Document of
The World Bank

Report No: ICR00002819

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-74700 TF-90073)

ON A

LOAN
IN THE AMOUNT OF US$50 MILLION

AND A

GLOBAL ENVIRONMENTAL FACILITY GRANT
IN THE AMOUNT OF US$7 MILLION

TO THE

REPUBLIC OF THE PHILIPPINES

FOR A

NATIONAL PROGRAM SUPPORT TO ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT PROJECT

April 24, 2014

Sustainable Development Department
Philippines
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 8, 2013)

Currency Unit = Philippines Pesos (PHP)

At Appraisal P 48 = US$ 1.00

At Completion (December 31, 2013) PHP 44 = US$ 1.00

FISCAL YEAR

January 1 – December 31

Abbreviations and Acronym

ADB	Asian Development Bank
AOs	Administration Orders
APL	Adaptable Program Lending
BNFI	Bicol National Park Foundation
CAS	Country Assistance Strategy
CBD	Convention on Biological Diversity
CBFM	Community Based Forest Management
CENRO	Community Environment and Natural Resources Officer
CEPF	Critical Ecosystems Partnership Fund
CLUP	Comprehensive Land Use Plan
COA	Commission on Audit
CPPAP	Conservation of Priority Protected Areas Program
DA	Department of Agriculture
DA-BFAR	Department of Agriculture - Bureau of Fisheries and Aquatic Resources
DA-BSWM	Department of Agriculture - Bureau of Soil and Water Management
DAO	Department Administrative Order
DAR	Department of Agrarian Reform
DENR	Department of Environment and Natural Resources
DFIMD	Diversified Farm Income and Market Development
DILG	Department of Interior and Local Government
EA	Environmental Assessment
EcoGov	Environmental Governance
EMB	Environment Management Bureau
ENR	Environment and Natural Resources
ENRU	Environment and Natural Resources Unit
FASPO	Foreign Assisted Program Office
FMB	Forest Management Bureau
GAA	General Appropriation Act

GDP	Gross Domestic Product
GEF	Global Environment Facility
GEO	Global Environment Objective
GIS	Geographic Information System
GOP	Government of the Philippines
GPOA	General Plan of Operations and Activities
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
IEC	Information, Education and Campaign
IEM	Integrated Ecosystem Management
IFR	Interim un-audited Financial Reports
IPAF	Integrated Protected Area Fund
IPRA	Indigenous Peoples' Rights Act
IRR	Internal Rate of Return
IUCN	International Union for the Conservation of Nature
LAMP	Land Administration and Management Project
LGU	Local Government Unit
LRA	Land Registration Authority
METT	Management Effectiveness Tracking Tool
MFO	Major Final Output
MGB	Mines and Geosciences Bureau
MTDP	Medium-Term Development Program
NEDA	National Economic and Development Authority
NCIP	National Commission on Indigenous People
NIPAS	National Integrated Protected Areas System
PDO	Project Development Objective
WMC	Watershed Management Committee

Vice President:	Axel von Trotsenburg
Country Director:	Motoo Konishi
Sector Manager:	Ousmane Dione
Project Team Leader:	Samuel Wedderburn
ICR Team Leader:	Samuel Wedderburn

PHILIPPINES

NATIONAL PROGRAM SUPPORT TO ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT PROJECT

TABLE OF CONTENTS

A. Basic Information

Country:	Philippines	Project Name:	National Program Support for Environment and Natural Resources Management Project
Project ID:	P096174,P091147	L/C/TF Number(s):	IBRD-74700,TF-90073
ICR Date:	12/27/2013	ICR Type:	Core ICR
Lending Instrument:	SIM,SIL	Borrower:	GOVERNMENT OF THE PHILIPPINES
Original Total Commitment:	USD 50.00M,USD 7.00M	Disbursed Amount:	USD 50.00M,USD 6.68M
Environmental Category: B,B		**Focal Area**: M	
Implementing Agencies: Department of Environment and Natural Resources			
Cofinanciers and Other External Partners: None			

B. Key Dates

National Program Support for Environment and Natural Resources Management Project - P096174

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	06/06/2005	Effectiveness:	11/27/2007	11/27/2007
Appraisal:	03/27/2007	Restructuring(s):		12/20/2012
Approval:	06/26/2007	Mid-term Review:	06/30/2010	05/28/2010
		Closing:	12/31/2012	12/31/2013

GEF Program supporting the National Program for Environment and Natural Resources Management Project - P091147

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	06/06/2005	Effectiveness:	11/27/2007	11/27/2007
Appraisal:	04/27/2007	Restructuring(s):		12/20/2012
Approval:	06/26/2007	Mid-term Review:	06/30/2010	06/30/2010
		Closing:	12/31/2012	12/31/2013

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes	Moderately Satisfactory
GEO Outcomes	Moderately Satisfactory
Risk to Development Outcome	Moderate
Risk to GEO Outcome	Moderate
Bank Performance	Moderately Satisfactory
Borrower Performance	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry	Moderately Unsatisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance	Moderately Satisfactory	Overall Borrower Performance	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
National Program Support for Environment and Natural Resources Management Project - P096174			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating:**
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA)	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA)	None
DO rating before Closing/Inactive status	Moderately Satisfactory		

GEF Program supporting the National Program for Environment and Natural Resources Management Project - P091147			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating:**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA)	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA)	None
GEO rating before Closing/Inactive Status	Moderately Satisfactory		

D. Sector and Theme Codes

National Program Support for Environment and Natural Resources Management Project - P096174		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Forestry	10	34
General agriculture, fishing and forestry sector	30	23
General public administration sector	22	30
General water, sanitation and flood protection sector	30	11
Other Mining and Extractive Industries	8	2
Theme Code (as % of total Bank financing)		
Biodiversity	14	1
Environmental policies and institutions	29	73
Other rural development	14	13
Pollution management and environmental health	29	9
Water resource management	14	4

GEF Program supporting the National Program for Environment and Natural Resources Management Project - P091147		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Forestry	15	15
General agriculture, fishing and forestry sector	20	60
General water, sanitation and flood protection sector	20	15
Other social services	20	5
Sub-national government administration	25	5

Theme Code (as % of total Bank financing)		
Biodiversity	29	40
Land administration and management	14	5
Other rural development	14	30
Participation and civic engagement	14	10
Water resource management	29	15

E. Bank Staff

National Program Support for Environment and Natural Resources Management Project - P096174

Positions	At ICR	At Approval
Vice President:	Axel van Trotsenburg	James W. Adams
Country Director:	Motoo Konishi	Joachim von Amsberg
Sector Manager:	Ousmane Dione	Rahul Raturi
Project Team Leader:	Samuel G. Wedderburn	Idah Z. Pswarayi-Riddihough
ICR Team Leader:	Samuel G. Wedderburn	
ICR Primary Author:	Douglas A. Forno	

GEF Program supporting the National Program for Environment and Natural Resources Management Project - P091147

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Vice President:	Axel van Trotsenburg	James M. Adams
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ICR Primary Author:	Douglas A. Forno	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)
The program's overall development objective is to assist the Department of Environment and Natural Resources to improve efficiency and effectiveness in its service delivery. More specifically, the project would aim to strengthen the allocative efficiency of DENR's limited budget resources through better prioritization and partnership arrangements, facilitating scaling-up and better linking of plans and budgets.

Revised Project Development Objectives (as approved by original approving authority)

Global Environment Objectives (from Project Appraisal Document)
Global Environment objective Ref. PAD B.2, Technical Annex 3
The global environment objective of the program would be to enhance ecosystem services for global and local benefits. Specific global objectives would be addressed through GEF financing in strategic areas to enhance ecosystem services for global and local benefits. The global environment objective would be achieved by applying an integrated ecosystem management (IEM) approach in priority watershed areas and selected sites of global significance.

Revised Global Environment Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Implementation of DENR's reform agenda, which includes timely actions on the dated covenants, achievement of the key milestones and continued progress in implementing the Rationalization Plan			
	Rationalization Plan submitted to DBM Reform agenda agreed for NPS-ENRMP in line with Rationalization Plan Dated covenants provided in the loan for key actions.	Key milestones have been met Dated loan covenants complied with and under implementation.		Key milestones met Reform Agenda pursued consistent with draft Rationalization Plan Compliance with dated covenants within DENRs control
Date achieved	11/27/2007	12/31/2012		12/31/2013
Comments (incl. % achievement)	Largely Achieved: Rationalization Plan prepared since appraisal but only approved by DBM October 16, 2013. However, key milestones were met (covenanted under the project) i.e., establishment of the Procurement Unit for Foreign-Assisted Projects, creation of the Internal Audit Service within the Department, updating and implementation of a 3-year Forward Planning and Budgeting strategy and the alignment of annual work plan and budget submissions with this strategy, and restructuring of EMB			

	along functional lines. Dated covenants have also been complied with.			
Indicator 2 :	30% improvement in overall client satisfaction with DENR service delivery by type of client e.g. LGU/communities.			
quantitative	Baseline Survey	30% improvement in client satisfaction		Completion Survey not yet done. Planned for 2014
Date achieved	12/15/2008	12/31/2012		12/31/2013
Comments (incl. % achievement)	Not Achieved: The baseline survey was not finalized until year 3 of the project. The follow-on survey was not done within the project period although DENR has committed to DBM to undertake the study in 2014. By the time of the baseline survey satisfaction levels were in the 60% to 70% range.			
Indicator 3 :	80% of the Project's investment targets in rehabilitation, ecosystem development and assessments being met.			
quantitative	0%	80%		85%+
Date achieved	11/27/2007	12/31/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Of the 26 Result Indicators for the project (Schedule 2 of Legal Agreement), 22 have been substantially achieved and 4 partially achieved. These key outputs are discussed under the Intermediate Outcomes (below). .			
Indicator 4 :	15% reduction in total suspended particulate matter levels in Metro Manila over the 2007 baseline			
quantitative	142ug/Ncm	121.0 ug/Ncm		119 ug/Ncm
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: The 16% decrease is primarily attributed to the inclusion of strategies such as implementation of color coding scheme to reduce traffic for public utility buses and private cars, measures to ensure compliance with emission testing and other important initiatives partly. The project contributed to establishing the target, supporting the strategies and providing the discipline to both reach the target and report regularly on progress.			

(b) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	35% of ecologically sensitive forests (outside protected areas) under effective protection as identified in each Watershed Management Plan			
Value (quantitative or Qualitative)	0%	35%		35%

Date achieved	12/15/2008	12/31/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Of the 358,222 ha of non-protected areas in the four GEF assisted sites, 125,377 ha. (35%) are under effective protection in terms of having: i) Management frameworks with corresponding budgets adopted by Watershed Management Councils (WMCs) and LGUs; ii) Subprojects under implementation, and iii) LGU ordinances/ resolution and law enforcement.			
Indicator 2 :	106,000 hectares of protected areas, protection forest and wetlands in GEF supported sites under effective management by PY5 as measured by the PA management effectiveness tool.			
Value (quantitative or Qualitative)	0	106,000 hectares		131,886 hectares
Date achieved	11/27/2007	12/31/2012		12/31/2013
Comments (incl. % achievement)	Achieved: 131,886 ha out of a total area of 158,713 ha are under effective management in the four GEF assisted sites in terms of having; i) Management frameworks with corresponding budgets adopted by WMCs and LGUs; ii) Subprojects under implementation,. iii) LGU ordinances/resolutions; and law enforcement under implementation, and iv) baseline METT information (2010) repeated in 2013			
Indicator 3 :	25% decline in the area under kaingin (as measured by no. of plots) as a result of project intervention.			
Value (quantitative or Qualitative)	0%	15%		Not directly measurable
Date achieved	11/27/2007	12/30/2012		12/31/13
Comments (incl. % achievement)	Partially Achieved: This indicator proved to be un-measurable. However to the extent that: "Other woodlands/ brush-lands/grasslands" can be considered as the kaingin areas (slash and burn), the total of such areas based on the IEM framework for the four GEF assisted sites was 69,984 ha. The achievement of a 25% reduction in such activities is expected to have resulted from implementation of the IEM plans and management activities thus establishing more sustainable management practices.			

