0%
Total	36.53	100.0%		

Source: Asian Development Bank.

Figure A11.1: Projected and Actual Cumulative Contract Awards
(\$ million)



Source: Asian Development Bank.

- Projections based on LFIS and portfolio monitoring report.
- Partial Cancellations were made in 2013 for \$2.50 million (excludes IDC of \$4.905 million); in 2014 for \$3.84 million and in 2015 for \$4.4 million.

SUMMARY OF GENDER EQUALITY RESULTS AND ACHIEVEMENTS

A. Project Description

1. The project aimed to promote sustainable management of coastal resources and increase income for local communities. The project covered six priority marine biodiversity corridors and ecosystems covering 79 local government units (LGUs) in the provinces of Cagayan, Cebu, Davao Oriental, Masbate, Romblon, Siquijor and Zambales. These LGUs surround four "extremely high" marine biodiversity corridors of national and global importance namely: (i) Babuyan corridor along the northern coast of Luzon; (ii) Ticao Pass-San Bernardino Strait-Samar corridor; (iii) Daanbantayan corridor straddling the Visayas Sea and the Tanon Strait; and (iv) Pujada Bay corridor, an important point of convergence of bioregions of the Pacific Ocean and the Celebes Sea.

2. The project outcome was to be accomplished through a series of activities under four project outputs: (i) Policy and Institutional Strengthening and Development; (ii) Integrated coastal resources management (ICRM) and Biodiversity Conservation; (iii) Enterprise Development and Income Diversification; and (iv) Social and Environmental Services and Facilities. The project was co-financed by Asian Development Bank (ADB) and Global Environment Facility (GEF) which was implemented from January 2007 to June 2014. At appraisal, the project was categorized as effective gender mainstreaming (EGM) and a gender action plan (GAP) was designed with 13 success indicators, broken down into nine targets (quantitative) and four actions or activities (qualitative).

B. Gender Analysis and Project Design Features

1. Gender Issues and Gender Action Plan Features

3. The project recognized the need to respect local values and beliefs, and the choices of both men and women about taking part in specific tasks. It encouraged greater involvement of women in the decision-making process of ICRM and promoted gender equity in access to the project's benefits as reflected in the GAP. This was envisaged to be achieved through a set of strategies: (i) collecting gender disaggregated data in household socioeconomic studies, national and municipal gender sensitization training, and integrating gender analysis in the municipal ICRM planning, monitoring, and evaluation; (ii) including women as a major stakeholder for output C on enterprise development and income diversification; and ensuring their membership in self-reliant groups and involvement in the identification, establishment, and demonstration of viable enterprises and livelihood activities; and (iii) including women as a primary stakeholder in the identification, planning, construction, and operation and maintenance of social and environmental infrastructure and facilities under output D.

2. Overall Assessment of Gender-Related Results/Achievements

4. Implementation of the GAP was highly successful, 89% (8/9) of the GAP numerical targets and 100% (4/4) of the GAP activities were achieved, resulting to high participation rates by women in the project's processes and ensuring their access to its benefits. Except for the 33% benchmark target indicator on recruiting female project management staff members, for which data was unavailable at the time of preparation of the project completion report, and one partially achieved target indicator on women's employment in livelihood enterprises, all GAP success indicators were met. Table A12.1 on GAP achievements below accounts for each of these 13 indicators.

5. The GAP implementation helped narrow gender disparities by guaranteeing women's access to human capacity development opportunities that were made available to institutional key players (government and nongovernment), and the project's direct stakeholders – coastal community residents. Overall, attendance in the numerous seminars and trainings organized under the project reached 21,367 individuals (8,838 or 41% were women) from 988 community people's organizations or self-reliant groups (SRGs) which were organized by the project.

6. Equally important was the project's contribution to women's economic empowerment through its support in organizing and strengthening 322 enterprises, and in its provisioning of capital assets for alternative and supplemental livelihood activities. By the end of the project, employment had been created for 12,647 persons, of whom 5,506 or 44% were women.¹ Finally, the project was instrumental in elevating women's voices into the public arena, thereby boosting their confidence and cultivating their leadership potentials, and resulting to high female representation at policy dialogues held (49%) and marine protected area (MPA) boards and SRG leadership (37%) elected.

3. Gender Equality Results

i. Participation, Access to Project Resources and Practical Benefits

7. The rate of participation by women in most of the project's activities exceeded the 33% threshold that was set at appraisal. Subscription by women was almost at par with men's: policy consultations (49%), ICRM membership (40%) and SRG leadership (37%). Women's significant participation in trainings was further evident in ICRM and biodiversity conservation (33%), in livelihood, technical and enterprise development (47%), and organizational development and management formation covering topics on leadership and skills building of SRGs (48%). Women's increased access to capacity building opportunities was extensive, enabling them to become effective agents of change. They received training in organizing information, education and communication (IEC) campaigns, organizational development and management skills, ICRM biodiversity, enforcement, technical and entrepreneurship, and demonstration enterprises. Low uptake by females (23%) was observed in only one topic-area: the enforcement trainings designed for *bantay dagat* (marine watch teams), which are usually male-dominated.

8. The project addressed women's practical needs for supplementary incomes and may have even improved their access to social and health services. Women from the 59,326 households in 134 *barangays* in 12 LGUs covered by the project are expected to reap the health and social benefits arising from improved community facilities. The construction of water systems reduced women's drudgery from household water collection and management. More importantly, the introduction of alternative and supplementary livelihoods was an impetus for greater economic participation by women since unlike the fish hunting livelihoods that were earned offshore, women had more access and control over the tools of production and the value chain. As mentioned earlier, 5,506 women found employment and those who engaged in ecotourism services derived incomes in anywhere between ₱500 to ₱2,000.

¹ Important to note that after one year of the establishment, only 87 of 322 livelihood enterprises remain operational. Updated figures on women employed in these enterprises are yet to be determined.

ii. Strategic Changes in Gender Relations

9. In terms of women's strategic interests, the project contributed to the long-term goal of breaking gender stereotypes by appropriating spaces for women's perspectives and voices, especially in policy dialogues. In a sector that has been traditionally and exclusively regarded as a male domain,² this is a breakthrough. Women's membership in SRGs reached 40% (10,136 out of 25,342) across the six regions of project operations. Leadership and technical training for women upgraded their ability to organize and manage community organizations, strengthening themselves individually and as groups, empowering them for the exercise of rights-claiming and collective mobilization, which are essential in community-based ICRM and biodiversity conservation initiatives. Eventually, upgraded skills acquired by women helped boost their confidence, authority and influence, leading to their improved condition and position at home, and in their communities. More encouraging gender results were palpable by the end of the project -- a significant portion, 37%, of board members in MPAs, as well as SRG leaders, were women. Their formation opens the path to a core of female community leaders who are equipped with leadership techniques and entrepreneurial skills, and at the same time carry some level of expertise on the technical science of ICRM and biodiversity conservation.

iii. Contribution of Gender Equality Results to Overall Project Outcomes and Effectiveness

10. Women's high level of participation and leadership in biodiversity conservation and livelihood activities strengthened community ownership of the project since women are usually known to assume community roles with ease and dedication. The link between attention given to social and health facilities such as water systems, community centers, and women's leadership has not yet been well established. However, it is commonly observed that women decision makers are more sensitive to their constituents' needs and tend to favor investments that bestow direct health and social benefits to their constituency.

11. The active participation by women in trainings facilitated the development of viable livelihood and micro-enterprise activities as means of alternative income for fisherfolks affected by the restrictions on the use of coastal resources. Women and their families are now able to initiate a shift from reliance on marine resources on a subsistence basis, towards market-oriented economic activities such as fish/crab cage farming, weaving, livestock and poultry production, salt-making, food processing, food catering and trade especially in ecotourism sites, water refilling stations, composting among others.³

12. GAP implementation and monitoring obliged the project management team to collect and report on sex-disaggregated data throughout the project duration. Collection and reporting of sex disaggregated data was systematic and regular. The gender perspectives on issues and women's conditions in project monitoring reports bear high potential use for inclusive policy planning and program implementation in the future, provided that consolidation and further analysis of data is undertaken.

13. The aforementioned gender equality results, particularly from its focused attention to the formation of female community leaders who are concerned about ICRM and biodiversity

² Fishing is commonly regarded as a man's occupation, Women's contribution to the value chain, on shore, is often overlooked and undervalued.

³ For additional reference, watch this video featuring capacity building activities on Ecotourism that were undertaken by the Project: <https://www.youtube.com/watch?v=tLtaxsYx-yU>

conservation, hallmarks the project's inclusiveness and effectiveness. Partnerships forged with the local government, combined with the dedication of community leaders, will help sustain the project gains.

C. Lessons and Recommendations

14. The following factors were considered significant in achieving GAP targets:

- (i) the ADB project team constantly reminded the project management team on the importance of GAP implementation for the success of the project;
- (ii) after the MTR, the project engaged a social safeguards specialist to review the Gender Action Plan to improve compliance, propose enhancing measures in relevant aspects as needed;
- (iii) women in the coastal communities were continuously encouraged to participate in project activities; and
- (iv) the project management team at central and provincial levels were aware of the GAP requirements and routinely collected sex-disaggregated data for GAP implementation status reports.

15. The following recommendations will enhance GAP implementation in future projects:

- (i) the major lesson learnt is that the potent combination of the community driven development (CDD) and a gender quota approach, alongside a covenanted commitment on GAP implementation and monitoring, was an effective modality in motivating the EAs/IAs and beneficiaries to achieve gender equality results. Project management was propelled into compliance to meet the minimum thresholds, in the process challenging traditional notions of gender roles in poor coastal communities, and eventually creating the enabling conditions that encouraged and equipped more women to progressively engage with the project. The quotas on women's participation and benefits that were clearly provisioned in the GAP caused to broaden ownership of the project, contributing to the overall success of the project. Replication and scaling up of pro-poor resource management projects operating in more conservative social contexts or sectors will find the combined approach of CDD, GAP, and gender quotas powerful.
- (ii) all GAP targets and actions should be clearly communicated to the executing/implementing agencies and all stakeholders during the early stages of project implementation;
- (iii) undertake regular monitoring of the status of GAP implementation;
- (iv) engage a gender specialist or GAP implementation staff under project management consulting team to collaborate closely with the ADB gender specialist;
- (v) to advance the quality of GAP reporting, include an analysis on trainings sessions conducted by routinely administering participant evaluations on the relevance of the topics, appropriateness of methodologies used, its effect on their daily lives and if there is any significant gender difference in the choice of topics;
- (vi) where applicable, intensify gender analysis on ICRM studies to add to the knowledge base in this area (gender and ICRM); and
- (vii) sustainability of livelihood enterprises and operations and maintenance (O&M) of projects need to be taken account with corresponding budget allocations from the planning stage to implementation as well as ensuring women's participation in O&M activities.