(c) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Framework for the rationalization of NRM&E policies and legislation developed and under implementation.			
Value	Various studies available	Action plan being		Policies and

(quantitative or Qualitative)	highlighting inconsistencies in legislation, policy and implementation.	implemented to rationalize the ENR policies and legislation.		legislation rationalized
Date achieved	11/27/2007	12/31/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Framework developed and being updated in line with new priorities. Inconsistencies and overlaps in existing policy & legislation have and continue to be addressed.			
Indicator 2 :	Forward planning and budgeting strategy started to be implemented which inter alia provides a vision and benchmarks for key reforms in DENRs operations.			
Value (quantitative or Qualitative)	DBM instruction has been issued requiring OPIFs to be prepared by all departments.	Close Linkage between Plans and Budgets		3 Year Forward Plan issued and followed
Date achieved	12/27/2007	12/30/2012		06/28/2013
Comments (incl. % achievement)	Achieved. The 2010-2012 Medium Term Expenditure Program was completed. Major expenditure items for the 3 MFOs were consistent with project outcomes.			
Indicator 3 :	Procedures and responsibilities for issuance of tenure instruments standardized and streamlined.			
Value (quantitative or Qualitative)	Lack of clarity in procedures for CBRMA/CBFMA and NIPAS has virtually resulted in a cessation of this instrument	Increases in issuance of CBRMA/CBFMAs and NIPAS-IRR.		Tenure instruments standardized and
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Two key activities have been done; i) Cadastral maps have been prepared for 814 (50%) of municipalities in the country; and ii) Forest boundary delineation has been completed for 75 provinces and two cities, encompassing 79,245 Square Km.			
Indicator 4 :	30% of degraded forest in GEF supported sites rehabilitated with native species representing the bio-geographic region as identified in the WMP.			
Value (quantitative or Qualitative)	64,000 ha	30%		14%
Date achieved	06/30/2010	12/30/2012		12/31/2013
Comments (incl. % achievement)	Partly Achieved: Core indicator: area restored. Rehab. Of 9525 ha (planned target may have been over estimated given available resources).			
Indicator 5 :	100% of GEF supported protected areas (PA) mainstreamed PA management effectiveness tool.			
Value (quantitative or Qualitative)	Tools not in use at any sites.	100%		100%
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. %	Achieved: Core indicator equivalent (Forest area brought under management plans) Tool in use at all sites.			

achievement)				
Indicator 6 :	60% of targeted communities in GEF supported sites implementing micro-catchment plans by the end of the Project.			
Value (quantitative or Qualitative)	None	60%		100%
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: All targeted municipalities have micro catchment plans.			
Indicator 7 :	75 % of funded activities (by $ value) in GEF supported sites implemented by the LGUs and/or other stakeholders			
Value (quantitative or Qualitative)	Zero	75%		100%
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Core indicator equivalent (people in targeted forest and adjacent communities with increased monetary and non-monetary benefits from forests).			
Indicator 8 :	10% per annum increase in companies complying with environmental standards compared to baseline			
Value (quantitative or Qualitative)	Year 1 level	Year 1 levels plus 10% (air 55%, water 37%)		84 % air; 63% water
Date achieved	12/30/2008	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Core indicator equivalent (Particulate matter reduction under the project (microgram/m3).			
Indicator 9 :	Designation and operationalization of at least 3 water quality management areas.			
Value (quantitative or Qualitative)	Zero	3		3
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: 3 WQMAs established i) Meycauayan-Marilao-Obando- R3, Jaro-Tigum-Aganan R-6 & Saranggani Bay-R12. Each has a Governing Board and 10- year WQMA action plan.			
Indicator 10 :	128 LGUs are implementing three aspects of ecological solid waste management.			
Value (quantitative or Qualitative)	Number of LGUs: 48 (2006)	128		128
Date achieved		12/28/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Industrial or municipal solid waste reduced or recycled under the project - Out of 128 LGUs, 97% implementing segregation at source; 83% practice segregated collection, and 82% operate Material Recycling Facilities.			
Indicator 11 :	Key databases on line for public access			
Value (quantitative or Qualitative)	No database on line	Database on line for public access		Some database on line. Development ongoing.

Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Connection of DENR offices and bureaus through Voice Over Internet Protocol (VOIP) is largely completed. The system will facilitate monitoring and reporting as well as updating of databases, land records etc.			
Indicator 12 :	PA rules and regulations updated and streamlined and revised policy issued.			
Value (quantitative or Qualitative)	Lack of clarity in procedures for CBRMA/CBFMA and NIPAS has virtually resulted in a a cessation of this instrument.	Increases in issuance of CBRMA/CBFMAs and NIPAS-IRR		Revised IRRs issued
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Revised IRR's for the National Protected Area System (NIPAS) were issued in 2008 (DAO 2008-26). These include the procedure for the issuance of Protected Area Community Based Management Agreement (PACBRMA)			
Indicator 13 :	Mapping of Priority geo-hazard areas completed.			
Value (quantitative or Qualitative)	None	Maps prepared at 1:50,000		1,634 geo-hazard maps at a scale of 1:50,000 completed
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Completion of smaller scale maps (1:10,000) also expected in 2014.			
Indicator 14 :	Rehabilitation plans for 5 abandoned mines			
Value (quantitative or Qualitative)	0.00	5.00		5.00
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Assessments have been finalized for all 5 sites (encompassing soil and water analysis, geotechnical/geo-hazard assessment, information, education and communication, flora & fauna, air quality and acid mine drainage).			
Indicator 15 :	Interim Rehabilitation of Bacacay mine			
Value (quantitative or Qualitative)	None	Interim Rehabilitation		Interim Rehabilitation
Date achieved	11/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Interim rehabilitation has been achieved through construction of diversion channel/pipeline, maintenance of limestone dam & ore/waste stockpile dam, construction of lab building as well as research on phyto-remediation & maintenance of 70 hectare reforestation			
Indicator 16 :	30% of households in GEF sites adopt livelihood practices.			
Value (quantitative or Qualitative)	0.00	30.00		9.00
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	6,810 households benefited out of estimated 77,152 with 96% of funds used. Target overestimated for the available project resources.			

Indicator 17 :	Watershed management councils established and MOAs in place between DENR and LGUs and between LGUs and NGOs.			
Value (quantitative or Qualitative)	None	Watershed management councils established		Watershed management councils established
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Watershed Management Council exist for all GEF sites along with MOAs with DENR-LGUs and LGUs with Peoples Organizations			
Indicator 18 :	Best Management Practices replicated in at least 2 non GEF sites.			
Value (quantitative or Qualitative)	None	Replication in 2 GEF sites		Replication in 3 GEF sites
Date achieved	12/27/2007	12/27/2012		12/31/2013
Comments (incl. % achievement)	Achieved: The IEM approach is being replicated as part of the National Convergence Initiative (DENR-DA-DAR) and is being undertaken in the watersheds of Quinal R-5, Pola & Bongabong R-4B. Other foreign assisted project are also adopting the approach.			
Indicator 19 :	ENR fees/royalties operational in at least 2 watershed areas			
Value (quantitative or Qualitative)	None	PES operational in at least 2 sites.		Not yet operational
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	TA on PES has been provided, studies done, & a Compendium of case studies prepared, while user fees/environmental service fees are being collected in a no. of protected areas, difficulties 've been experienced in implementing. PES suggesting more policy guidance.			
Indicator 20 :	Monitor 179 emission test stations			
Value (quantitative or Qualitative)	179.0	179.0		273.0
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: 273 stations now being monitored with 100% compliance			
Indicator 21 :	Monitor 4700 permits to operate			
Value (quantitative or Qualitative)	1337	4700		4700
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Both the number of companies issued permits and their compliance with requirements increased.			
Indicator 22 :	Monitor 1600 companies along water bodies draining into Manila Bay			
Value (quantitative or Qualitative)	1337	1600		1744

Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved. Both the number of companies and their compliance increased.			
Indicator 23 :	Monitor 101 bathing beaches for their bacterial levels/safety			
Value (quantitative or Qualitative)	23	101		124
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved:			
Indicator 24 :	Monitor 4216 environmental critical project issued with Environmental Compliance Certificate			
Value (quantitative or Qualitative)	4216	4216		4380
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: Both the number of ECPs monitored and their compliance with ECCs have improved.			
Indicator 25 :	At least 30% of degraded forestlands in non-convergence watershed (outside GEF sites) rehabilitated with native species			
Value (quantitative or Qualitative)	0%	0%		>30%
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved. The National Greening Program (NGP) was launched in 2011 with a target of planting 1.5m ha by 2016. As of 2013, some 311,581 has. planted. Of 100,000 ha planned for project support (outside GEF sites), 71,807 ha (71.8%) already planted			
Indicator 26 :	Protected Areas Management Tool (METT) adopted in 60% of protected areas			
Value (quantitative or Qualitative)	0	60%		61%
Date achieved	12/27/2007	12/30/2012		12/31/2013
Comments (incl. % achievement)	Achieved: METT is now being implemented in 64 of the 105 Protected Areas in the country (61%).			

G. Ratings of Project Performance in ISRs

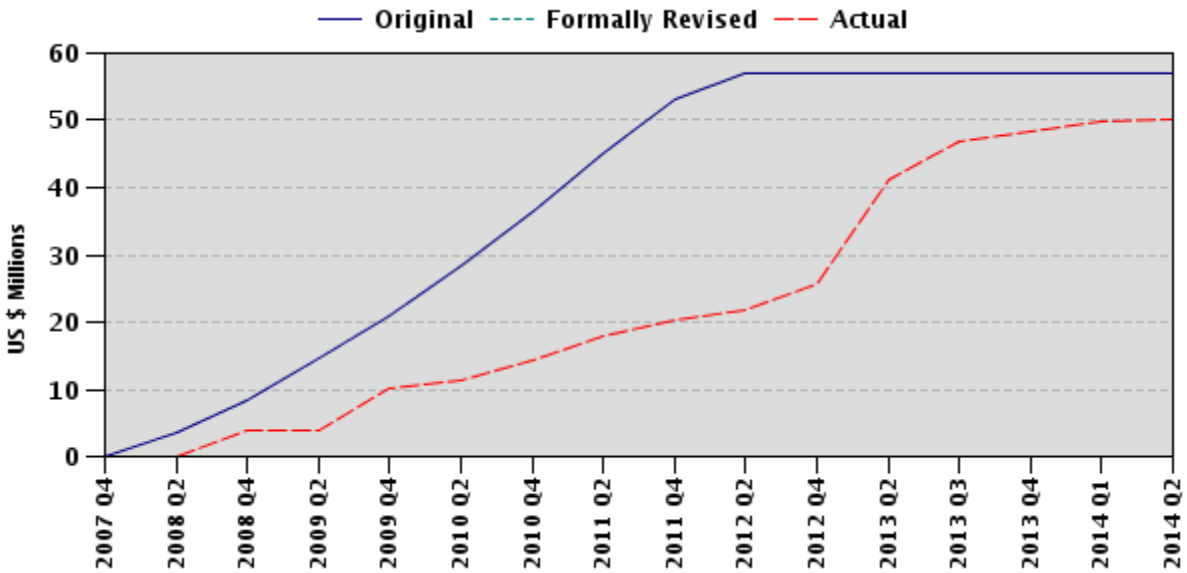
No.	Date ISR Archived	DO	GEO	IP	Actual Disbursements (USD millions)	
					Project 1	Project 2
1	01/16/2008	S	S	S	0.00	0.00
2	04/02/2008	S	S	S	2.50	0.30
3	12/19/2008	S	S	MS	4.00	0.34
4	07/29/2009	S	S	MS	10.15	0.36
5	01/12/2010	MS	MS	MU	11.41	0.58
6	10/12/2010	MS	MS	MU	15.27	1.62
7	02/14/2011	MS		MU	17.84	0.00
8	08/09/2011	MS	MS	MU	20.41	2.51
9	02/07/2012	MS	MS	MS	23.62	3.46
10	08/07/2012	MS	MS	MS	33.19	4.39
11	02/12/2013	S	S	S	43.33	5.61
12	09/14/2013	MS	MS	S	48.28	6.35
13	12/26/2013	MS	MS	MS	50.00	6.68