16. There were delays in the GAP implementation, which were due to a confluence of factors such as the SRGs' hurdles over the fulfillment of documentary requirements for enterprise development, fund and in-kind-asset transfer issues between central and local partners, and the limited capacity of provincial/local government staff. However, the delays did not significantly affect successful delivery of the GAP results. Similar projects in the future should consider these factors when scheduling the timing of deliverables.

Table A12.1: Achievement of Gender Action Plan Implementation

Gender Action Plan (GAP Activities, Indicators and Targets)	Achievement
Consultations	
1. Women's participation in consultations on policy issues will be ensured through participation of women's interest groups and nongovernment organizations focusing on environmental issues. (Activity 1)	Achieved. 49% of participants in policy consultations and research forums were women, based on the attendance sheets. Women groups were invited.
Information, Education, and Communication Campaigns (IECs)	
2. IEC campaigns will include modules especially tailored for women's role in integrated coastal resources management (ICRM). (Activity 2)	Achieved. IEC campaigns promoted women's role in ICRM and covered topics on gender equality promotion and women's rights protection through discussion of laws such as RA 9262 Anti-Violence Against Children and Women Act. In gender analysis/sensitivity trainings conducted, almost half of the participants (49% or 206 out of 422) were women.
3. IEC campaigns will target the linkage between population growth and deteriorating coastal resources, and population management (Activity 3)	Achieved. IEC campaigns were designed to link population, health and environmental issues. Women made up almost half of participants in trainings held on this topic - 49% (1,257 of 2,583). Overall, women's participation in IEC trainings/campaigns was nearly at par with men (47% or 1956 women out of 4166 of participants).
ICRM Plans	
4. At least 33% of members of ICRM organizations mobilized/revitalized by the Project will be women (Target 1)	Achieved. In ICRM organizations that were mobilized/revitalized under the Project, female membership reached 40% (8,580 of 21,630). Women were mobilized to participate in organizational development and management skills trainings. Overall, female attendance in such trainings was higher than targeted: 48% (2,639 of 5,449).
5. At least 33% of the marine protected area board members will be women (Target 2)	Achieved. The target on women's representation in marine protected area management boards was slightly surpassed. Women made up 37% (849 of 2,313) of the member-leaders in these decision-making bodies.
Training	
6. At least 33% of the participants of ICRM and biodiversity trainings for staff will be women	Achieved. Out of 1,715 DENR, DA, BFAR and LGU staff trained in various

(Target 3)	aspects of ICRM and biodiversity, 39% (n=668) were women.
7. At least 33% of the participants of ICRM, biodiversity, enforcement, technical, and entrepreneurial training for beneficiaries will be women (Target 4)	Achieved. Overall, 33% of participants (3,377 of 10,196) in all trainings on ICRM biodiversity, enforcement, technical and entrepreneurship were women.
Livelihood Opportunities	
8. At least 33% of the members in self-reliant groups (SRGs) will be women (Target 5)	Achieved. Target exceeded: 40% (10,136 of 25,342) of members in SRGs were women.
9. At least 33% of the self-reliant group leaders will be women (Target 6)	Achieved. Target exceeded: 37% (1,664 of 4,499) of the self-reliant group leaders were women.
10. At least 33% of the beneficiaries from training and demonstration enterprises will be women (Target 7)	Achieved. Target exceeded: 48% (4,173 of 8,721) members of SRGs trained on livelihood, technical, enterprise and organizational development were women.
11. The enterprises provide supplemental employment opportunities to 6,800 of whom at least 30% are women (year 6) (Target 8)	Partially Achieved. The enterprises developed (total of 322 enterprises, comprising 267 aquatic and land-based enterprise, and 55 ecotourism enterprises) provided employment to 12,647 persons, 44% (5,506) of whom were women. Only 87 of these 322 livelihood enterprises remain operational after one year of establishment. The updated figures on women employed in these enterprises are undetermined as of writing of the project completion report (PCR).
Social and Environmental Infrastructure	
12. Through participation in ICRM plan preparation, women's participation in planning, implementation, and maintenance will be ensured. (Activity 4)	Achieved. Women's participation in ICRM planning and implementation ensured. 36% of the participants in training and workshops conducted in relation to ICRM planning were women. At least 50% of the direct and indirect beneficiaries of the subprojects were women.
Incremental Staffing	
13. At least 33% of the new staff recruited under the Project will be women. (Target 9)	No basis for assessment, data was not available at PCR preparation.

Table A12.2: Summary of Training Topics and Attendance

Type and Title of Trainings Provided	No. of POs/SRGs	No. of Attendees		
		Male	Female	Total
A. ICRM, BIODIVERSITY AND ENFORCEMENT				
Enforcement-Bantay Dagat				
Fishery Law Enforcement Training (<i>bantay dagat</i>) /Deputy Fish Warden	3	121	20	141
Training on Law Enforcement and Deputization (<i>bantay dagat</i>)	4	80	17	97
Training for Coastal Law Enforcement (<i>bantay dagat</i>)	19	690	137	827
Organization/Strengthening of Multi-sector Organization (<i>bantay-dagat</i>)	8	211	77	288
SWOT Identification & Planning Writeshop/SWOT Analysis for <i>bantay-Dagat</i> of R3/BFAR	21	319	206	525
Launching of Eel Trap & Value-added Training on "Kiwet" (<i>bantay dagat</i>)	10	295	61	356
Subtotal	65	1,716 77%	518 23%	2,234 100%
ICRM and Biodiversity Conservation				
Biodiversity Conservation Training Re-Echo & MPA Networking	1	46	27	73
Review of Proposal & Memorandum of Agreement on biodiversity Conservation Project	1	48	32	80
Marine Protected Area (MPA) Networking	5	376	235	611
Environmental Laws Training	12	290	157	447
Skills Enhancement/ Site Assessment of Biocon Project	2	18	7	25
MPA Assessment	2	70	70	140
Orientation on ICRM	15	248	160	408
Training on Sangguniang Kabataan (SK) and New Organization on ICRMP	1	97	57	154
Orientation Seminar on Waste Assessment & Characterization Survey (WACS)	1	56	20	76
Workshop in the Development of LGU Subproject under Output (iv)	2	183	73	256
Training/Workshop for Enumerators in Determining User Fees & Resources Rents	1	69	31	100
Consultative Meeting & Presentation of Final ICRM Plan	1	28	5	33
Training/Orientation on Geological Assessment/Mapping	2	46	18	64
Training on Environment Compliance Regulations, Water Quality Monitoring & Solid Waste Management	1	144	181	325
Orientation Workshop on Delineation of Municipal Coastal Water	1	68	30	98
Participatory ICM Planning Workshop	8	365	244	609
Workshop on Development of Local Capacities on Sea and Human Security in Coastal Communities in the Philippines.	1	47	34	81
Participatory Coastal Resources Assessment Training (PCRA)	13	604	191	795
Planning Workshop on Finalization of POP	1	22	19	41
Orientation/Workshop on Watershed Management Plan Preparation	2	138	54	192
Subtotal	73	2,963 64%	1,645 36%	4,608 100%
Biodiversity and Eco-tourism				
Training for Reef (Eco-tourism)	1	133	74	207
Training for River (Eco-tourism)	1	82	97	179
Reef Ranger (Guide) Training	4	204	117	321
Seascape Ranger (Guide) Training	2	13	0	13
Birding (Guide) Training	1	10	6	16
Paddling Training/Snorkelling Guide	3	125	162	287

Type and Title of Trainings Provided	No. of	No. of Attendees		
Scuba Diving Training	5	405	55	460
Diving Training	2	5	4	9
Trek Guide Training/Trail Guide Training	2	22	13	35
Marine Protected Area Ranger	9	73	1	74
Farmer Scientist	4	20	17	37
Subtotal	34	1,092	546	1,638
		67%	33%	100%

B. LIVELIHOOD, TECHNICAL AND ENTERPRISE DEVELOPMENT

Business Planning	28	197	132	329
Enterprise Development and Business Planning	56	141	82	223
SRG Training	41	84	91	175
Native Chicken Production	9	147	79	226
Fieldtrip Exposure to Bitaugan Native Chicken Production	1	19	11	30
Care & Management of Cattle	4	40	22	62
Care & Management of Goat	10	184	149	333
Talaba Culture Management	1	5	0	5
Vermicast Production Skills Training	6	36	52	88
Banana Farm Management	1	5	9	14
Hands on Training on Bangus Fingerlings/Garungan Production	2	63	18	81
Certification Course for Water Refilling Station & Plant Operators	2	2	0	2
Skills Training Workshop on Cultural Mgmt. Practices for Commercial Cassava Production	1	21	10	31
Hand on Training on Eucheimia Farming	1	0	1	1
Skills Training on Quail Raising	2	6	4	10
GMP & Hygiene & Sanitation	1	1	5	6
Training on Tilapia Culture/Tilapia Production in Cage (Development & Mgmt.)	13	133	63	196
Training on Seaweeds Processing	2	2	3	5
Training on Water Lily Handicrafts and Beads Craft	1	0	34	34
Training on Proper Handling of Ducks	1	4	2	6
Training on Mudcrab Culture	4	39	15	54
Training on Fish Handling & Marketing	1	4	1	5
Training on Entrepreneurship & Management	3	12	4	16
Training on Vegetable Production using Organic Fertilizer	2	45	18	63
Training on Nipa Wine Trading	2	53	46	99
Training on Fish Cage Development & Management	7	125	99	224
Skills Training on Meat & Fish Processing Technology	3	5	8	13
Skills Training on Pond Development & Management	6	43	16	59
MAFC Municipal Wide Organic Agriculture Training	1	21	22	43
Vegetable Production, Post Harvest & Marketing Training Skills	1	41	18	59
Skills Training on Wine Processing	1	8	8	16
"Kiwet" eel Fish Processing	1	35	15	50
Skills Training on Hog Fattening/Swine Production & Management	3	9	2	11
Skills Training on Broiler Production	5	28	15	43
Handicraft Training	1	0	60	60
Tablea Making	1	0	60	60
Tetra Pack (waste juice bags making)	1	0	60	60
Livelihood Trainings (chorizo, soap & candle making, backyard gardening, etc.)	4	20	93	113
Skills Training on Food Processing	2	0	90	90
Organic Farming	4	5	13	18
Natural Farming	1	10	28	38