H. Restructuring (if any)

Restructuring Date(s)	Board Approved		ISR Ratings at Restructuring			Amount Disbursed at Restructuring in USD millions		Reason for Restructuring & Key Changes Made
	PDO Change	GEO Change	DO	GEO	IP	Project1	Project 2	
12/20/2012			MS		MS	41.25		Extension of Closing Date
12/20/2012				MS	MS		5.33	Extension of Closing Date

I. Disbursement Profile

P096174



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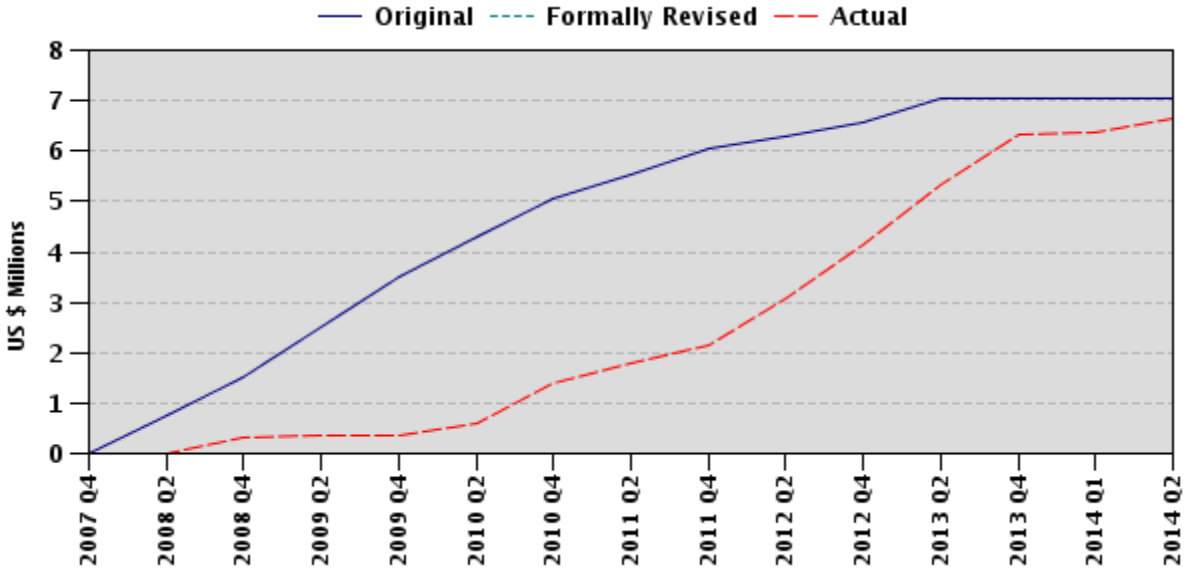

1. Project Context, Development and Global Environment Objectives Design

1.1 Context at Appraisal

The project was approved in June 2007 at a time when weak economic performance had constrained the country's ability to reduce poverty and meet its development objectives. GDP growth and investment per capita were among the lowest in the region and the government was facing a significant fiscal deficit. Reversing this through sustainable economic growth and greater social inclusion was therefore at the heart of the Medium Term Philippine Development Plan (MTPDP 2004-2010) and central to the World Bank's Country Assistance Strategy 2006-2008 (CAS). The strategic goals of the MTPDP and CAS were to enhance agricultural productivity and agribusiness, asset [land] reform, responsible management of natural resources and the environment, and public sector/expenditure rationalization to improve public service delivery. The CAS noted that with the emphasis on sustainable economic growth there were concerns that lack of attention being given to environment and natural resource management (ENR) would seriously offset short-term economic gains with significant longer-term costs.

While the Government of the Philippines (GoP) had undertaken a number of reforms to enhance the policy and institutional framework for environment and natural resource management and had comprehensive laws and regulations in place[1], for the most part inadequate resources, weak governance and limited institutional capacity were undermining effective implementation and compliance. Public confidence in the Department of Environment and Natural Resources (DENR) was further clouded by periodic allegations of corruption and this had contributed to a culture of regulatory avoidance, rather than compliance. As a consequence DENR had not been receiving the budgetary support it needed to be commensurate with its responsibilities. At the time of project appraisal in 2007, DENR's budget was around PhP7 B. As a result DENR had relied heavily on foreign assisted projects and grants to fund its operations; a "project-by-project approach" that had led to short-term interventions, changing priorities and lack of sustainability. Importantly, the budget situation changed significantly over the life of the project with DENR's budget growing to PhP 23B; a more than three-fold increase by 2013. The proportion of the budget available for operations increased from 44 to 77% over the same period.

In the decade prior to 2007 the Bank and GEF had supported two ENR type projects[2], the Bank loan-financed project was rated satisfactory at completion while the GEF

[1] Key underpinning legislation included: the National Integrated Protected Area System (NIPAS) Act, the Comprehensive Agrarian Reform Law, the Mining Act, the Indigenous People's Rights Act (IPRA) Act, Fisheries Code, the Wildlife Resources Conservation Act, the Clean Air Act, the Ecological Solid Waste Management Act, the Toxic and Hazardous Waste Management Act and the Clean Water Act. The Local Government Code (LGC) also advocated comprehensive decentralization and devolution of some of DENR's functions to Local Government Units (LGU).

[2] World Bank& GEF assisted projects completed prior to NPS-ENRMP approval were i) Environment and Natural Resources Sector Adjustment Loan; and ii) GEF Conservation of Priority Protected Areas Project. Other ongoing Bank assisted "ENR" type projects are i)Laguna de Bay Institutional Strengthening and

supported project which focused on protected areas was rated unsatisfactory. The Bank had also been a catalyst in engaging DENR, the National Economic Development Authority (NEDA), donor partners, NGOs, LGUs and communities in reviewing the country's natural resource management issues, culminating in the publication of two reports around 2006 [3]. Those studies highlighted the need to; (i) strengthen decentralization of natural resource management and devolution to Local Government Units (LGUs) and (ii) overhaul the budget process within DENR. Public Expenditure Management Reforms being implemented around the same time by the Department of Budget Management (DBM) also committed DENR to performance based budgeting around three Major Final Outputs (MFOs).[4] It was in the context of strengthening DENR's efficiency and service delivery while also funding the fiscal deficit of Government, that the Bank was requested to provide a budget-support loan of $50 M for DENR.

1.2 Original Project Development Objectives (PDO) and Key Indicators (as approved)

The program's overall development objective was to assist the Department of Environment and Natural Resources to improve efficiency and effectiveness in its service delivery. More specifically, the project aimed to strengthen the allocative efficiency of DENR's limited budget resources through better prioritization and partnership arrangements, facilitating scaling-up and better linking of plans and budgets. Key Indicators were as follows:

i) Implementation of DENR's reform agenda, which include timely actions on the dated covenants, achievement of the key milestones and continued progress in implementing the Rationalization Plan.
ii) 30% improvement in overall client satisfaction with DENR service delivery by type of client e.g. LGU/communities.
iii) 15% reduction of total suspended particulate matter levels in Metro Manila over the 2007 baseline levels.
iv) 80% of the Project's investment targets in rehabilitation, ecosystem development and assessments being met.

1.3 Original Global Environment Objectives (GEO) and Key Indicators (as approved)

The Global Environment Objective of the program was to enhance ecosystem services for global and local benefits. The global environment objective was to be achieved by

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Community Participation (LISCOP-Additional financing); and ii)Land Administration and Management II Project (LAMP II).

[3] "Governance of Natural Resources in the Philippines" and a "Natural Resources Management: Way Forward Action Plan for the Philippines".

[4] The MFOs serve as the main guide in DENR's target setting and planning, and are the basis for its budget requests and Performance Indicators.

applying an integrated ecosystem management (IEM) approach in priority watershed areas and selected sites of global significance. Key Indicators for the GEO were:

i) 106,000 hectares of protected areas, protection forest and wetlands in GEF supported sites under effective management by the end of the project.

ii) 35% of ecologically sensitive forests (outside protected areas) under effective protection.

iii) 25% decline in the area under *kaingin* (as measured by no. of plots) as a result of project interventions

1.4 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification: There were no revisions of the PDO or key indicators.

1.5 Revised GEO (as approved by original approving authority) and Key Indicators, and reasons/justification: There were no revisions of the GEO or Key Indicators.

1.6 Main Beneficiaries,

The main beneficiary was the DENR. The project was designed to ensure the timely availability of funds for operation and capital expenses to finance DENR's priority programs. LGUs and communities were also targeted as beneficiaries in the four watersheds selected for implementing Integrated Ecosystem Management and in other areas where it was expected that best practices developed in the targeted project sites would be replicated.

1.7 Original Components (as approved)

The project is designed as a National Program Support (NPS) operation and utilizes the SIM instrument. The NPS is a flexible vehicle which provides for a long term, programmatic, sector wide and integrated approach. The SIM meets these requirements, unlike a SIL which does not allow the flexibility in financing and could not be used strategically in meeting DENR's reform agenda. The NPS approach moves away from project-based interventions which pre-identify discreet activities, establish parallel structures, focus on short-term interventions and have problems of transition to regular programs on completion. The NPS provides for financing a portion of DENR's budget and allows the flexibility for the project to support all of DENR's programs through the Major Final Outputs which represented a move towards results based budgeting, and adoption of an Objective Performance Indicator Framework. Thus the three project components and related project interventions are designed around the three MFOs, namely: a) Policy, Planning, Monitoring and Evaluation; b) Integrated Ecosystem Management; and c) Strengthening Environment and Natural resources. Details are as follows:

A. Component/Major Final Output (MFO1): Policy, Planning, Monitoring and Evaluation (total cost US$30.14 M – of which GEF US$1.90 M): There were five sub-components:

i) Subcomponent 1.1: Rationalization of ENR Plans and Policies:

- *Strengthening the efficiency of DENR's organization and operations through*; (i) development of a framework for rationalizing and prioritizing ENR policies and legislation; (ii) streamlining the delegation of approving authorities within the organization; and (iii) restructuring EMB to be functionally–based, rather than being organized by sub-sector.
- *Strengthening the service delivery functions in the provision of data, information and M&E through;* (i) a baseline and end-of-project survey of client satisfaction with DENR's service delivery and transparency in providing access to data and information, (ii) strengthening of the Policy and Planning Office to more effectively undertake M&E, (iii) strengthening of key databases and establishment of an MIS system; and
- *Strengthening DENR's overall project management processes through;* improving the allocative efficiency in the budget by the better linking of plans and budgets.

ii) Subcomponent 1.2: Surveys and Mapping. This supported the demarcation of forest lands, watersheds, protected areas, foreshores, geo-hazards (high risk areas for landslides and flood-run-off) and groundwater.

iii) Subcomponent 1.3: Watershed Development Planning. Support was provided for the characterization of land-use patterns, delineation and ground truthing of forest and protected areas, focused initially on watersheds supported under Component 2

iv) Subcomponent 1.4: Remediation of Risks included (i) site investigation and development of rehabilitation and remediation plans for selected abandoned mines; (ii) interim remediation of risks posed by the abandoned Bagacay mine pending preparation of longer-term rehabilitation and remediation plans and, (iii) development of environmental and social policies and guidelines for current and future mining.

v) Subcomponent 1.5: Public Awareness and Environmental Education included support, in particular from the GEF, for review and assessment of DENR's IEC strategic framework, based on experience from other donor supported IEC plans and programs, including identification of best practices.

B. Component/MFO 2 Integrated Ecosystem Management (total cost US$14.09 M – of which GEF US$4.43 M): There were two sub-components:

i) Subcomponent 2.1 Integrated Ecosystems Management: This promoted (i) participatory watershed management[5] and strengthening of LGUs to undertake ENR

[5] Watersheds to be supported were: i) Angat (55,709 ha), Ipo (6,600 ha), Dona Remedios Trinidad-Gen. Tinio (20,760 ha), Kanan (39, 160, 83 ha), Bicol River Basin: Libmanan-Pulantuna (70,924ha), &

management, and (ii) Habitat Rehabilitation and Restoration though (a) restoration and rehabilitation of convergence[6] and non-convergence watersheds, (b) capacity building for LGU and communities, and (c) IEC campaigns.

ii) Subcomponent 2.2 Agro-Forestry and Livelihood Support: Support was provided for demand driven livelihood activities supporting sustainable land management and/or biodiversity conservation in micro-catchments. Proposals were to be financed on a competitive basis and endorsed by Watershed Management Councils and/ or LGUs. Carbon finance activities were to be explored as a means of providing recurrent financing in exchange for the establishment and maintenance of forests in eligible areas.