Type and Title of Trainings Provided	No. of	No. of Attendees		
Aqua Selvi	1	20	28	48
Fish Warden Training	2	40	0	40
Product Orientation	5	85	48	133
Subtotal	245	1,738	1,534	3,272
		53%	47%	100%
C. ORGANIZATIONAL DEVELOPMENT AND MANAGEMENT				
Leadership Development & Financial Management	65	129	114	243
Progress Tracking Involving ICRMP Fund Intervention & Inventory of SS on Land Acquisition & Gender Dimensions	49	61	46	107
Project Monitoring & Evaluation & Technical Writing	48	63	42	105
Organizational Diagnosis	25	364	195	559
Simple Bookkeeping	58	198	267	465
Leadership Training & Parliamentary Procedure	9	80	129	209
Simple Accounting & Bookkeeping	8	8	47	55
Strategic Planning	17	558	453	1,011
Team Building	9	21	51	72
Training on Basic Record Keeping & Simple Bookkeeping	45	91	82	173
Business and Financial Management	3	10	30	40
Values Clarification and Work Ethics	3	314	266	580
Leadership Training & Team Building	1	3	102	105
Basic Leadership & Management Training	14	32	234	266
Values Formation	2	26	16	42
Financial Management	1	5	0	5
Project Development & Management	3	16	16	32
Monitoring & Evaluation	6	18	11	29
Social Preparation	17	221	129	350
Training on Simplified Financial Management	31	106	57	163
Organizational Training/Capability Training	18	158	74	232
Participatory M & E Training/Workshop	1	34	41	75
Orientation Training on Integrated Information Management System (IIMS)	9	120	87	207
Training on Manifold Geographic Information System (GIS)	8	174	127	301
Training on Forest Plantation & Nursery Management	1	0	23	23
Subtotal	451	2,810	2,639	5,449
		52%	48%	100%
D. INFORMATION, EDUCATION AND COMMUNICATION (IEC) CAMPAIGNS				
Orientation/Training & IEC for Biodiversity Conservation Project (also MPA)	24	374	297	671
IEC Planning Workshop	6	294	196	490
Population Health & Environment (PHE)	79	1,326	1,257	2,583
Stakeholders Analysis and Gender Sensitivity Training	2	131	101	232
Gender Sensitivity Training (GST)	8	85	75	160
RA 9267 Violence Against Women & Children	1	0	30	30
Subtotal	120	2,210	1,956	4,166
		53%	47%	100%
Grand Total	988	12,529	8,838	21,367
		59%	41%	100%

Source: Government project completion report and ADB records.

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Covenant	Reference in Loan Agreement	Status of Compliance
Loan Agreement		
<p>1. (a) The Borrower shall cause the Project to be carried out with due diligence and efficiency and in conformity with sound administrative, financial, engineering, environmental and coastal management practices.</p> <p>(b) In carrying out of the Project and operation of the Project facilities, the Borrower shall perform, or cause to be performed, all obligations set forth in Schedule 5 of the Loan Agreement.</p>	Article IV, Section 4.01	Complied with.
<p>2. The Borrower shall make available, promptly as needed, the funds, facilities, services, land and other resources which are required, in addition to the proceeds of the Loan and GEF Grant, for the carrying out of the Project and for the operation and maintenance of the Project facilities.</p>	Article IV, Section 4.02	Complied but with delays in availability of counterpart funds.
<p>3. (a) In the carrying out of the Project, the Borrower shall cause competent and qualified consultants and contractors, acceptable to ADB, to be employed to an extent and upon terms and conditions satisfactory to the Borrower and ADB.</p> <p>(b) The Borrower shall cause the Project to be carried out in accordance with plans, design standards, specifications, work schedules and construction methods acceptable to ADB. The Borrower shall furnish, or cause to be furnished, to ADB, promptly after their preparation, such plans, design standards, specifications and work schedules and any material modifications subsequently made therein, in such detail as ADB shall reasonably request.</p>	Article IV, Section 4.03	Complied with.
<p>4. The Borrower shall ensure that the activities of its departments and agencies with respect to the carrying out of the Project and operation of the Project facilities are conducted and coordinated in accordance with sound administrative policies and procedures.</p>	Article IV, Section 4.04	Complied with.
<p>5. The Borrower shall take all action which shall be necessary on its part to enable each of the LGUs to perform their respective obligations under the Subproject Financing Agreements and shall not take or permit any action which would interfere with the performance of such obligations.</p>	Article IV, Section 4.05	Complied with.
<p>6. The Borrower shall exercise its rights under the Subproject Financing Agreements in such a manner as to protect the interests of the Borrower and ADB and accomplish the purpose of the Loan.</p>	Article IV, Section 4.06	Complied with.
<p>7. (a) The Borrower shall (i) maintain, or cause to be maintained, separate accounts for the Project; (ii) have such accounts and related financial statements audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB; (iii) furnish to ADB, as soon as available but in any event not later than 9 months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report</p>	Article IV, Section 4.07	Complied with, but with delays on submission of audited project accounts: FY 2010; Delayed by 8.6 months, 2009, 2011, 2015, 2016 by less than one month. Delays were due to the

Covenant	Reference in Loan Agreement	Status of Compliance
<p>of the auditors relating thereto (including the auditors' opinion on the use of the Loan proceeds and compliance with the financial covenants of this Loan Agreement as well as on the use of the procedures for imprest account/statement of expenditures), all in English language; and (iv) furnish to ADB such other information concerning such accounts and financial statements and the audit thereof as ADB shall from time to time reasonably request.</p> <p>(b) The Borrower shall enable ADB, upon ADB's request, to discuss the Borrower's financial statements for the Project and its financial affairs related to the Project from time to time, the Borrower's auditor pursuant to Section 4.07(a) hereabove, and shall make necessary arrangements for any representative of such auditors to participate in any such discussions requested by ADB, provided that such discussion shall be conducted only in the presence of an authorized officer of the Borrower unless the Borrower shall otherwise agree.</p>		<p>time taken for the government auditor to complete the report. Audit opinion in years 2009 to 2013, 2015-2016 were qualified due to recording flaws which were adjusted the following year. In 2014, audit opinion was adverse for the same reason.</p> <p>Complied with.</p>
8. The Borrower shall enable ADB's representatives to inspect the Project, the Goods and Works financed out of the proceeds of the Loan, and any relevant records and documents.	Article IV, Section 4.08	Complied with. An audit of assets was conducted in October 2012.
9. The Borrower shall ensure and cause the LGUs to ensure that the Project facilities are operated, maintained and repaired in accordance with sound administrative, financial, engineering, environmental, coastal management and maintenance and operational practices.	Article IV, Section 4.09	Complied with. Beneficiaries of social and environmental facilities were trained on O&M.
Environmental		
10. DENR, shall ensure that: (a) the Project facilities are designed, constructed, operated and maintained in compliance with applicable environmental laws and regulations of the Borrower, ADB's Environment Policy (2002) and the Environmental Assessment Review Framework (EARF) prepared for the Project; (b) all mitigation measures detailed in the EARF are implemented and monitored to a satisfactory standard, and (c) environmental management and monitoring plan developed for prototype future interventions specified in the EARF are followed during the implementation period, and the result is reported to ADB as part of the quarterly Project reports.	Schedule 5 Paragraph 9	Complied. All subprojects have complied with the Borrower's laws and regulations. The environmental management plan details cover required mitigation measures. The Borrower has also complied with ADB's Environmental Policy (2002) and SPS (2009).
11. DENR, shall cause LGUs to conduct initial environmental examination (IEE) or, for proposed Subprojects with potentially significant adverse environmental impacts, an environmental impact assessment (EIA) for each of proposed Subprojects.	Schedule 5 Paragraph 10	Complied with delays. All subproject designs have built-in IEE. EIA was not required.
Social		
12. Indigenous People DENR shall ensure that an indigenous peoples development	Schedule 5	Complied on time.