C. Component/MFO 3 Strengthening Environment and Natural Resources Management (total cost US$4.77 M – of which GEF US$0.67 M): There were two sub-components:

i) Subcomponent 3.1 Monitoring Systems for ENR Laws and Regulations**:** Support was for; (a) strengthening regulatory functions related to the issuance of tenure instruments and encroachment into forest areas; (b) strengthening regulatory implementation for air, water quality, solid waste management and environmental impact assessment (EIA), and (c) capacity-building for volunteer enforcement and local natural resource monitoring .

ii) Subcomponent 3.2 Community-based Participatory IWM Monitoring System: This supported development of participatory land, water and resource use monitoring (though GEF funding), based on the existing DENR Biodiversity Monitoring System previously supported with funding from the World Bank.

1.8 Revised Components. There were no changes to the components.

1.9 Other significant changes: Two additional programs were included for support, at no additional cost, beginning in year four of the project's implementation. The first of these was the "National Greening Program", a national tree planting program with the target of 1.5m ha by 2016 of which 100,000 ha were planned for support under NPS-ENRMP. Plantings were to be in blocks of at least 50 hectares and done through eligible People's Organizations. The second program was the "Operational Plan for the Manila Bay Coastal Strategy", a long-term, inter-agency program for the clean-up of Manila Bay and its waterways for which DENR was designated as the lead agency by the Supreme Court. The project funded procurement of "trash barges" and supported development of the Manila Bay Coordinating Office (MBCO) in DENR. Both of these programs developed as core programs of the DENR during the course of the project. They further enhanced achievement of the PDO for the project by supporting Integrated Ecosystems

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Ligawasan Marsh (46,798 ha). Areas in Abulog (CAR), Matutinao (Region 7), Pola (Region 4-B) were anticipated pending further preparation, but did not eventuate. Angat, Ipo & Dona Remedios Trinidad-Gen. Tinio were dropped in the first year for lack of interagency support. Bago River Watershed (Region 6) was included instead.

[6] Convergence refers to watersheds selected for support i.e., where there is a convergence of effort between DENR, LGUs communities and other agencies.

Management, and strengthening environment and natural resources management, which were the goals of Components 2 and 3 of the project respectively. Thus, the provision of funding under the project was fully consistent with their inclusion in the project and Schedule 2 of the Legal Agreement. As such the modifications did not require restructuring of the project. Inclusion of these two programs under the project was particularly motivated by the need to accelerate the utilization of loan funds which had fallen far short of appraisal projections by mid-term.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

The PDO was clearly stated and reflected the need to strengthen the DENR in improving its service provision and management of the nation's natural resources. The GEO was also consistent with the thrust of the DENR to introduce a more integrated approach to the management of key ecosystems in order to sustain environmental benefits. Although the project comprised only three components reflecting each of the DENR's Major Final Outputs, being a National Program Support operation it covered the broad range of activities under DENR's mandate. Partly as a result of this the results framework included a large number (33) of indicators though it provided a sound basis for implementing, and assessing progress towards achieving the expected outcomes. The project was focused on only one institution, the DENR, including its regional offices, and also established partnerships with LGUs. Project management was based in DENR's Foreign Assisted Projects Office (FASPO). It was therefore not complex in its organizational arrangements. The main technical innovation introduced by the project was Integrated Ecosystem Management. DENR was already committed to the approach but had not yet developed the strategy or piloted any activities.

i) Preparatory studies and lessons: Project design was informed by a number of lessons from past Bank and GEF interventions, environmental impact assessments and discussions with stakeholders, including the need for overhauling DENR's planning and budgeting processes and strengthening participation of communities and local governments in ENRM. These were presented in the papers on "Governance of Natural Resources in the Philippines", the "Natural Resources Management Way Forward Action Plan for the Philippines" and further elaborated upon through a government-wide "Public Expenditure, Procurement and Financial Management Review". Additionally, an Institutional Analysis, Financial Management Assessment and a Governance Assessment were undertaken as part of project preparation. Collectively, these reviews provided a solid base of information on the "devastating pace of natural resource and environmental degradation" in the country and the issues needing to be addressed, but also the risks in working with DENR, given the "limited success of GoP to effectively institute ENR management in the past".

ii) Risk Assessment: At appraisal the project was correctly identified as having wide ranging risks based on the preparatory studies and lessons. A number of risks were rated as High. The following briefly summarizes the risk areas identified for the project:

- High risks identified were; i) inadequate procurement capacity within DENR, redundancy of procurement functions between foreign-assisted and regularly funded projects and ii) fiduciary concerns that project funds could be misused due to weak internal controls and absence of an internal audit capacity. These risk areas were in fact a challenge during the first two years of implementation. But the risks were mitigated by the measures included in the project for significant institutional strengthening in procurement and financial management.

- Substantial risks identified were; i) the trade-off between political priorities designed to achieve rapid economic growth at the expense of environment and natural resource management; ii) the difficulties in devolving ENR functions to LGUs; iii) budget constraints and frequent changes in senior staff; and iv) the possible slow pace of ENR policy, legal and regulatory reforms. Mitigation measures proposed included close alignment between DENR's reform agenda and the Rationalization Plan which included measures aimed at improving DENR's effectiveness, and selecting watersheds for inclusion in the project where there was strong LGU buy-in, and close monitoring.

- Moderate risks identified were i) that the pace of government-wide reform could be reduced; ii) trade-offs, such as expanding the area under forest cover while transitioning farmers to more sustainable agricultural practices; iii) lack of transparency in DENR's procurement; and iv) inadequate internal controls. In reality these risks did not impact appreciably on the project. As noted above, mitigation measures included DENR's procurement and financial management practices and capacity. The project also supported cadastral mapping which has provided the basis for legislative action to define forest lands.

A World Bank Quality at Entry Review was undertaken by QAG (Quality Assurance Group) during the first year of implementation and gave an "unsatisfactory rating". This was subsequently revised to be "moderately unsatisfactory". The QAG panel noted that the analysis and needs of DENR were well reflected in the appraisal documents and that a "clear case is made for the urgency of addressing environmental and NRM challenges in the Philippines". But the over-riding concern of the QAG review was that the operation was premature without Government agreement on reforms for restructuring the institutional setup for environmental regulation and the decentralization agenda. QAG also noted that "though described as a budget support operation, the operation has no policy or budget actions to test commitment and move the agenda forward". The QAG review also felt the GEF components were likely to face serious implementation problems which would be difficult to overcome with the limited resources available. It was also felt the project had too many elements which were poorly linked and unlikely to be achieved in 5 years.

With the benefit of hindsight, while the QAG review did raise important concerns, the project preparation and design would seem to have been adequate and responsive to the needs and capacity of DENR. The design responded to the lessons identified in the past

assessments and lessons on the need for overhauling DENR's budgeting processes and strengthening participation of communities and local governments in ENRM. To the extent that virtually all of the activities/programs under the project were actively pursued and most Key Performance Indicators largely achieved, attests to a satisfactory quality of entry in terms of design and implementation feasibility. That said, the length of time and level of effort needed to bring about reforms in the DENR, although recognized as an issue at the outset, was still underestimated. Nevertheless, the project design correctly took account of ensuring small but incremental measures and reforms were achieved, consistent with the draft Rationalization Plan for DENR[7], but without specifically linking the project's implementation with approval of that Plan.

QAG's concerns about Government of Philippines (GoP) and DENR commitment and ownership of the project proved to be partly correct, at least in the initial stages of implementation, but as discussed in the section below on factors affecting implementation, these improved as the project progressed.

In terms of project complexity, though there were only three components, QAG noted that "the project had too many elements." But as a National Program support operation, flexibility existed for DENR to spread funds across a wide range of activities. The design therefore correctly tried to ensure specificity in what was to be supported, albeit somewhat an extensive list of activities. This approach in fact provided an effective platform for Bank engagement with DENR management on a range of programmatic and institutional issues. This is unlikely to have happened through a more narrowly focused (SIL) project.

No Safeguards issues were identified at appraisal and none arose during the project. There were no other cofinaciers or partners involved in the project.

2.2 Implementation

The project was implemented over six years, including a one year extension. The loan was fully disbursed and only a small undisbursed balance remains for the GEF grant (US$323,000) at the end of the project. A range of implementation difficulties were encountered, mainly procedural such as procurement and meeting the financial accounting requirements of the Bank, but difficulties were eventually overcome and the

[7] Rationalization Plan: In the years leading up to the project, most Government Departments had been required to prepare Rationalization Plans by DBM. Such plans, *inter alia* were required to describe how the concerned Department planned on doing business in the future, the institutional reforms desired and the staff adjustments that would be needed to achieve such reforms. The process of approving these draft Rationalization Plans was very lengthy, due in part to the significant budget implications and issues surrounding planned staff changes, redundancies, retirement policies etc.

process contributed to strengthening DENR's administrative procedures. Much of the success in resolving implementation issues can be attributed to the management and staff of the Foreign Assisted Projects Office (FASPO) and the Financial Management Service of DENR. Those units with whom the Bank task team worked closely were the prime movers in seeking solutions, following-up, and in monitoring and reporting of project activities. While this was critical and much appreciated for the project, it highlights the fact that the NPS-ENRMP initially was seen as a "FASPO project," rather than an instrument to strengthen the institution as a whole as intended. This situation changed during the second half of the project as DENR's Management Committee[8] focus on project implementation issues.

The slow rate of disbursement for the loan became an underlying issue rather than a symptom of slow project implementation. This was due to initial DENR staff perceptions about the extra burden in meeting accounting and financial reporting requirements of the Bank. However, as discussed below, while disbursement became an issue in itself, it did not impact much on project progress as DENR continued to implement the various components using its regular budget. Limited capacity for procurement also contributed to delays but was eventually overcome through intensive training. On the other hand, the slow pace of GEF grant utilization resulted from the length of time (two years in some instances) it took to establish Watershed Management Councils and to develop implementable watershed management plans due to the detailed participatory approach used. Although the loan was only US$50M and the GEF grant US$7 M, by the third year of the project (mid-term), only US$14.2 (28% of the loan) and US$1.5 M (21% of the GEF grant) had been disbursed. Liquidation of disbursed loan and GEF grant funds was very low at around 14%. By mid-term, Bank review teams began to regularly advise DENR management that a substantial under-utilization of the loan was likely. Management Action/Decision matrices became the norm in Aide Memoirs and letters to DENR management detailed actions requiring follow-up. In mid-2010, the Bank wrote to the Secretaries of DBM and DENR, respectively, to determine whether Government wished to continue with the loan or to cancel the unused portion. In response, the Secretary of DENR clarified the intention to fully utilize the loan. Two new core programs of the DENR were added to facilitate loan utilization; (i) the National Greening Program and (ii) the Operational Plan for the Manila Bay Coastal Strategy. DENRs Management Committee was also directed by the Secretary of DENR to resolve implementation and loan disbursement issues. The result was a dramatic increase in disbursements with the loan being fully disbursed by loan closing and with only a small balance of US$323,000 remaining undisbursed in the GEF grant.

Another factor which affected implementation, and more specifically loan utilization, was the changing fiscal and political circumstances since the time of project design/appraisal. When the project was appraised (2006), it was designed as a "budget-support" loan in a sense that the loan was to finance a share of the DENR's total budget without

[8] The project was designed to follow normal DENR management and administrative structures and procedures. As such the Project Steering Committee created through Special Order 1030 was in effect the membership of DENRs Management Committee.

incrementality and can be used flexibly to support the whole program within the main output areas. DENR's budget in 2007 was PhP 7 Bn. At that level the US$50 M loan would have amounted to about 6% of DENR's budget over the life of the project. But with a subsequent easing of the fiscal situation, together with improvements in DENR's capacity[9], the budget of DENR expanded rapidly to PhP 23 Bn by 2013. In reality the $50 M SIM loan amounted to just 2% of DENR's budget over the six year implementation period. While the fiscal easing was one factor impacting on loan utilization, the SIM instrument was also seen to impose additional processing requirements while not contributing "incremental funds". Staff shortages in Regional Field Offices reportedly compounded the issue, specifically in financial management, which limited the available capacity to process the required documents. Implementing units were reluctant to include activities for financing through the loan and the Planning Service was likewise concerned that "tagging" expenditures against the loan might result in DENR's expanding budget being under-spent. It was not until after mid-term as familiarity with accounting requirements developed and as pressure built to fully utilize the loan (see addition of new programs described above), that the pace of disbursements picked up.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

M&E Design. Key design elements comprised detailed results monitoring framework/ process, client satisfaction baseline and end-project surveys, as well as mid-term and project completion reviews. These collectively provided effective M&E for the project. The Key Performance Indicators (KPIs) for the project were both specific and numerous (33). They remained unchanged throughout the project and most were substantially achieved, though some proved impossible to measure, such as the decline in kaingin (slash and burn), as it was difficult to identify such land use. Others were overly ambitious such as the area of degraded forests in GEF sites rehabilitated.

The PDO outcome indicators provided a measure of DENR's progress in "improve(ing) efficiency and effectiveness in its service delivery". There were strong links between the intermediate outcome indicators and the PDO which provided a better basis for measuring the institutional and service delivery strengthening of DENR, i.e., in terms of; i) streamlining ENR policies and practices, ii) establishing integrated ecosystem management systems, and iii) monitoring and enforcement of environmental regulations. The GEF-KPIs further reinforced the monitoring of DENR's ecosystem services, although the indicator on the decline in kaingin areas[10] proved un-measurable.

M&E Implementation and Utilization: The Policy and Planning Service (PPSO) was responsible for M&E of program activities under the project in collaboration with the

[9] DBM is reported to have been more amenable to increasing the budget envelope of agencies implementing an NPS project given the built-in mechanisms for good public expenditure management. "Pump-priming" activities were also undertaken from 2007 to 2008 to help stimulate the economy.

[10] GEF KPIs were i) 106,000 hectares of protected areas, forest and wetlands in GEF supported sites under effective management, ii) 35% of ecologically sensitive forests (outside protected areas) under effective protection, and iii) 25% decline in the area under kaingin .

PCU/FASPO and regional DENR offices and bureaus. The collection and submission of data was designed to follow the existing institutional arrangements. FASPO was responsible for the collection and analysis of data related to GEF activities. Additionally, the project provided for the establishment of an MIS (Sub-component 1.1) designed to provide more systematic database updating, public access to information, reporting and M&E beyond the life of the project. The MIS although not expected to be operational until mid-2014 is however being strongly supported by DENR management and should greatly improve information flow, transparency and access to DENR's databases. The considerable experience of FASPO in managing foreign assisted projects served the NPS-ENRMP well. The six-monthly monitoring reports prepared by FASPO corresponded with the six-monthly review missions of the Bank. Both the quantitative and qualitative aspects of the M&E reports improved throughout the project. By mid-term these reports were providing comprehensive feed-back of the status of implementation and greatly facilitated the review of the status and issues requiring attention. Also, once DENR's Management Committee took a proactive role in overseeing the project they required weekly M&E reports which helped in closely monitoring project progress.

A survey of client satisfaction was undertaken, although the base-line was not completed until the third year of the project. The initial survey provided a more positive feedback than had been anticipated, with 60-70% client satisfaction in terms of transparency, accountability and provision of services (Annex 2). A number of reservations were however expressed by both the Bank and DENR-FASPO as to the methodology used by consultants, as the sample size was believed to be too small and only those areas where DENR had active programs were sampled. The follow-up survey planned at project completion will not be completed until mid-2014, beyond the time frame for completing this ICR. The delay was due to late scheduling on the part of DENR but they have a commitment with DBM to undertake this survey using their own resources. The extent to which client satisfaction with DENR services has changed is therefore not possible to assess at this stage. DENR also contracted consultants to undertake a mid-term review of the project. However apart from summarizing the main achievements to that point, that mid-term review did little more than confirm the appropriateness of the project design and reiterate the findings reported through Bank Aide Memoirs and the Bank's mid-term review as to the need for and ways to accelerate the pace of loan and GEF grant utilization. The two dated covenants relating to progress monitoring were substantively met, i.e., (i) the mid-term review of DENR's performance was undertaken and discussed with DENR, DBM, NEDA and the Bank, and (ii) a completion report was undertaken and the findings of that report discussed with DENR, DBM, NEDA and the Bank.

2.4 Safeguard and Fiduciary Compliance

The project was appropriately assigned a "category B", as potential impacts were expected to be moderate. Five safeguard polices were triggered by the project i) environmental assessment (OP/BP/GP 4.01), ii) natural habitats (OP/BP 4.04), iii) indigenous peoples (OD 4.20, revised as OP 4.10), iv) forests (OP/BP 4.36), and v) safety of dams 9OP/BP 4.37). Safeguard compliance was rated satisfactory throughout the project. Environmental assessments were an integral part of the preparation of Watershed Management Plans for each of the sites covered by the project, as well as in

the preparation of abandoned mine rehabilitation plans. No issues triggered by natural habitats, forests or safety of dams safeguard policies were encountered.

Each of the four watersheds selected for IEM activities under the project have indigenous cultural communities. The Kanan watershed overlaps with ancestral domains of the Dumagats covered by recognized certificates of ancestral domain claims. The Ligawasan Marsh is predominantly populated by the Maguindanaon, while the Libmanan-Pulantuna watershed is visited by nomadic tribes for food gathering, although not part of any ancestral domain. The Bago Watershed has a small enclave of IP communities. Throughout the project there was satisfactory compliance with the Indigenous Policy Framework established for the project. Among the actions taken to ensure the concerns of indigenous communities were taken into account were i) a social anthropologist was contracted to assist the Indigenous Peoples in the watersheds of Bago and Libmanan-Pulantuna to participate meaningfully in the watershed planning process and in the preparation of the IP Social Assessment and Plans, ii) the formulation and piloting of procedures for engaging IPs in watershed management was coordinated with the National Commission on Indigenous Peoples (NCIP), and iii) a seminar on Working with Indigenous Peoples on Natural Resource Management was conducted for DENR and LGU officers, drawing upon NCIP and NGO resource persons. As a result of these actions, a number of livelihood projects were identified for IP communities including swine raising in Bago and goat raising in Libmanan-Pulantuna watersheds. IPs were also engaged in fruit/forest tree planting and maintenance. The process also provided IPs with venues for discussions of grievance and management of potential conflicts amongst themselves or with other sectors in the watershed. This was particularly the case for Kanan watershed where issues within the IP communities relate to the recognition of ancestral domain and tribal leadership. The IP plan expected to be integrated in the integrated ecosystem management plans of the four pilot watersheds and as a basis for implementation of alternative livelihood activities was still under preparation at project completion, due principally to underestimation of the complexities and time and resources needed to coordinate with NCIP and undertake social preparation, especially when conflicts exist within IP communities such as experienced in the Kanan watershed.

Procurement was rated moderately satisfactory for the first four years of the project and satisfactory for the final two. Implementation was constrained during the first two years due to limited procurement capacity. The experience mirrored that of other projects in the Philippines where considerable unfamiliarity was found to exist among Regional Field Units and LGUs with the Government Procurement Reform Act (RE 9184) which *inter alia* harmonizes Bank and Government procurement guidelines. With considerable back-stopping from the Bank's Manila office, a "Procurement Improvement Plan" was implemented, greatly improving efficiency. Subsequently, an assessment by the Government Policy Procurement Board in July 2010 found procurement in DENR was among the highest out of eighteen government agencies that were receiving loans and grants from the World Bank. Delays encountered in implementing the MIS system resulted mainly from questions raised in political circles about the costs of such a system. This put things on hold for about 18 months but procurement subsequently resumed. Delays in undertaking remediation works at Bagacay mine resulted from restrictions on

access by DENR contractors imposed by the Department of Finance (DOF) which has control over the site. The paradox was that while DENR was attempting to undertake remediation works, DOF was holding open the option of re-opening the mine. This conflict was apparently unknown to the project preparation team and was only brought to the attention of the Bank review Team around mid-term. After some delay however, DENR was able to have work resumed. A Community Participation Procurement Operations Manual (CPPOM) was prepared and proved to be useful in providing guidance and flexibility in the implementation of the National Greening Program by the field offices. Geo-tagging of investments, including tree plantings under the National Greening Program was also introduced. This innovation has considerable potential for strengthening resource allocation and procurement transparency in DENR.

Financial management was rated as moderately unsatisfactory from the end of the first year of implementation (2008) until becoming moderately satisfactory from late 2011 until the end of the project in 2013. The slow pace of loan disbursement led to high levels of input from the DENR's Financial Management Service, at times supported by Commission on Audit (COA), DBM and World Bank staff to clarify and train DENR regional staff. In reality, what were seen as "cumbersome" Bank procedures, mainly by DENR Regional staff, were with few exceptions the same as government procedures. The main issue was the requirement under the loan for timely reporting of expenditures for loan disbursement, whereas this has been more leniently required for regular budget releases. To a considerable extent the physical achievements and significant improvements in financial reporting under the project were the result of strong oversight, training and back-stopping provided by DENR's Financial Management Service, in close collaboration with financial management staff of the Bank's Manila Office.

The DENR submitted annual audited financial statements for the project as required under the loan and grant agreement. Submission was usually delayed but timeliness improved over time. Project financial statements were rendered a qualified opinion usually due to errors in recording financial transactions. The latest audit report for the calendar year 2012 was rendered a qualified opinion due to the following: a) overstatement of Property, Plant and Equipment (PPE) accounts due to the inclusion of transferred/donated PPE's and insufficient provision of allowance for depreciation; b) failure to obtain the Non-Cash Availment Authority (NCAA) from the Department of Budget and Management necessary to record receipt of funds; and c) improper recording of transactions under Construction in Progress accounts, Payables and Receivables from other agencies. DENR monitors the resolution of these audit findings and informs the Bank of the status of these audit recommendations during project support missions.

2.5 Post-completion Operation/Next Phase

The NPS-ENRMP supported ongoing core programs of DENR such that sustainability should not be an issue. The challenge for the DENR however is to continue actively pursuing reforms that were supported under NPS-ENRMP and for which there is a growing consensus as to the benefits. Key among these are: i) Wider application of the integrated ecosystem management (IEM) approach through partnerships with LGUs and

communities; ii) Devolution of DENR responsibilities to LGUs consistent with IEM; iii) Further strengthening of EMB to improve both the effectiveness and credibility of the institution; iv) Implementation of the MIS system to enhance connectivity between DENR units, regular updating of databases, feedback mechanisms for timely management actions and on-line public access for environmental services, fee payment and information; and v) Convergence with other institutions in addressing the Country's pressing environmental issues which *inter alia* include the clean-up of Manila bay and its waterways, and the National Greening Program.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation: *Relevance Rating: High*

The PDO and GEO remain relevant and fully consistent with GoP priorities to promote inclusive growth and reduce poverty. Activities in both these areas continue to support a cross section of the latest Philippine Development Plan (2011-2016) five priorities[11] and 16-point [12] agenda under the President's social contract. The project also remains consistent with the latest CAS (2010-12) by specifically supporting strategic objectives: (3) better public service delivery; and (4): reduced vulnerabilities, disaster risk management and climate change; and the overall cross cutting objective of good governance. The outcome and intermediate result indicators (KPIs) though numerous were appropriate in providing a measure of DENR's progress in "improving efficiency and effectiveness in its service delivery, including ecosystem management".

The design of the project around core programs would seem to have been both relevant and the most appropriate way of engaging with DENR management on ways to strengthen the allocative efficiency of budget resources. DENR remained focused on achieving the core programs supported by the loan and GEF grant and through better prioritization and partnership arrangements, facilitating scaling-up and better linking of plans and budgets.