Covenant	Reference in Loan Agreement	Status of Compliance
<p>plan is prepared in accordance with ADB's Policy on Indigenous Peoples (1998) in case the presence of indigenous people is identified who may be significantly affected. Implementation of the Project activities at such sites shall be conditional on ADB's approval of the relevant indigenous peoples development plan.</p>	Paragraph 11	Project effect on indigenous peoples was found insignificant.
<p>13. Indigenous People</p> <p>The Borrower shall ensure and, through DENR, cause all the Implementing Agencies to ensure that no Project activity is undertaken in, or have adverse impact on, land, inland waters, coastal areas and natural resources within them, that are designated ancestral domains with corresponding certificate of title or are under claim as ancestral domain.</p>	Schedule 5 Paragraph 12	Complied on time. Project impact on land, inland waters, coastal areas and other natural resources was found insignificant.
<p>14. Resettlement</p> <p>DENR, shall cause the Project Implementing Agencies (PIAs) to comply with ADB's Policy on Involuntary Resettlement (1995) and ensure that land utilized under the Project is either unoccupied public land, or has been purchased from a willing seller and paid for in cash. The evidence of such transactions shall be kept on record during the Project implementation.</p>	Schedule 5 Paragraph 13	Complied on time. All lands utilized under the project were unoccupied and or with evidence of ownership. No informal settlers were affected.
<p>15. Resource Access</p> <p>DENR shall ensure that all the implementing agencies ensure that any people adversely affected by restricted access restriction and discipline to aquatic, mangrove and watershed resources shall be identified, and potential impacts on their incomes are mitigated through their inclusion in community-based resource management, enterprise development, and income diversification activities under the Project. Identities of the affected persons and the proposed mitigation measures shall be included in the municipal or city integrated coastal resource management (ICRM) plan of the relevant LGU and approved by DENR. Implementation of mitigating measures shall commence prior to imposition of such restriction, and shall be monitored under the project performance management system (PPMS).</p>	Schedule 5 Paragraph 14	Complied with delays. Project interventions particularly under Output (iii) were given to affected people (fisher folks and forest dwellers). This was emphasized in the preparation of LGU municipal plans. Priority was given to people adversely affected by restrictions imposed by the Project.
<p>16. Gender</p> <p>DENR shall ensure that gender-related indicators are incorporated into the PPMS and that the gender action plan prepared for the Project is fully implemented in a timely manner, and that adequate resources are allocated for the purpose. In particular, the Borrower shall cause all the PIAs to ensure that: (a) at least 33% of the members of ICRM organizations mobilized under the Project are women, (b) at least 33% of board members of marine protected areas are women; (c) at least 33% of participants in any of the ICRM, biodiversity, enforcement, technical and entrepreneurial trainings for the beneficiaries are women; and (d) at least 33% of new staff recruited under the Program are women.</p>	Schedule 5 Paragraph 15	Complied with delays. Overall, women participation in organization was 40% while women involvement in people's organization/self-reliant groups management was 37%.
Others		
17. Established, Staff, and Operating PMU/PIU		

Covenant	Reference in Loan Agreement	Status of Compliance
DENR shall designate the Foreign-Assisted Special Projects Office (FASPO) as the project management office (PMO).	Schedule 5 Paragraph 1	Complied on time. Coordinating Office under the supervision of FASPO-DENR was established through Special Order No. 144 S. 2008.
18. The Project Steering Committee shall oversee and coordinate Project implementation.	Schedule 5 Paragraph 2	Complied on time. DENR issued Special Order No. 2007-230 dated 13 March 2007 creating the Project Steering Committee. The PSC was reconstituted with the issuance of SO No. 361 Series of 2010.
19. DENR and Department of Agriculture shall be jointly PIAs for Outputs A, B, and C. DENR shall also implement Output D by providing technical support for Subproject preparation to the LGUs, and the LGUs shall be the PIAs for their respective subprojects.	Schedule 5 Paragraph 3 to 5	Complied with delays. On 28 June 2007, DENR and DA signed a memorandum of agreement stipulating their respective functions and responsibilities.
20. DENR shall establish regional steering committee (RSC) in each of Regions 2, 3, and 7, and a provincial steering committee (PSC) in each of the provinces of Masbate and Davao Oriental for the purpose of overseeing and coordinating Project implementation within the region or province.	Schedule 5 Paragraph 6	Complied.
21. Fielding of Consultants International consultants; national consultants.	Schedule 4 Paragraph 8	Complied with delay.
22. Anticorruption The Borrower shall comply with and shall cause the DENR and the PIAs to comply with ADB's anticorruption policy. The Borrower (i) acknowledges ADB's right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive or coercive practices relating to the Project; and (ii) agrees to cooperate fully with and to cause the DENR and the Project Implementing Agencies to cooperate fully with any such investigation and to extend all necessary assistance, including providing access to all relevant books and records, as may be necessary for the satisfactory completion of any such investigation.	Schedule 5 Paragraph 27(a)	Complied with.
23. Without limiting the generality of paragraph 27(a), Schedule 5 of the Loan Agreement, the Borrower shall (i) ensure that the DENR and the Project Implementing Agencies conduct monitoring inspections on all contractors' activities related to fund withdrawals and settlements; and (ii) ensure that and cause the DENR and the Project Implementing Agencies to ensure that all contracts financed by ADB and the GEF in	Schedule 5 Paragraph 27(b)	Complied with.

Covenant	Reference in Loan Agreement	Status of Compliance
connection with the Project include provisions specifying the right of ADB to audit and examine the records and accounts of the DENR and the Project Implementing Agencies and all contractors, suppliers, consultants and other service providers as they relate to the Project.		
<p>24. Performance Monitoring and Evaluation</p> <p>The Borrower shall ensure that a PPMS is established in DENR to be operated by the FASPO, and project performance monitoring and evaluation is conducted for each Project Output and Subproject.</p>	Schedule 5 Paragraph 28	Complied with.
<p>25. Quarterly and Annual Reports</p> <p>FASPO shall prepare and submit quarterly and annual progress reports to ADB within one month after the end of each period with assistance from consultants.</p>	Schedule 5 Paragraph 1	Complied with delays.
<p>26. GEF Co-Financing</p> <p>In the event that GEF Grant is suspended or cancelled, and without limiting the generality of Section 4.02 of the Loan Agreement, the Borrower shall make timely arrangements satisfactory to ADB to have the GEF Grant become available or to commit the additional funds for the Project expenditures that would have originally been financed out of the GEF grant or agree to scale down the project scope appropriately.</p>	Schedule 5 Paragraph 26	Complied with.
<p>27. GEF Co-Financing</p> <p>In the event that GEF grant is suspended or cancelled, and without limiting the generality of Section 4.02 of the Loan Agreement, the Borrower shall make timely arrangements satisfactory to ADB to have the GEF grant become available or to commit the additional funds for the project expenditures that would have originally been financed out of the GEF grant or agree to scale down the project scope appropriately.</p>	Schedule 5 Paragraph 26	Complied with.
<p>28. Subproject Financing Agreements</p> <p>The Borrower, acting through the MDFO, shall enter into a Subproject Financing Agreement with each of the relevant LGUs upon approval of the Subproject by the Policy Governing Board of MDFO as endorsed by the Regional Steering Committee.</p>	Schedule 5 Paragraph 21	Complied with. Subject Financing Agreements signed with 17 LGUs.
<p>The terms and conditions of Subproject Financing Agreements shall be decided in accordance with the National Government and Local Government Unit Cost-Sharing Policy approved by the Investment Coordinating Committee on 12 December 2002, as amended from time to time.</p>	Schedule 5 Paragraph 22	Complied with.
<p>29. MDFO shall prepare a model Subproject Financing Agreement and obtain ADB's approval before entering into any Subproject Financing Agreements. The first Subproject Financing Agreement shall be reviewed and approved by ADB before its execution, and all the Subproject Financing Agreements shall materially follow the model Subproject Financing Agreement and the first Subproject Financing Agreement.</p>	Schedule 5 Paragraph 24	Complied with.

Covenant	Reference in Loan Agreement	Status of Compliance
<p>30. Implementation by Local Government Units (LGUs)</p> <p>The Borrower, acting through DENR, shall enter into an implementation agreement with each LGU on terms and conditions satisfactory to ADB. Such agreement shall include commitments of the LGUs on:</p> <ul style="list-style-type: none"> (a) participation and collaboration in Project activities; (b) Designation of municipal or city Project units; (c) Preparation of the municipal or city ICRM plan, conforming to all the safeguard requirements, and to be approved by DENR; (d) Provision of required counterpart funding for recurring expenditures for coastal resources management during and after project implementation 	Schedule 5 Paragraph 7	Complied with.
<p>31. Copies of DENR-approved ICRM plans shall be submitted to ADB for review and record.</p>	Schedule 5 Paragraph 8	Complied with.
<p>32. Semiannual Review</p> <p>The Borrower and ADB shall jointly conduct reviews of the Project at least twice a year. The semi-annual reviews shall assess the implementation performance and achievement of Project outcomes and objectives, review the financial progress, identify issues and constraints affecting the Project, and work out a time bound action plan for their resolution.</p>	Schedule 5 Paragraph 29	Complied. Implementation Review Missions were conducted at least twice a year. The last was the ADB Review Mission in June 2014.
<p>33. Midterm Review</p> <p>The Borrower and ADB shall undertake a mid-term review in 2009. The mid-term review shall cover Project parameters, compliance with covenants in this Loan Agreement and necessity of modification of scope or implementation arrangements, in addition to actual physical and financial progress of the Project.</p>	Schedule 5 Paragraph 30	Complied. Midterm review conducted in March 2011.

ECONOMIC ASSESSMENT

A. Introduction

1. The economic revaluation followed the assumptions and approach adopted at the time of project appraisal.¹ The project was expected to (i) strengthen the overall policy and legal framework; (ii) build capacities of communities; civil society groups; and national, provincial, and municipal government institutions; (iii) undertake participatory resource use planning and management, biodiversity conservation, and resource enhancement; and (iv) provide local economic development opportunities to the affected community residents and facilitate access to social and environmental services and facilities. It was assumed that by reducing the decline in quality and productive capacity of coastal habitat, the project would provide direct and indirect economic benefits including improved fish catch, reduced erosion in foreshore and upland areas, and increased local and global use values.² The development of alternative and supplemental incomes, through viable livelihood and microenterprises would relieve pressure on the coastal resources. The progressive population management programs in the coastal *barangays*, with education on reproductive health and the linkage between population and environmental quality was expected to reduce future population pressure on coastal resources.

B. Methodology

2. The project was implemented over seven years and assumed a 20-year economic life.

3. **Exchange Rate and Discount Rate.** For this analysis, the prevailing interbank exchange rate at project completion (₱43.78/\$1.0) was applied. A discount rate of 12% was used to ascertain the net present value and a cutoff point for the economic internal rate of return (EIRR).

4. **Price Assumptions.** Financial benefits and costs were estimated in constant 2014 terms. Financial prices were based on actual project costs. The analysis used a domestic price numeraire where the shadow exchange rate factor (SERF) was used to adjust the prices of traded commodities to domestic levels. The SERF was assumed to be 1.2, which is the standard SERF for the Philippines as indicated in the Government's Investment Coordination Committee's Project Evaluation Procedures and Guidelines. The values of coastal resources and products from livelihood activities were taken at the border price and their economic values derived by adjusting these with the SERF. To take into account local unemployment and underemployment, labor costs were shadow priced at 0.61.