[11] Five Priorities include: i) Anti-corruption/transparent Accountable and Participatory governance; ii)Poverty reduction and empowerment of poor and vulnerable; iii) Rapid, inclusive and sustained economic growth; iv)Just and lasting peace and the law; v) Integrity of the Environment and climate change mitigation and adaption.

[12] 16- point agenda include: i)stable macro-economy achieved; ii) globally competitive and innovative industry and service sectors achieved; iii) food security improved; iv) income in agriculture and fishery sector increased; v) sector resilience to climate change increased; vi) growth in agriculture and fishery sector increased; vii) performance of tourism agriculture and industries improved; viii) Access to social goods and services improved; ix) Environmental quality improved; x)resilience to climate change and natural disasters increased; xi) financial systems made resilient and inclusive; xii)effective transparent governance practiced; xiii)Enhanced access to justice; xiv) human development status improved; xv)stable national security achieved; xvi) natural resources conserved protected and rehabilitated; xvii) environmental quality for a cleaner and healthier environment improved; xviii)resilience of natural systems enhanced with improved adaptive capacities of human communities.

The choice of the SIM lending instrument was considered the most appropriate at the time of appraisal given the parameters provided by the 2003-2005 CAS, the institutional strengthening focus of the project and the Public Expenditure management reforms being implemented at the time by DBM. In retrospect, a Sector Investment Loan (SIL) might have been less problematic in terms of loan disbursement and supporting some of the activities under the project. However, being a non-regular budget fund source, a SIL would probably not have provided the same platform for engagement with DENR management on the broad range of issues needed to strengthen the institution and build credibility. The possibility of beginning with a smaller loan utilizing the APL instrument was reportedly not acceptable to Government. On balance therefore the choice of the SIM was appropriate (see Section 6: Lessons Learned).

Design and implementation mechanisms that built on existing organizational arrangements are also deemed to have been appropriate and still relevant. The slow loan disbursement prompted discussions at virtually every review mission as to whether the project was appropriately designed, or whether additional modifications were needed. In each instance, however, the consistent view of DENR and Oversight agencies was that: i) the reform measures addressed under the project remained central to the Government's overall public expenditure reform agenda and the; and ii) the project design and PDO remained consistent with the reform measures and goals described in DENRs Draft Rationalization Plan to which they remained committed..

3.2 Achievement of Project Development Objectives and Global Environment Objectives: Rating of PDO and GEO Outcomes: Moderately Satisfactory

The PDO was to assist the Department of Environment and Natural Resources to improve efficiency and effectiveness in its service delivery. More specifically, the project aimed to strengthen the allocative efficiency of DENR's limited budget resources. As defined, the PDO was somewhat "open-ended" although in terms of the Key Performance Indicators provided in the Results Framework, the objectives were substantially achieved. The objective of improving allocative efficiency was helped by the three fold increase in DENR's budget but this occurred at the same time as three year Forward Budgets and Plans were introduced under the project. Capacity was improved primarily in fiduciary aspects, but also in planning, watershed management and M&E contributing to greater efficiency in DENR's performance. A number of core functions were strengthened for example in implementing tenure instruments and mapping; monitoring and compliance with key environmental policies and regulations increased while the Integrated Ecosystem Management (IEM) approach was successfully introduced to shift away from subsectoral interventions (forestry, protected areas, water, etc.) to more integrated natural resources management which also involved partnerships with LGUS and communities.

Significant institutional achievements were i) an effective Internal Audit Unit was established, ii) the Implementing Rules and Regulations for the NIPAS act were issued,

iii) regional units of the Environment Management Bureau were realigned along functional lines, iv) Integrated Eco-System Management was successfully implemented through partnerships with 24 LGUs [13]and subsequently adopted by DENR for expansion, v) EMB implemented a more transparent and regular reporting system of environmental parameters, and vi) an MIS system linked to databases is being implemented with electronic linkages between field units and National units expected to be operational in 2014. These institutional improvements are fully integrated into DENR systems and are being widely applied. Policies and guidelines have been established to mitigate future environmental risks of abandoned mines and plans have been prepared to expand beyond the pilot sites supported by the project. Some 17 livelihood activities were undertaken in conjunction with LGUs. As discussed below the list of achievements vis-à-vis the PDO targets and KPIs under the project was quite extensive and more importantly led to improvements in various aspects of DENR's operations. Of the four Indicators for the PDO, three have been achieved and the fourth has not been measured as the follow-up Client Satisfaction Survey has not been completed. Each of these is discussed below. Due to the number of indicators and their inter-linkages, a more extensive discussion has been included in Annex 2.

i) Implementation of DENR's reform agenda, which includes timely actions on the dated covenants, achievement of the key milestones and continued progress in implementing the Rationalization Plan: DENR's Rationalization Plan was prepared by the time of project appraisal but was only approved by the DBM in October 2013. The project design saw this as a risk and implementation of the project was not directly linked to approval of that Plan. However, key institutional reforms which were covenanted under the project and included in the Plan were achieved to the extent they were within DENR's control and contributed to strengthening capacity and efficiency, namely:

a) Procurement capacity was significantly strengthened. A Procurement Improvement Plan developed with World Bank support was implemented during the third year of the project and significantly improved the pace and quality of procurement. Preparation of a Community Participation Procurement Operations Manual (CPPOM), together with geo-tagging of investments including tree planting under the National Greening Program, provided significant innovations for DENR in facilitating both the monitoring of investments during implementation and their subsequent maintenance.

b) An Internal Audit Unit was established[14] and has been functioning effectively. Internal audits were conducted for Regions 3, 4A, 4B and 11, along with audits of

[13] The IEM approach is being replicated as part of the National Convergence Initiative (DENR-DA-DAR) and is being undertaken in the watersheds of Quinali R-5, Pola & Bongabong R-4B. Other foreign assisted project are also adopting the approach e.g., USAID supported Biodiversity and Watersheds Improved for Stronger Economy and Resiliency Project (B+WISER) & GiZ's EnRD Project in Region 8.

[14] Internal Audit Unit was established by Administrative Order. 2006-15 dated 02 November 2006. An S.O. 2008-01 issued 03 January 2008 designated the IAS OIC Director. The plan to engage a firm to help strengthen the internal audit services was taken over by DBM as part of a planned Bank assisted IDF grant to assist DBM. Delays in approving that grant have meant the contract for this has not yet been approved.

regions covered by the Forestland Boundary Delineation and National Greening Program.

c) DENR's 3-yr Forward Plan and National Expenditure Program was approved and provided the basis on which annual budgets were approved. The NPS-ENRMP remained fully consistent with that 3 year Forward Plan and DENRs successful implementation of the NPS-ENRMP is considered as one of the factors contributing to the three-fold increase in DENR's budget over the life of the project. That said, there was little in the Plan to indicate any significant change in DENRs prioritization or shift in emphasis between the brown and green agendas, though with the significant additional budget all activities could be funded. While a goal of the project was the strengthening of allocative efficiency through better prioritization and partnership arrangements, the only specific indicator or strategic direction provided at appraisal was achievement of the project's implementation target of 80% of planned investments in rehabilitation, ecosystems development and assessments. Clearly partnership arrangements with LGUs were strengthened as part of strengthening eco-system management and MFO based budgeting has strengthened the linking of plans and budgets. Although the extent to which allocative efficiency has improved is not clear the three-fold increase in DENR's budget also lifted a lot of the constraints on DENR's budget that had existed at appraisal thereby allowing all activities to be funded. ,.

d) The restructuring and staffing of EMB (into function-based divisions) was undertaken at the regional level in line with the draft Rationalization Plan. With approval of the Rationalization Plan in October 2013, the formal restructuring and staff hiring has commenced.

ii) 30% improvement in overall client satisfaction with DENR service delivery by type of client e.g. LGU/communities:- As mentioned previously, the base line survey was delayed and by the time it was conducted, project activities had been going on and client satisfaction was at a 60% - 70% range (on satisfaction indicators). This was significantly higher than the expected baseline on which a target improvement of 30% was expected, although reservations exist as to the methodology (see Annex 2). The client satisfaction survey planned to be undertaken at project completion has been delayed to 2014, beyond the timeframe for completing this ICR, due to delays in scheduling by the DENR. Although there were numerous stakeholder workshops and consultations during the project these were focused on specific components. While the feedback suggested strong support for project activities such as reforestation and livelihoods, it would be difficult to extrapolate these into an assessment of the extent to which client satisfaction has changed in DENR as a whole.

iii) 15% of reduction of total suspended particulate matter levels in Metro Manila over the 2007 baseline levels;- Suspended particulate matter levels in Metro Manila were reduced by 25%; from 142 μg/NCM (baseline) to 106 μg/NCM. The decrease is attributed to strategies such as implementation of color coding to reduce traffic and measures to improve compliance with emission testing which were partly influenced by

the project. Suspended particulate matter, levels are still 32% above the standard set for the Philippines of 90ug/NCM. The project contribution also helped in establishing the targets and providing the discipline to both reach the target and report regularly on progress. Other indicators discussed below and in Annex 2 also show significant increases in monitoring and compliance.

iv) 80% of the Project's investment targets in rehabilitation, ecosystem development and assessments being met: This target was fully achieved. It was essentially a summary target of other indicators that are discussed below. Project investments were effective in forest rehabilitation and reforestation, ecosystem management, surveys and mapping, remediation of risks and in environmental monitoring as discussed below for each of the KPIs.

The GEO was that "Ecosystems are enhanced for global and additional local benefits". This was largely achieved with targets being met for more effective management of protected areas and enhanced protection of sensitive ecosystems outside of protected areas. This was supported by intermediate outcomes such as extensive use of the protected areas Management Effectiveness Tracking Tool, expansion of the IEM approach and strengthening Protected Area rules and regulations. The Key Performance Indicators were generally achieved as follows:

i) 106,000 hectares of protected areas, protection forest and wetlands in GEF supported sites under effective management by the end of the Project. 131,886 ha out of a total area of 158,713 ha are under effective management in the four GEF assisted sites in terms of having: a) management frameworks with corresponding budgets adopted by WMCs and LGUs; b) subprojects under implementation; c) LGU ordinances/ resolutions; and law enforcement under implementation; and d) baseline METT information (2010).

ii) 35% of ecologically sensitive forests (outside protected areas) under effective protection. Of the 358,222 ha of non-protected areas in the four GEF assisted sites, 125,377 ha. (35%) are under effective protection in terms of having a) management frameworks with corresponding budgets adopted by WMCs and LGUs; b) subprojects under implementation, c) LGU ordinances/resolutions and law enforcement under implementation.

iii) 25% decline in the area under kaingin (as measured by no. of plots) as a result of project interventions. This indicator proved to be un-measurable as there is no accurate data available on the extent of active Kaingin (slash and burn). Satellite imagery cannot adequately differentiate between active and previous areas affected by Kaingin. However to the extent that "Other woodlands/ brushlands/ grasslands" can be considered as the kaingin areas, the total of such areas rehabilitated, under the IEM framework for the four GEF assisted sites was 69,984 ha. The achievement of a 25% reduction in such activities can therefore be expected to have resulted from implementation of the IEM plans and management activities.