5. **Natural Resource Values.** The project involved an integrated approach to managing coastal resources, which had a focus on the coastal resources as well as upland resources such as watersheds.³ The main resource values associated with the coral reefs originated from fisheries for local consumption, erosion control, local use (tourism with on-site residence), and global use (fisheries for live export, off-site tourism, and aesthetic/biodiversity value). The main benefits from mangroves include wood use, fisheries, erosion control, waste treatment, recreation, and habitat/refugia (biodiversity). As the government had banned cutting of

¹ ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Grant from the Global Environment Facility to the Republic of the Philippines: Integrated Coastal Resource Management Project*. Manila.

² Most commonly documented local and global use values include tourism, recreation, and habitat/refugia.

³ The supplementary Appendix F of RRP discussed the valuation method in detail.

mangroves, the analysis excluded any benefits expected from wood use. The resource use values for erosion control and waste treatment have not been established for the Philippines; however, the literature shows these have potentially high values. For the purpose of this analysis, the values for erosion control are conservatively estimated at 10% and waste treatment at 5% of estimated values for other countries. The wood and soil erosion abatement are primary benefits from the watersheds. Recent estimates are that one hectare of mature plantation can annually prevent loss of 8.58 tons⁴ of soil, which is estimated at ₱970/ton in 2014 terms. Table A14.1 presents the use values for the coastal and watershed resources, which are updated to 2014 levels using the G-5 manufacturing unit value index.

Table A14.1: Resource Use Values in the Financial Terms

Resource	Price (₱/ton)	Values in 2006 Terms (₱/km ² /year)		
		Excellent	Fair	
Poor				
Coral Reef				
Fisheries	52,800			
Erosion Control		1,079,000	1,079,000	432,000
Local Use		791,000	316,000	158,000
Global Use		1,654,000	913,000	546,000
Mangroves				
Fisheries	52,800			
Fuelwood				
Erosion Control			1,323,000	
Waste Treatment			2,408,000	
Global Use (recreation)			4,733,000	
Global use (habitat/refugia)			1,216,000	
Watershed				
Averted Soil Loss	970			

km² = square kilometers, ₱ = peso.

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

6. **Enterprise Models.** Actual feasibility assessments submitted during project implementation were used. The range of activities included: (i) land-based (e.g., production of organic fertilizer, fiber and coir dust, rope and twine, geotextile nets, as well as raising of swine); (ii) fishery-related (such as tilapia culture in earthen ponds, salt making, dried seaweed production, fish-cage culture, and dried salted fish production; and (iii) microenterprise (e.g., soap making, and mushroom culture). The models for the enterprises span over six years, which provides for an establishment period of one year and an operation period of five years. The useful life of the structures such as sheds and boats were assumed to be six years, while for tools and other capital investment three years. The working capital requirement for the enterprises was estimated on the basis of the costs required for initiating production operation, and depending on the type of the enterprise the requirement is assumed to range between one and three months.

⁴ Estimated value of soil derived through replacement method by Pabuayon, I. M., R. V. O. Cruz, M. M. Calderon, M.N. Rivera, L. C. Lumanta, N. O. and Tolentino. 2000. *Economic Valuation of Philippine Bamboo Resources, A Final Report*. Manila.

C. Project Benefits

7. **Project Coverage and Benefit Area.** The project covers 79 LGUs in seven provinces and provided capacity building for 1,715 national, regional, provincial, and municipal government staff. Additionally, the project trained 4,608 community members and civil society representatives in integrated coastal resources management and strengthened *bantay-dagat* in the participating LGUs. The project also provided social and environmental infrastructure in 134 coastal *barangays* and raise awareness on population management in the 79 LGUs. The Project established 267 aquatic and land-based enterprises, and 55 ecotourism enterprises providing alternate and supplemental livelihood, which will directly benefitted 8,721 fisherfolk.

8. The project established 75 marine protected areas (MPAs), covering 24,908 hectare (ha) which included 24,908 ha coral reefs with 5,432 ha no-take zones,⁵ 4,355 ha mangroves, 10,605 ha watersheds. Also, the project reforested 1,260 ha of mangroves and 4,355 ha of watersheds and rehabilitated 3,094 ha of mangroves and 6,250 ha of watersheds.⁶

9. **Benefits from Coral Reefs.** Coral reefs provide several products and uses that, in turn, serve as the basic means of livelihood among coastal communities. Basically, the products and services may be classified into: (i) products - those that may be considered as renewable resources, i.e., fish, seaweed, etc., and those that are depleted due to extraction such as sand, coral, etc.; and (ii) services - including physical structure (e.g., coastal protection), biotic (e.g., habitat maintenance for within ecosystems), biological support (e.g., through mobile links between ecosystems), biogeochemical (e.g., nitrogen fixation), information (e.g., source of pollution records), and social and cultural (e.g., aesthetic values, recreation, and gaming) services.

10. The benefits from coral reefs, however, may be affected by threats due to natural causes (e.g., coral bleaching,⁷ and typhoons) and human activities which may range from those which directly have an adverse effect (e.g., coral mining) to those which indirectly cause harm on the reef ecosystem (e.g., construction). Human activities, such as destructive fishing methods and uncontrolled extractive use, have caused rapid decline in the condition of coral reefs in the Philippines over the past years. Overall, their condition is not good; only 2.4% were considered to be in excellent condition, 22.4%, good, 51.7%, fair, and 23.5%, poor.

11. As coral reefs are destroyed, fisheries, tourism, coastal protection, and biodiversity values are lost. These losses have their greatest impact on local coastal communities and are reflected by the decrease in the recruitment of fish, which could have occurred from damaged reef areas if they were still intact. It was observed that the productivity of coral reefs has declined by about 37% over the period 1966–1986 or a decrease of about 1.9% annually mainly due to dynamite and cyanide fishing as well as other forms of destructive fishing methods.

⁵ Compares with 5,000 ha assumed in the appraisal economic evaluation.

⁶ Compares with reforested 2,000 ha of mangroves and 4,000 ha of watersheds, and rehabilitating 7,000 ha of existing mangrove plantations and 3,000 ha of watersheds, assumed in the appraisal economic evaluation.

⁷ Coral bleaching is the whitening of coral colonies due to the loss of symbiotic zooxanthellae from the tissues of polyps. There are a number of stresses or environmental changes that may cause bleaching, including disease, excess shade, increased levels of ultraviolet radiation, sedimentation, pollution, salinity changes, and increased temperatures.

Severely damaged reefs are unable to recover quickly to a high level of productivity.⁸ It is estimated that it will take 38 years for a severely damaged coral reef, due to dynamite fishing, to regain 50% of its original healthy state and to be productive again.⁹ From a global perspective, the danger of disappearance of coral reefs arises from the rapid increase in world population. Of the six billion people on earth, almost four billion live in coastal areas. Many of the world's densest population regions are in tropical coasts bordered by coral reef ecosystems.

12. **Benefits from Mangroves.** Mangroves are highly productive forests growing along tropical tidal mudflats and coastal areas extending inland, along rivers, streams, and their tributaries where the water is generally brackish. Mangrove ecosystems have extremely high natural productivity in terms of plant growth and all the associated organisms. Much of this productivity translates into useful products for people in the form of economic benefits. About 450,000 ha of mangroves existed in the Philippines in 1918. In 1970, the country's mangrove forest area was estimated at 288,000 ha. By 1988, the mangrove cover declined to about 140,000 ha. From 1988 – 1993, it further declined to about 138,000 ha. The rates of decline in mangrove area, about 1.63% annually, from 1918–1993 are presented in Table A14.2. The analysis adopted annual benefits of a healthy square kilometer of mangrove area at about \$336,000/year in 1998 terms.

Table A14.2: Mangrove Area Historical Trends, Philippines

Year	Total Mangrove Area (ha)	Number of years	Decline in Total Area (ha)	Rate of Decline/Year (ha)	Decline in Total Area	Rate of Decline/Year
1918	450,000					
1970	288,000	52	162,000	3,115	36.00%	0.69%
1980	175,000	10	113,000	11,300	39.24%	3.92%
1988	140,000	8	35,000	4,375	20.00%	2.50%
1993	138,000	5	2,000	400	1.43%	0.29%
		13	37,000	2,846	21.14%	1.63%

ha = hectare

Source: Department of Environment and Natural Resources.

13. **Benefits from the Watershed.** Industrial logging in conjunction with lack of effective forest management had reduced the forest cover to about 20% of the original forest cover. The combined effect of reduced forest cover and low presence of the conservation techniques in upland agriculture has been leading to soil erosion and increased flooding, which has in turn led to damage to coastal habitats, higher costs of coastal infrastructure and risk to lives. Besides providing fuel and timber wood and fruit, the watershed prevents the soil erosion. Estimates show that annually each square kilometer of a mature tree stand can reduce the erosion by 858 tons of soil (footnote 4).

14. **Benefits from Livelihood and Micro-enterprise schemes.** The livelihood and micro-enterprise schemes, established by coastal communities with the project assistance, relieved the pressure on coastal resources, thus, preventing their further deterioration. Moreover, these projects are expected to increase household income and, subsequently, reduce the incidence of poverty in the project areas.

⁸ McAllister, D. E. 1988. *Environmental, Economic and Social Costs of Coral Reef Destruction in the Philippines*. Manila. (Galaxea 7: pp. 161–178).

⁹ Alcala, A. C. and E. D. Gomez. 1979. Recolonization growth of hermatypic corals in dynamite-blasted coral reefs in the Central Visayas, Philippines.

15. **Quantification of Benefits.** For purposes of economic analysis, the quantifiable benefits that are attributable to the project can be grouped in the following five categories:

- a. ***Fishery values:*** These are the net values of sustainably managed commercial coral reef and mangrove fishery. They include catch on the reef and mangrove areas as well as the value supported outside of these areas but dependent on it (e.g., through spawning aggregation).
- b. ***Local uses:*** These refer to the myriad of marketed and non-marketed uses from coral reefs and mangroves that are not associated with the commercial fishery. In the case of coral reefs, this can include aquarium trade, coral harvesting, and gleaning. Mangrove uses can include small-scale capture fishery and hunting. Mangroves in the Philippines serve as an important source of fuelwood and building materials. However, as cutting of mangroves is currently prohibited by the Government of the Philippines, benefits from local uses (mainly fuelwood and building materials) are excluded from the economic analysis.
- c. ***Erosion control function:*** This refers to the ability of a given ecosystem to prevent coastal erosion or flooding. Coral reefs can act as a barrier to destructive wave action or to longshore currents that might otherwise erode beaches while mangroves perform this function by fixing sediment and detritus. The value attached to this function is highly site-dependent, as it relates substantially to the value of the coastline that is being protected and to the likelihood of erosion in the absence of this protection. Higher values are associated with built-up populated coastlines or with coastal areas prone to recurrent damage through surges, tidal actions, tsunamis, or storms. Similarly, through improved management, the watersheds can reduce erosion in the upper catchment areas.
- d. ***Global biodiversity values:*** These values are typically quite high but are difficult, if not impossible, for countries to capture. Analyses suggest that even in well-organized co-management schemes involving patents, licensing of product developments, or leasing of information, national governments often fail to get a fair share.
- e. ***Livelihood and micro-enterprise schemes:*** Coral reef rehabilitation requires change of the fishing practices from destructive to sustainable. In order to provide compensation for this switch, the project will facilitate development of viable livelihood and micro-enterprise activities as means of alternate income. The establishment of these livelihood and microenterprise projects should lead to less fishing effort from the local community. It is assumed that the coastal communities have not implemented these indicative livelihood and micro-enterprise schemes before the project. The project preparatory technical assistance identified a list of 12 potential activities, which was be expanded during implementation to include other such site-specific activities in which the municipality may hold comparative advantage.

16. **Quantified Benefits.** In the without-project scenario, the productivity of the coral reefs is assumed to decline at a rate of 2% per annum; the historic rate of decline recorded for the Philippines (footnote 8). While the project has stopped the decline and significantly improved productivity, the analysis conservatively assumes that in the with-project scenario, the decline rate in coral reef productivity will only be halved in the participating LGUs. In case of marine protected areas, the without-project benefits are assured to follow the pattern

for coral reefs in fair condition. Given that the no-take zones will be a fraction of the municipal waters within each of the LGUs and will be the focus of more intense activities, the productivity gains from the no-take zones are anticipated to increase at 10% per year or the productivity to triple in 20 years.¹⁰ However, the analysis conservatively assumes that productivity will double over 20 years.

17. In the case of the mangroves, resource values and productivity are expected to decline at a rate of 1.6% per annum, the historic decline rate for the Philippines. With enrichment planting and effective enforcement of regulations through community participation, the productivity of mangroves is anticipated to improve in the participating LGUs. However, for the purpose of this analysis, the annual decline in mangrove productivity is conservatively assumed to be reduced to 1.0% in the with-project scenario. In addition, the areas of mangroves reestablished with community participation are assumed to reach full productivity by year 5 and thereafter productivity will be maintained through continued community management.

18. With the ban on logging in the watersheds, in the without-project scenario the soil erosion abatement capacity in the partially denuded forest areas is assumed to be maintained. In the with-project scenario, rehabilitation in the form of timber stand improvement is assumed to recover the soil erosion abatement capacity by one-third over five years. For the completely denuded forest areas, soil erosion increases with time; however, in absence of data on the trends in soil erosion, the analysis assumes that erosion levels are steady. In the with-project scenario, the reforested watersheds are assumed to reach their full soil erosion abatement capacity by year 5.

19. In case of the livelihood activities and microenterprises, the analysis assumes that all enterprises will be incremental. While the enterprise development activities are anticipated to continue beyond project implementation, the analysis conservatively considers only enterprises to be established during project implementation.

20. **Non-quantifiable Benefits.** Apart from the benefits discussed in the preceding sections, a number of benefits cannot be readily quantified, including: (i) improved nation-wide coastal resources management resulting from improved policy and legal framework and institutional strengthening of Department of Environment and Natural Resources, Department of Agriculture's Bureau of Fisheries and Aquatic Resources, and municipal local government units; (ii) improved coastal resources management in neighboring LGUs resulting from the information, education, and communication campaigns in the project area; (iii) improved revenues for the local government units through introduction of user fees; (iv) improved ecological governance resulting from empowerment of coastal communities in resources management and project implementation; (v) reduced cost and improved quality of social and environment-related infrastructure resulting from greater community participation in planning, design, and construction activities; and (vi) improved community

¹⁰ The benefits from establishing MPAs were first documented by the Silliman University Marine Laboratory at the Sumilon Island fish sanctuary, which was established in 1974. This initial experiment on coral reef management, which prohibited all types of fishing activities on a portion of the island over 8 years, allowed researchers to monitor and collect data on the regenerative capacity of the reef under an effective management scheme. Observed benefits included: (i) improved coral reef substrate condition; (ii) tripling of individual fish abundance per 500 square meters with the most significant increase among fish targeted by fishers; and (iii) substantial increases in yearly fish catch to fishers on the Sumilon Island reef, not in the sanctuary, from about 14 tons/square kilometer/year to almost 36 tons/square kilometer/year or a regeneration rate of about 12%/year (Russ and Alcala 1996).

welfare resulting from provision of social and environmental services and infrastructure.

D. Assessment of Returns from Livelihood Enterprises

21. The results show that the livelihood enterprises have benefitted substantially. Depending on the size of the enterprise, the annual income net of cash and in-kind costs ranges from ₱8,500 to ₱102,000. Returns to labor, which are calculated by dividing revenue, less all costs except labor, by the amount of labor required, are significantly higher than the minimum wage rate applied in the rural areas for agriculture-related activities.

22. Livelihood and microenterprise schemes typically exhibit very high returns (mainly due to low capital investment and production costs relative to high revenues), although they tend to be highly volatile to changes in output prices and production cost.

E. Economic Assessment

23. **Project Investment and Recurrent Costs.** All costs are in constant 2014 terms. Investment costs are net of price contingencies, interest during construction, and taxes and duties. Foreign cost content of the costs was adjusted by the SERF, while the local output was taken at its full value. While the scope of benefits from the policy aspects, institutional development, capacity building, and community development may not be limited to the project area, the analysis takes into account costs of all the project activities.

24. **Assessment Result.** The economic viability was undertaken based on the calculated stream of net incremental costs and quantified benefits attributable to the project activities over 20 years, as shown in Table A14.3. The project EIRR is 15.7% and the economic net present value at ₱316.6 million. The project EIRR is slightly lower than the appraisal estimate of 16.2%, as a result of the reduced project scope and thus lower project costs incurred over a longer implementation period with costs concentrated at the end of project implementation. Incremental benefit streams were improved slightly due to higher values of the quantified benefits elements. Sensitivity analysis results are presented in Table A14.4. A 5% reduction in the benefit stream would result in an EIRR of 10.7%; a shortening duration of the benefit stream would result in an EIRR of 12.4%.

Table A14.3: Summary Economic Resource Flow Statement
(₱ million)

Year	Project Costs (A)	Net O&M (B)	Without-Project Resource Flow (C)	With-Project Resource Flow (D)	Net Economic Benefits [E=(D-C)-(A+B)]
2007	7.7	0.0	4,214.6	4,214.6	-7.7
2008	33.0	0.2	4,141.4	4,141.4	-33.2
2009	62.3	1.2	4,069.2	4,069.2	-63.5
2010	238.1	3.1	3,996.0	3,996.0	-241.2
2011	191.8	10.2	3,923.8	3,923.8	-202.1
2012	319.2	16.0	3,850.7	3,850.7	-335.2
2013	283.5	25.6	3,778.5	3,778.5	-309.0
2014	249.1	34.1	3,705.3	3,855.3	-133.2
2015	0.0	41.5	3,633.1	3,833.1	158.5
2016	0.0	41.5	3,559.9	3,763.6	162.2
2017	0.0	41.5	3,487.7	3,732.6	203.3
2018	0.0	41.5	3,414.5	3,698.7	242.7
2019	0.0	41.5	3,342.3	3,671.0	287.2
2020	0.0	41.5	3,269.1	3,641.8	331.2
2021	0.0	41.5	3,196.9	3,611.2	372.8

Year	Project Costs (A)	Net O&M (B)	Without-Project Resource Flow (C)	With-Project Resource Flow (D)	Net Economic Benefits [E=(D-C)-(A+B)]
2022	0.0	41.5	3,123.8	3,563.8	398.5
2023	0.0	41.5	3,051.6	3,532.4	439.3
2024	0.0	41.5	2,978.4	3,498.7	478.8
2025	0.0	41.5	2,906.2	3,475.8	528.1
2026	0.0	41.5	2,833.0	3,438.3	563.7
2027	0.0	41.5	2,761.6	3,401.1	597.9
2028	0.0	41.5	2,692.1	3,364.3	630.7
2029	0.0	41.5	2,624.3	3,327.9	662.1
2030	0.0	41.5	2,558.2	3,291.9	692.2
2031	0.0	41.5	2,493.8	3,256.3	721.0
2032	0.0	41.5	2,431.0	3,221.1	748.6
Economic Internal Rate of Return (%)					15.7%
Economic Net Present Value at a Discount Rate of 12% (₱ million)					316.6

Table A14.4: Sensitivity Analysis

Sensitivity Test	EIRR (%)	ENPV (₱ million)
Base Case	15.7%	304.5
-5% benefit stream	10.7%	-95.3
Benefit stream ends in 2027	12.4%	22.6

EIRR = economic internal rate of return, ENPV = economic net present value.

25. In view of the delayed completion of the priority social and environmental services and facilities subprojects, sufficient operational information was not available for post project economic assessment. Selected projects were reviewed and the following economic appraisal measures were assessed.

Table A14.5: Assessment of Selected Priority Social and Environmental Services

Subproject	EIRR (%)	ENPV (₱ million)
Candelaria Municipal Materials Recovery with Composting Facility (MRCF)	36.0%	17.4
Mobo municipal wharf in Brgy Pinamarbuan	21.0%	3.3
Palanas Water Supply System Upgrade		
Cantumog-Luyang River Flood Control structure project	18.9%	6.1
Bostob Municipal Water Supply System	37.2%	18.1
Calayan Municipal Hospital	26.0%	9.9

EIRR = economic internal rate of return, ENPV = economic net present value.