Key intermediate outcomes defined in the Results Framework for the project that contributed to achievement of the PDO and GEO are summarized below (see also Annex 2). Challenges that now face DENR are also presented if gains made are to be consolidated:

i) Rationalization of ENR policies & legislation: A framework for rationalizing policies was developed and continues to be updated. Inconsistencies or overlaps in existing policy are being addressed. Several joint issuances by DENR with DAR, LRA, DILG and NCIP were made to clarify respective jurisdictions, policies, programs and projects, harmonize the implementation of Indigenous People's Reform Act (IPRA) and ENR laws and policies, and reconcile NIPAS Act of 1992 with the IPRA law.

ii) Key databases on-line for public access: The MIS system connecting DENR field offices and bureaus was delayed but is expected to be functional by mid-2014. The system will facilitate monitoring and reporting as well as updating of databases, land records etc. The enhancement of "Service Delivery" through on-line public accessibility to databases e.g. relating to industrial use, forests and protected areas has yet to be established. Likewise, the service orientation of DENR has yet to evolve to enable on-line permit application, fee schedules and transparent publication of processes, as well as comprehensive and timely environmental reporting.

iii) Improved tenure instruments: Targets for two key activities were achieved, notably; a) Cadastral maps have been prepared for 814 (50%) of municipalities in the country, providing information on alienable and disposable public lands and a critical input to resolving the many competing claims on A&D lands. Completion of cadastral mapping is scheduled for 2015. The maps will be of considerable value to LGUs and are inputs to the Bank assisted LAMP2 project (additional financing), and b) Forest boundary delineation has been completed for 75 provinces and two cities, encompassing 79,245 sq km. DENR has been proactive in drafting of 68 bills to define forest boundaries. The maps were required by the legislature as a prerequisite for the legal definition of forest boundaries.

iv) Protected Area Rules & Regulations; These were made more transparent through the issuance of Revised IRR for NIPAS in 2008 (DAO 2008-26). They include procedures for issuance of Protected Area Community Based Management Agreement (PACBRMA) which, *inter alia* addresses harvesting rights and tenure for people living within protected areas. The revised IRR has also streamlined the procedures for the establishment of PAs, particularly in regard to boundary demarcation and zoning.

v) Mapping of Priority Geo-hazard areas: All of the planned 1,634 geo-hazard maps at a scale of 1:50,000 have been completed and completion of smaller scale maps (1:10,000) should be completed in 2014. The maps are increasingly being used to help prepare LGUs and national agencies in advance of typhoons, as part of risk mitigation measures through information on flood and landslide prone areas.

vi) Interim Rehab. of Bagacay mine & Rehab. Plans for five abandoned mines: Interim rehabilitation of Bagacay was largely achieved. Assessments have also been finalized for five other abandoned mine sites. MGB plans to undertake interim rehabilitation at the rate of one new site /year, commencing 2013 and have made budgetary provisions. (There are reportedly some 22 significant abandoned mine sites in the country).

vii) Forest and Protected Area Management Practices: These have been strengthened and "best practices" adopted, notably; i) METT has been adopted as a management tool and is being implemented in 64 (61%) of the Protected Areas of the country (the target was 60%), and ii) the goal of rehabilitating. >30% degraded forest outside GEF sites was substantially achieved through the National Greening Program (NGP) wherein some 311,581ha of the planned 1.5m ha (by 2016) have so far been planted. Of the 100,000 ha planned for support under NPS-ENRMP, 71,807 ha (71.8%) were planted through involvement of Peoples Organizations. ENR fees/ royalties which were planned to be operational in at least two watershed areas have yet to be implemented, but a number of opportunities have been identified. There was no progress in the planned review of carbon finance activities as a means to provide recurrent financing in exchange for the establishment and maintenance of forests.

viii) Integrated Ecosytem Management has been adopted by DENR as the way forward for planning and implementing watershed development programs though procedures that forge partnerships between DENR, LGUs and communities. Best practices have been identified and the approach piloted under NPS-ENRMP has been expanded to cover other areas e.g., in Quinali R-5, Pola & Bongabong R4B & adopted as part of the National Convergence Initiative between DENR, DA and DAR. Some 1,266 ha were regenerated under the project with 23 or (78%) of LGUs/communities in GEF supported sites implementing ENR/micro-catchment Plans (the target was 60%).

ix) Environmental Monitoring. Procedures have been strengthened to provide more systematic and timely reporting of key parameters for air, water and solid waste. Through the NPS-ENRMP monitoring and reporting discipline has improved. Nevertheless an inherent conflict remains to be addressed in regard to EMBs responsibilities for both monitoring/reporting of environmental parameters as well as the institution charged with enforcement of such, and

x) The "Clean-up" of Manila bay, largely under the direction of the Supreme Court has been initiated with DENR designated as the lead agency. That said, at the time of this ICR, the initiative lacks the level of Government commitment, oversight, and direction that this ambitious and long-term program will require. Further World Bank support planned for this initiative is contingent on resolution of the institutional issues.

3.3 Efficiency: *Rating Substantial*

At appraisal, a conventional cost-benefit analysis (CBA) that would allow the calculation of economic rate of return (ERR), net present value (NPV), and benefit-cost ratios was

not undertaken given the budget support (framework type) project. To ascertain the extent to which the project was cost efficient, an analysis of project cost per unit of input/output for activities for which data were available was conducted for the purposes of this ICR. The analysis shows that the project implementation was cost efficient.

Analysis of cost per input/output. The results of the analysis show that total and average costs per seedlings procured, for tree planting in the beneficiary regions, amounted to PhP12.3 (US$0.27) and PhP12.10 (US$0.27) respectively. This cost is far lower than the prevailing market prices in the country (see www.OXL.ph). Also, an analysis of costs per output for activities for which data was available, show that the total cost per project output amounted to PhP2, 690.62 (US$60.25). On average, it cost PhP28,941.00 (US$648.00) to produce an average output of 80,904 for all the activities included in the analysis. *(see Annex 6 for detailed discussion).*

Lower costs of forest development compared to comparable projects in the country. As a results of the implementation of social mobilization initiative, NGP standard costs norms per hectare is on average less than half of the costs of comparable afforestation/reforestation projects such as Upland Development Project (UDP) and JICA Forest Land Management Project [(PHP 33,000)-US$728.36], and the Forest Land Project supported by the JBIC and ADB [(PHP 35,000) - US$772.51] in the Philippines

The project got off to a slow start due to operational and administrative inefficiencies, which caused considerable amount of delays. For example financial management performance was rated moderately unsatisfactory due mainly to delays in submission of IFRs and persistent weaknesses in FM capacity, which led to delay in reporting and slow in utilization and disbursement of funds. But FM performance improved significantly and was upgraded to moderately satisfactory during the 10th supervision mission. The improvement was attributed to the increased efforts by DENR FASPO and FMS staff to ensure timely submission IFRs and actions taken to improve overall FM performance. As noted in section 2.4, project implementation progress was also constrained due to weak procurement capacity. Despite these setbacks, significant efficiency gains were recorded during implementation. They include, among other others, savings in project funds, which led to implementation of additional 24 activities; strengthening of DENR capacity to prioritize resulting in improved allocative efficiency of sector resources; and establishment of geo-tagging of trees planted for site validation leading to better reporting and payment of contractors. *(see Annex 6 for a detailed discussion).*

3.4 Justification of Overall Outcome and Global Environment Outcome *Rating: Moderately Satisfactory*

Most PDO and Intermediate Result Indicators for the project were achieved and the project's results contributed to enhancement of DENR's ability to implement its mandate across the spectrum of its responsibilities. In the end, the loan was fully disbursed with only a small balance of the GEF grant remaining undisbursed. The moderately satisfactory rating is a reflection of these significant achievements, although more could have been achieved had the Management Committee of DENR been more proactive from

the outset and not waited until mid-term. Although the loan was relatively small (US$50M), it supported the core programs of DENR as is the intention of the NPS approach, and that fiscal easing enabled DENR to use its regular budget to implement many activities. Some significant results can be directly attributed to the loan and to the GEF grant such as: i) strengthening of Forest and Protected Area Management Practices; ii) establishment of protocols for mitigating risks and for rehabilitation of abandoned mines; iii) adoption of Integrated Ecosystem Management, iv) the strengthening of Environmental Monitoring; and v) a number of process improvements in procurement, financial management, internal auditing and in development of the MIS system. DENR is already scaling-up/replicating some of these, such as Integrated Ecosystem Management and rehabilitation of abandoned mines. Improvement of fiduciary processes has strengthened DENR as a whole, as has development of the MIS. In the absence of the project, it is likely that some results would have been achieved such as: i) issuance of the Revised IRR for NIPAS; ii) Mapping of priority geo-hazard areas; iii) the National Greening Program; and iv) initiation of the Clean-up of Manila Bay, as these were important mandates or national priority activities. But their inclusion in the project seemed to have accelerated their implementation. This was the case for the Clean-up of Manila Bay, Forest Land Boundary Delineation and Cadastral Surveys, which would have continued to lag in the absence of the project, as reported by DENR management itself. With regard to the National Greening Program, the project influenced the incorporation of improved practices such as enhanced community based management which also led to better incorporation of sustainability measures compared with earlier reforestation programs. Notwithstanding these achievements it is recognized that continuation of DENR's reform program remains a challenge for management in moving DENR to an even more service oriented and efficient organization.

3.5 Overarching Themes, Other Outcomes and Impacts: ***Rating*** *Moderately Satisfactory*

(a) Poverty Impacts, Gender Aspects, and Social Development: While institutional strengthening of DENR was the main focus of the project, the piloting of Integrated Eco-system Management (IEM) together with livelihood subprojects were designed to address the nexus between poverty and natural resource management in watersheds facing severe environmental pressures. The participatory approach embodied in the IEM specifically targeted poor communities to ensure their involvement in planning and implementation of watershed management activities and in the sharing of benefits through "harvesting rights" of trees/fruit and through development of alternative sources of income. Similarly the approach supported by the project under the National Greening Program targeted People's Organizations for the production of seedlings, planting, and maintenance as well as in ensuring subsequent benefits from "harvesting rights". This was a significant accomplishment that DENR has now adopted for expansion in other watersheds.

Gender was not specifically integrated as part of project activities, nor were there concerted efforts to disaggregate data by gender. That said women were represented at higher decision-making levels of environmental management other than community activities which are traditionally a women's domain. This is not surprising given that the

Philippines has the favorable ranking of being one of eleven countries in the world that have succeeded in closing the gender gap on education, health and survival, while also performing very strongly on economic participation, opportunities and political empowerment. Women were reportedly well represented in all community activities including seedling production, weeding and tree maintenance and other livelihood program activities.

(b) Institutional Change/Strengthening: The main focus of the project was on institutional strengthening as discussed throughout this ICR. The PDO for the project was somewhat "open-ended" specified in terms of "improving efficiency and effectiveness in DENR's service delivery". The project sought to; i) strengthen governance and credibility within government and the general public and ii) strengthen the manner and efficiency by which core functions are implemented. The accomplishments under the project were significant and undoubtedly contributed to building DENRs credibility, transparency and efficiency. But in reflecting on these accomplishments given the size of the organization and its broad mandate, much remains to be done. Important contributions were in regard to institutional strengthening described previously and through improvements in "decision-support tools" such as cadastral surveys, geo-hazard mapping, abandoned mine mitigation measures, and LGU partnership arrangements.

(c) Other Unintended Outcomes and Impacts (positive or negative): Not applicable

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

As previously noted, the outcome Client Satisfaction survey to be undertaken at project completion will not be available until later in 2014, beyond the time frame for this ICR. The anticipated assessment of client satisfaction with DENR services is therefore not yet possible. Throughout implementation of the project, however, there were numerous stakeholder workshops and consultations in the process of developing watershed management plans and livelihood subprojects in piloting the IEM approach. While it is not feasible to extrapolate the very positive feedback from those (sub-component) workshops to DENR as a national institution, the available data and anecdotal feedback do indicate broad stakeholder support for the IEM approach piloted under the project. The positive feedback from those various consultations have been well recorded in videos and a range of publications providing a wealth of guidance and case studies for future programs (see Annex 6).

4. Assessment of Risk to Development Outcome and Global Environment Outcome

Rating: Moderate

The project has implemented a set of activities which have strengthened the capacity of DENR as an institution to deliver on its mandate, and practices to enhance integrated natural resources management that are already being replicated by DENR. In addition, the organization now has increased and more predictable budget resources putting it in a firmer financial position to maintain the project outcomes. This suggests moderate institutional, financial and technical risks to the PDO and the GEO. Public demands and

pressures for DENR to enhance its credibility, transparency and service delivery as well as protection of the country's ecosystems are becoming more evident in the press and at Administrative and Political levels.