Source: ADB calculation.

TERMINAL EVALUATION REPORT FOR GLOBAL ENVIRONMENT FACILITY

A. Global Environment Facility Background

1. The Integrated Coastal Resources Management Project (ICRMP), a project of the Government of the Philippines, intended to support government's efforts to address the critical issues of sustainable management of marine and coastal resources. The project entered the Global Environment Facility (GEF) pipeline on 9 February 2000 and was approved by the GEF Council on 27 September 2004. Further processing was delayed due to the government's fiscal constraint. With the fiscal situation improved in 2006, the project was finally appraised and was endorsed by the Chief Executive Officer to the GEF Council on 1 December 2006. Funding for the project from the Asian Development Bank (ADB) was approved on 23 January 2007. The financing agreement was signed on 28 March 2007 and became effective on 29 June 2007. At appraisal, the project completion date was scheduled on December 2012 but was extended to June 2014 due to implementation delay.

2. At appraisal, the project was estimated to cost \$56.05 million, excluding interest and commitment charges on the ADB loan of \$6.30 million. Total GEF funding was \$9.0 million while the co-financing was \$47.05 from the ADB, the GOP, LGUs and beneficiary communities, excluding the interest and commitment charges on the ADB loan. Actual expenditures were \$5.83 million from the GEF, \$20.65 million from the ADB, and \$9.54 from the GOP, LGUs and beneficiary communities. A detailed breakdown of funding usage by output is presented in Annex A.

3. This terminal evaluation report limits itself to an assessment on project outputs or activities that received GEF financing support, which fell predominantly under Output B. An assessment for the overall project is provided in the main text of the project completion report.

4. The project sought 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 supported: (i) policy and institutional strengthening and development; (ii) reduction of extensive poverty prevalent among coastal communities through the provision of alternative livelihood and enterprise development, social services and infrastructure; (iii) promotion of sustainable management and use of coastal resources and related ecosystems, and conservation of coastal resources and globally significant biodiversity; (iv) control of coastal environmental pollution and erosion; and (v) strengthening the capabilities of GOP agencies, people's organizations and local communities on coastal resource management and social development. The project outputs included:

- (i) **Output A: Policy and Institutional Strengthening and Development** - aimed at: (i) rationalizing government policy for integrated coastal resource management (ICRM) and improving coordination mechanisms; (ii) strengthening national and local government institutional capacity; and (iii) developing a performance-based incentive and disincentive system for local governments. This output accounted for only \$3,500 (0.6%) of the \$5.83 million of GEF funding utilized.

- (ii) **Output B: ICRM and Biodiversity Conservation** - promoted basic ICRM practices to protect and manage coastal ecosystems. This output accounted for \$4.94 million (84.5%) of the \$5.83 million of GEF funding utilized.
- (iii) **Output C: Enterprise Development and Income Diversification** - provided municipal fisherfolk with supplementary income to reduce their reliance on fishing by promoting environment friendly sustainable enterprises and livelihoods. This output accounted for \$0.452 million (7.8%) of the \$5.83 million of GEF funding utilized.
- (iv) **Output D: Social and Environmental Services and Facilities** - addressed the basic social services needs of disadvantaged coastal communities by providing technical and investment support to participating LGUs for improving water supply and sanitation, solid waste management, and mitigating coastal pollution and erosion. This output accounted for \$0.231 million (4.0%) of the \$5.83 million of GEF funding utilized.

5. The project was originally planned to be implemented in six priority marine biodiversity corridors and ecosystems covering 68 LGUs in the provinces of Cagayan, Cebu, Davao Oriental, Masbate, Siquijor and Zambales. These were: (i) the Babuyan corridor along the northern coast of Luzon; (ii) the Ticao Pass-San Bernardino Strait-Samar corridor; (iii) the Daanbantayan corridor straddling the Visayas Sea and the Tanon Strait; and (iv) the Pujada Bay corridor, an important point of convergence of bioregions of the Pacific Ocean and the Celebes Sea. The Zambales marine ecosystem in the Sulu Sea and the Bohol small-island marine ecosystem between the Bohol Sea and Sulu Sea were added to the project areas for their "high" to "very high" priority marine biodiversity significance and proximity to marine corridors. The number of participating local government units increased to 79 with the inclusion of Romblon province.

B. Implementation

6. The ICRMP implementation was a collaboration of different national agencies including: Department of Environment and Natural Resources (DENR); Bureau of Fisheries and Aquatic Resources (BFAR) under the Department of Agriculture; 79 LGUs; community stakeholders like *bantay dagat* (marine watch teams) people's organizations; and self-reliant groups (SRGs).

7. Following loan approval in January 2007 and prior to loan effectiveness in June 2007 DENR created an ICRMP project steering committee (PSC) in March 2007 to effect start-up operations. The PSC was tasked to review and approve the project's work and financial plans and policies/implementation guidelines. At the regional level, regional project implementing units (RPIUs) were created along with their respective regional steering committees (RSC) to review and approve the regional work and financial plans and evaluate the technical merits of the specific subprojects. The RPIUs were tasked to oversee and monitor project implementation at the regional level. The provincial project implementing units (PPIUs) were involved in the following activities: (i) preparation of project work and financial plans and reports; (ii) implementation advocacy and information, education and communication (IEC) programs; (iii) participation in the review and approval process of sub-projects; (iv) monitoring and evaluation of project progress; and (v) ensuring the participation of all stakeholders in project implementation.

8. To ensure the effective and efficient implementation of ICRMP, a project management office (PMO) under the supervision of the Foreign-Assisted and Special Projects Office (FASPO) of the DENR was established. The roles of different DENR Offices and focal points for each output are shown in Table 1.

Table 1: Output Implementation Matrix

Responsible Office	Output A	Output B	Output C	Output D
Function	Policy strengthening	ICRM/Biodiversity	Enterprise Development	Social/ Environmental Facilities
Overall planning	FASPO PMO	FASPO PMO	FASPO PMO	FASPO PMO
Programming Budgeting				
Monitoring & Management				
Technical Lead	PAWB now BMB	PAWB now BMB	BFAR	FASPO
Technical Support	BFAR	BFAR and LGUs	PAWB	RPIU/PPIU/LGU
Financial Lead	FASPO	FASPO	FASPO	MDFO
Financial Support	PAWB	BFAR	BFAR	LGU

BFAR = Bureau of Fisheries and Aquatic Resources, BMB = Biodiversity Management Bureau, FASPO = Foreign-assisted Special Projects Office, LGU = local government unit, MDFO = Municipal Development Fund Office, PAWB = Protected Areas and Wildlife Bureau, PPIU = provincial project implementation unit, RPIU = regional project implementation unit.

Source: Government project completion report.

9. A team of international and national consultants located at the national and provincial implementation sites were recruited to assist the PMO. After contract revision, 14 consultant positions were in the national PMO, 4 international and 9 national consultants. Seven national consultant positions were at the provincial operation sites.

10. The external coordinating mechanisms for ICRMP implementation were supported by the signing of Memorandums of Agreement (MOAs), including: (i) MOA between DENR and DA-BFAR for the participation of BFAR in the implementation of activities under outputs B and C; (ii) MOA between DENR and the Department of Finance-Municipal Development Fund Office for the implementation of Output D; and (iii) MOA between DENR and PEMSEA for the coastal database undertaking.

11. Funding for Output D was processed through the Municipal Development Fund Office.

C. Relevance, Effectiveness and Impact

12. **Relevance:** At both appraisal and completion, the Project was rated *relevant* to the government's and GEF's objectives of improving sustainability of protected area systems, reducing threats to and sustainable use of biodiversity. The training of *bantay dagat* on environmental laws and enforcement, and the establishment of new and strengthening of existing marine protected areas (MPAs) and MPA networks are important to reducing threats to and sustainable use of biodiversity.

13. **Effectiveness:** The project made significant achievements, including: (i) an improved policy environment and legal framework for ICRM through the conduct of policy studies that were used as inputs to the drafting of the National Integrated Coastal Management Program; (ii) institutionalizing at the local levels the protection and management of coastal ecosystems and resources in the threatened areas of biodiversity to a larger number of LGUs (79) compared to 68 identified at appraisal; (iii) providing capacity building training to 1,715 staff (39% women) from DENR, DA, BFAR and LGUs compared with the appraisal target of 600 staff (33%

women); (iv) improved mangroves and watersheds with the rehabilitation and reforestation of 4,380 hectares of mangroves and 10,605 hectares of watershed, representing 97-99% of revised targets, and 9 mangrove sites now being used as ecotourism destinations; and (v) establishment of biodiversity conservation subprojects which are countermeasures to resource depletion and habitat losses such as giant clam, abalone, sea cucumber, and coral. The establishment of 5 regional ICRM centers in well-established academic institutions in Cagayan, Zambales, Masbate, Cebu, and Davao Oriental assured continuing support to biodiversity monitoring and research, training and demonstration.

14. The above achievements notwithstanding, the project failed to achieve several important targets. For example, it was envisaged that the project would establish 50 MPAs, each covering 1,000 ha of coral reefs area. At project completion, while 77 MPAs were established, the total coral reefs coverage is only 24,908 ha (49.8%) of the appraisal target, due to the smaller size of the MPAs than anticipated. In addition, several other targets relating to increase in fish density, increase in fish species diversity, and reduction in illegal fishing incidence cannot be assessed due to insufficient data. Given the Management Effectiveness Tracking Tool (METT) score increased from 70% in 2011 to 75% in 2013, it is likely that progress was made towards restoring marine life density and biodiversity in the participating LGUs. On the other hand, the last target on reducing illegal fishing by 50% is over ambitious and is unlikely to be achieved. Similarly, it is not possible to assess the outcome level targets due to insufficient data. Overall, the project was rated *less than effective* in achieving outcomes.

15. **Efficiency:** The project was *efficient* in achieving its outcomes and outputs despite delayed performance of all outputs. Participating LGUs prepared and adopted ICRM plans which provided funding for 411 projects related to coastal, law enforcement, and management of marine protected areas.

D. Global Environment Benefits and Catalytic Role

16. **Global environmental benefits:** The Philippines is one of the largest fish producers in the world. Improvement in sustainability of coastal resources in the country have regional ramifications in reducing possible pressures on resources in the neighboring states. The following accomplishments are deemed to have met this objective:

- (i) **Implementation of Mangrove/Watershed Conservation:** Reforested and rehabilitated 4,355 ha of mangroves and 10,605 ha of watershed areas.¹ The reforestation provided extra income for 360 peoples' organization members. Within mangrove conservation areas, nine sites were used as ecotourism destinations offering river expedition boating activity, providing livelihood to 341 self-reliant group (SRG) members. Within the watershed areas, three sites were used as forest adventure destinations offering trekking, providing livelihood to 273 SRG members.
- (ii) **Implementation of Biodiversity Conservation Projects:** Implemented 49 MPA-based conservation projects and three corridor-wide conservation projects. These projects included re-stocking of giant clams, abalones, sea cucumbers, sea hares, and other pelagic species. Corridor-wide conservation undertaking

¹ Very strong typhoons in 2012 and 2013 damaged some 2,911 ha of watershed plantations and 656 ha of mangrove plantations that had been rehabilitated.

included conservation of humpback whale and turtle. There were 10 MPA sites being used for eco-tourism destinations offering surfing and diving experiences.

- (iii) **MPA Networks:** The project established five MPA networks² promoting partnership among the LGUs with MPAs for collective conservation, protection and management of marine ecosystems. The MPA network activities were initiated through surveys, meetings and cross visits to existing MPA networks. Workshops were conducted on foundational concepts of MPA networks, coordination procedures and MPA Network planning. Activities included the creation of a legal basis through the issuances of Sangguniang Panlalawigan Resolutions as well as designation of the Ad Hoc Committees and preparation of MPA Network Plans. These networks emerged out of mutual interest and the Provincial Governments actively participated and supported the formation, organization and operations.
- (iv) **Research at Regional ICRM Centers:** Five RICs were established within marine science institutions as hubs for biodiversity monitoring and research, training and demonstration activities. The RICs completed eight research studies on the condition of coastal resources and threatened species on selected critical ecosystems.
- (v) **Researches on Critical Biodiversity Resources:** Completed 32 studies including the assessment of coastal pelagic species to provide benchmarking on impacts of climate change.
- (vi) **Training:** For strengthening LGUs' Capacity, the 79 LGUs received training on development planning, governance, project implementation, coastal management, resource management, biodiversity conservation, social facilities' project development, and feasibility study preparation.

17. **Catalytic role:** The strengthening of SRGs and demand-driven approach to the identification and packaging of biodiversity conservation projects resulted in mobilization of savings with the establishment of bank accounts of the self-reliant groups for each of their subprojects, i.e. one account each for their ecotourism, aquatic and land-based enterprises, etc. This has catalytic effects on the sustainable operation and expansion of the enterprises and continuing implementation of the ICRM activities.

E. GEF Tracking Tools

18. The Project adopted the GEF-endorsed METT to monitor MPAs. The METT Score Card monitors the status, appropriateness, and effectiveness of MPA management planning and implementation schemes. All the project LGUs were assisted in the conduct of METT evaluation or METT.

² The five committed MPA Networks were (i) Cagayan MPA Network for Babuyan Corridor (Region 2); (ii) Zambales MPA Network (ZAMPAN) for the Zambales Marine Ecosystem (Region 2); (iii) Masbate MPA Network (MAMPAN) for Ticao Pass (Region 5); (iv) South West Cebu Cluster for Daanbantayan Corridor (Region 7); and (v) Pacific Seaboard MPA Network of Davao Oriental (PASEMPANDO) for Pujada Bay (Region 11).

19. The METT provides a mechanism for monitoring the progress towards more effective management of the locally managed MPAs. This enables MPA managers to identify the needs, constraints and priority actions to be undertaken to improve the management of their protected areas. This tool is also valuable in setting directions and evaluating progress towards improving the management of MPAs. As a tracking tool, the METT aims to: provide a reporting system for MPAs; serve as a baseline data/ information to track the progress in the management of MPAs of the LGUs; and identify the strength and weaknesses of the MPA necessary for their effective management. It has two main sections: the data sheet and assessment form. The data sheet records the details of the assessment and some basic information about the MPA site, name, size, location etc., it also includes the list of threats present in the MPA ranked according to their impact on the MPA. The assessment form includes distinct elements of the management cycle namely context, planning, inputs, management, outputs and outcomes. The main part of the assessment is a series of questions categorized into the different phases of management elements.

F. Sustainability

20. Participating LGUs prepared and adopted ICRM plans which provided funding for 411 projects related to coastal, law enforcement, management of machine protected areas, alternative livelihood, etc. While the self-reliant groups were able to mobilize little savings for their continuing participation in the management of MPAs, they will still need the assistance of LGUs and other institutions. The DENR have regular program to continue to provide technical assistance to the SRGs. The integration of the ICRM plans in the municipal development plans increases the likelihood that LGUs will continue to provide financial support to the implementation of ICRM activities. Overall, the project is rated moderately likely sustainable.

21. **Socio-political Risks:** There is strong ownership of the ICRM activities at the local level: (i) local communities at the MPAs are passionate about their biodiversity conservation, their livelihood, and ecotourism projects and are actively involved in their operations; (ii) the current LGUs are very supportive of the operation of the social and environmental facilities established under the Project, providing the required staffing and funding support. Although elected officials at the LGUs level could change every three years, very strong SRGs could be a motivating factor for local officials to continue to support ICRM activities.

22. **Institutional framework and governance risks:** The policy studies and scientific researches contributed to the drafting of the NICMP and drafting of several department orders and policy issuances. Much of these, however, remain to be passed. The establishment and equipping of regional ICRM centers ensure that technical assistance to MPAs will continue to be provided. The BFAR has regular program supportive of aquatic and land-based enterprises established under the Project. Protection and sustainable use of biodiversity will remain to be a top priority with government under the Philippine Development Plan.

23. **Environmental risks:** The Project activities were aimed at, among other things, sustainable management of marine and coastal resources and environmental protection. By design, significant adverse environmental risks are not expected due to continuing operation of the subprojects and enterprises established under the project.

G. Monitoring and Evaluation (M&E) Framework and Institutional Arrangements

24. A participatory approach to monitoring using the GSA was institutionalized under the Project. The GSA is a participatory process designed to help the LGU and local stakeholders quickly and objectively track through time their progress in the practice of environmental governance. The GSA measures the five areas of LGU main responsibilities in management of: (i) environmental and natural resources planning and implementation; (ii) budgeting; (iii) contracting bidding and procurement; (iv) licensing, permitting and issuance of tenure and allocation instruments; and (v) law enforcement. The project administered the GSA process in all participating LGUs.

25. The project collaborated with the Partnerships for Environmental Management for the Seas of East Asia (PEMSEA) in the installation of the Integrated Information Management System (IIMS). The participating LGUs were trained in the installation of the municipal database for the coastal and marine environment. This IIMS, however, needs further enhancement to make it fully adoptable and operational at the LGU and DENR offices.

H. Overall Assessment

26. Overall, the project performance at completion is assessed successful based on the core evaluation criteria of its relevancy (*relevant*), effectiveness (*less than effective*), efficiency (*efficient*) and sustainability (*moderately likely sustainable*).³ The project was relevant based on its consistency with ADB's strategy and country program, government's development objective and plans, the Presidential Executive Order 533 issued in 2006 and importance from sub-regional perspective to sustainably manage coastal natural resources. It was effective in generating outputs with physical achievement of about 86% despite initial two-year start-up delays and one year extension by prioritizing activities and outputs of significant benefit to wider communities in the project area. It was also efficient in achieving outputs and progress towards outcome based on a robust EIRR of 15.7%. The delivery of key outputs with the participation by LGUs and communities and proactive willingness of LGUs to fund O&M point that the project benefits would be sustainable even after the project support ended.

³ As compared to the ratings for the overall project, the ratings for the GEF-financed activities are higher because more weight is assigned to Output B, which accounted for \$4.94 million (84.5%) of the \$5.83 million of GEF funding utilized.

Annex A: Project Data Sheet

I. Project Identification

GEF Project ID : 1185
 GEF Agency Project ID : PHI 33276
 Country : Philippines
 Project Title : Integrated Coastal Resources Management Project
 GEF Agency : Asian Development Bank

II. Dates

Milestone	Expected Date	Actual Date
CEO Endorsement	October 2006	1 December 2006
Agency Approval Date	November 2006	23 January 2007
Implementation Start	January 2007	June 2007
Midterm Evaluation	July 2009	18 February – 15 March 2011
Project Completion	December 2012	30 June 2014
Terminal Evaluation Completion	August 2015	May 2017
Project Closing	May 2017	5 June 2017

III. Project Framework

Project Output	Activity Type	GEF Financing (US\$)		Co-Financing (US\$)	
		Approved	Actual	Approved	Actual
1. Policy and Institutional Strengthening and Development	INV	0.600	0.035	0.830	0.146
2. Integrated Coastal Resource Management	INV	8.400	4.935	23.450	11.697
3. Biodiversity Conservation	INV		0.452	6.520	3.763
4. Enterprise Development and Income Diversification	INV		0.231	9.380	5.230
5. Social and Environmental Services and Facilities	INV		0.179	3.040	7.990
5. Project Management	INV		0.179	3.040	7.990
Total		9.000	5.832	47.050	28.826

Note: Co-Financing excludes interest and commitment charges of \$6.30 million on ADB loan.

Sources: GEF approval and endorsement of request for co-financing; Report and Recommendation of the President to the Board of Directors, ADB; DENR and ADB financial records.

IV. Cofinancing (\$ million)

Source of Cofinancing	Type	Project Implementation	
		Expected	Actual
GOP/LGU	INV	19.520	9.545
ADB	INV	27.530	19.281
Total		47.050	28.826

ADB = Asian Development Bank; INV = investment; GOP = Government of the Philippines; LGU = local government units.

Note: Actual expenditures from ADB exclude interest and commitment charges amounting to US\$1.365 million.