The main issues relate to the pace of reform and program implementation that can be expected. As an institution with a broad mandate encompassing monitoring, protecting, managing, regulating and enforcement of the country's natural resources, the issues and competing interests are diverse and complex, i.e., managing the balance between being development oriented, environmentally risk averse, centrally controlled rather than devolved and responsible for monitoring and reporting, yet also a regulatory enforcement agency. During the term of the NPS-ENRMP there were three changes in leadership of the institution, and the pace and nature of reform will undoubtedly be determined on the leadership of the institution going forward. Importantly, the long awaited Rationalization Plan was approved in October 2013 and is now under implementation. This will both consolidate and expand the achievements under the project designed to improve DENR's service delivery.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry: *Rating: Moderately Unsatisfactory*

Preparation of the project spanned about two years. It built on a significant amount of sector work and special studies[15] together with a feasibility study conducted through a consultant firm hired by the DENR. In particular the studies highlighted the fundamental need to (i) strengthen decentralization of natural resource management and devolution to Local Government Units (LGUs) and (ii) overhaul the budget process within DENR. As such, institutional strengthening was correctly central to the project. But going into the project there was a degree of skepticism as to whether DENR was sufficiently reform oriented to address the many short-comings identified. The QAG "moderately unsatisfactory" rating on the quality of entry reflects this skepticism by suggesting the project was premature. The difficulties encountered during the first three years of the project in getting the various activities implemented and getting acceptance/familiarity with procedures lend weight to that view.

On the other hand, the project design included a significant role for DENR-FASPO and the Financial Management Service. With the benefit of hindsight, it is apparent that

[15] Key documents used to inform the design of the project were :"Governance of Natural Resources in the Philippines", the "Natural Resources Management Way Forward Action Plan for the Philippines", "Public Expenditure, Procurement and Financial Management Review" and draft Rationalization Plan for DENR, together with DENR specific Institutional Analysis, Financial Management Assessment and a Governance Assessment.

without their strong and consistent engagement the project might have failed. Based on the outcomes, however, a rating of Moderately Satisfactory seems fair but given the difficulties during the earlier part of the project a Moderately Unsatisfactory rating is given.

(b) Quality of Supervision: ***Rating Moderately Satisfactory***

Implementation support missions correctly identified and documented the implementation issues in a timely manner and Aide Memoires shared with Government were transparent, frank and direct in highlighting concerns. Detailed Aide Memoirs were agreed with DENR including "Management Action Matrices" needing specific follow-up and key areas needing action were reflected in Bank management letters to the DENR Secretary after each review mission. M&E was effectively undertaken by FASPO and progress reviewed at each supervision. The significant issues with project implementation were discussed with both Bank and DENR management as well as with Oversight Agencies throughout the project. The Bank team correctly raised the possibility of partial loan cancellation at the appropriate time (around mid-term) and while this was rejected by DENR management, it did lead to the desired DENR management focus on the need to accelerate loan utilization. Throughout the project the Bank Task Team, which comprised several staff in the Manila Office of the Bank, maintained a close and collaborative working relationship with DENR. This close and regular/interim follow-up, including intensive supervision, undoubtedly contributed to the project's success and this is particularly reflected in the significant improvements in procurement and financial management achieved under the project. Field visits were conducted at least every six-months and more often as needed, particularly in the early years of the project when considerable assistance was given by the Bank to introducing the concept and procedures for Integrated Ecosystem management. At mid-term as implementation continued to be delayed and disbursement lagged considerably, "intensive supervision" was provided over a two year period which provided further support to DENR in "turning the project around." On balance a satisfactory quality of supervision rating would seem appropriate but a moderately satisfactory rating is given on the basis that the Bank might have been more proactive during the first three years on restructuring, re-design or cancellation, even in the face of DENR objections.

(c) Justification of Rating for Overall Bank Performance: ***Rating: Moderately Satisfactory***

Perhaps as QAG had suggested more could have been done during project preparation/appraisal to get agreement on specific reforms on devolution and in regard to strengthening regulatory compliance and enforcement. That said, as the experience from the Bank supported Diversified Farm Income and Market Development Project, another National Program Support Loan (SIM) around the same time showed, no amount of agreement on reforms "up-front" was successful, if the commitment to reform under the Administration of the time was not there (see also Section 6: Lessons Learned). With hindsight, the pragmatic approach taken by the Bank in preparing the project under the existing circumstances, together with the subsequent strong supervision input was

appropriate. Management communications with Secretaries of DBM and DENR on project implementation and loan utilization issues were timely and effective. The Borrower has raised the need for follow-on technical assistance to help consolidate the achievements of the project (see Section 7). ADB, USAID, GTZ and JICA have however supported projects that have expanded the ecosystem management approach developed under the NPS-ENRMP. Overall the Bank's performance is assessed as moderately satisfactory.

5.2 Borrower Performance

(a) Government Performance: ***Rating: Moderately Satisfactory***

The project was prepared and appraised at a time of fiscal constraints and the SIM loan was designed to provide budget support, i.e., cash availability at a time when even though the budget was approved, authority to spend for lack of cash availability was the constraint. The SIM loan was therefore designed as an integral part of DENR's budget. Subsequently, however, as the fiscal constraints eased, the advantages of the SIM loan declined. DENR's budget increased three–fold over the life of the project. To the extent DBM subsequently released DENR's budget, irrespective of the SIM, diminished the incentive of DENR to utilize the loan which had been designed as an integral part of the budget. While this had the effect of slowing the pace of loan utilization, the pace of project implementation continued much as had been planned at appraisal. The Bank Task Team raised this concern with DBM and DOF on several occasions and while steps were taken through "tagging" of items in the budget to try to increase the pace of loan utilization, it did not accelerate until around mid-term when the prospect of partial loan cancellation became prominent The prolonged delay by DBM in approving the Rationalization Plan for DENR added to implementation difficulties. That said, the discipline underpinning the accounting procedures required for the loan were welcomed by DBM and COA. Indeed COA supported training in conjunction with DENR's Financial Management Service. NEDA, although a member of the Steering Committee for the project, was not always proactively engaged. Overall the performance of the Government is rated as Moderately Satisfactory.

(b) Implementing Agency or Agencies Performance: ***Rating: Moderately Satisfactory***

As previously noted, the success of the project can be largely attributed to the efforts and strong support for the project goals from FASPO and the Financial Management Service; a highly satisfactory performance. But while designed to support the core programs and institutional strengthening of DENR, the project was initially largely left to FASPO to manage, contributing to perceptions in DENR during the early years that this was a "FASPO project." This it would seem suggested a lack of full "buy-in" to the project at the Management Committee level in the early years of the project as seen by delays in meeting project legal covenants and by "under-programming" activities to be financed under the loan. This issue was frequently raised by the Bank. It suggests that in the design of future interventions, FASPO should take a more facilitative & upstream planning role, with sub-component management responsibilities clearly vested in the

responsible implementing units/bureaus, and with stronger oversight by DENRs Management Committee. That said, the performance by the Mines and Geosciences Bureau, Environment Management Bureau, and by the participating Regional Field Units was satisfactory. The partnering with LGUs in the selected watersheds under the project was also done effectively with considerable effort given to ensuring adequate consultation with both LGUs and the involved communities. While the performance of key implementing units within DENR are assessed as having been satisfactory, or even highly satisfactory in the case of FASPO and the Financial Management Service, the lack of proactive engagement and ownership of the project by DENR's Management Committee in the early years suggests that a Moderately Satisfactory rating for DENR is appropriate.

(c) Justification of Rating for Overall Borrower Performance: *Rating: Moderately Satisfactory*

While the Oversight Agencies, DENR Management and implementing units of the DENR earnestly sought to address bottlenecks in order to effectively implement the project and achieve the PDO and GEO, the sense of something less than 'full buy-in" by the DENR Management Committee to the institutional strengthening process during the early years of the project contributed to delays, though subsequently they gave full support. An overall rating of Moderately Satisfactory seems appropriate.

6. Lessons Learned

i) **SIM vs. SIL.** The findings of this ICR reinforce those of the Diversified Farm Income and Market Development Project (DFIMD) ICR; another National Program Support (NPS) project implemented a few years earlier which also employed a SIM. As an instrument for institutional reform, the NPS-ENRMP experience also shows that a SIM is appropriate only when the client-agency, especially its management, is fully committed and operationally prepared to implement and mainstream reforms during the project period. This level of commitment proved to be somewhat lacking at the outset of the NPS-ENRMP and made implementation more difficult than if a SIL, focussed on discreet interventions, had been used. But as DENR management commitment picked up after mid-term, the NPS-SIM and its design as an integral part of DENR's budget and core program, provided an effective forum for Bank engagement with DENR management on wide ranging issues relating to its core programs. Moreover, while the NPS budget-support design allowed flexibility in how funds were allocated for core programs, the design also included an extensive set of performance indicators that enabled close monitoring of quite specific physical outputs. To DENR's credit, and despite its reluctance to use the SIM loan during the early years of the project, it still adhered closely to achievement of those indicators. In retrospect this proved to be an important design aspect of this NPS that kept the focus on achievement of outputs, rather

than loan disbursements/ budget support aspects[16]. This focus on specific outputs was reinforced by the GEF funded component which in effect was a SIL. The lesson from this NPS-SIM experience would therefore seem to be that once there was full management support for the project, the SIM provided an effective instrument for engagement on institutional strengthening and for supporting operational issues because of the focus on achievement of outcomes linked closely to DENRs –MFOs, and because it also provided a flexibility to respond to changes / new directions as they evolved.

ii) **Assessing Client readiness for institutional reforms.** The findings of this ICR confirm feedback from other projects in the Philippines, notably the ongoing Second Mindanao Rural Development Project (MRDP2), in regard to "when can it be said that a client-agency is ready for institutional reform?" The QAG reviewers felt the project was premature while the Bank Management took the judgment that, on-balance, the project should proceed. DENR's management had indicated its commitment to reforms in its draft Rationalization Plan and these were supported by the Oversight Agencies. The appraisal team nevertheless correctly anticipated only modest reforms. But the key lesson is that institutional reforms come less from management pronouncements and documents, than from when there is a broad consensus within the implementing units of the organization and among partners as to the benefits of the proposed reforms. Strong and sustained leadership is also important. The length of time it took under the project for the benefits of the IEM approach to be accepted is a case in point. Even at project completion when the benefits of the IEM approach and partnering with LGUs and communities has been broadly accepted, resistance to devolution remains strong within some areas of DENR. Likewise the inherent conflict within EMB is not widely accepted or recognized in regard to the agency being responsible for monitoring and reporting on environmental improvements, while also being measured against how effectively the regulations are being enforced. This linked with the lesson above on SIM vs SIL suggests that for those agencies that do not yet show readiness to undertake far reaching reforms, more focused SIL-type projects would appear to be more appropriate.

iii) **Importance of having an External Constituency to drive Institutional Reform:** Institutional readiness for reform, although an internal matter, also requires the presence of a strong external constituency to reinforce the incentive for change. For instance, NPS initiatives in the Department of Education (DepEd) and the Department of Health (DOH) were reportedly less problematic than for either the NPS-ENRMP or the

[16] The disconnect between disbursements and achievement of outputs *vis a vis* the performance indicators, at least up to mid-term for the project was due to DENR's use of its regular budget, in preference to use of the loan. While in part this reluctance was due to a fiscal easing that increased the availability of cash, the fact that, unlike a SIL, there was no specific project code in the budget, meant SIM funds were seen as the same as regular budget. But use of loan funds was then seen as requiring greater accounting effort and more expeditious and detailed documentation. The preference, given staff shortages and unfamiliarity, was therefore not to use the loan funds. There was also a concern in early years of the project that accounting delays could slow DENR's capacity to deliver on its program and fully utilize its regular budget. These concerns were overcome by mid–term due to commendable efforts of DENRs FMB and FASPO. Indeed the accounting knowledge and experience gained by implementing units was a significant outcome of the project.

NPS-DFIMDP, since there were clear stakeholder demands and pressures for the delivery of program outputs; i.e., by parents, students, LGUs, the media, and the general public. Typically such clients raise strong protests if health and education services are not satisfactorily delivered. In the case of both the Environment and Natural Resource and Agriculture and Fishery sectors, there is not the same constituency to effectively pressure efficiency in the delivery of services and investments, and certainly not in regard to stricter enforcement of regulations. Rather vested interests pursue specific outcomes e.g., improvement in air quality & rubbish collection etc; targets that tend to encourage reporting of "good outcomes" rather than transparency in timely publishing of data which may show less desirable results eg., levels of compliance/enforcement, water quality etc., that would attract attention to the more intractable/complex issues.

iv) **The Bank should facilitate rather than try to lead change:** Yet another lesson also touched on in the ICR for the NPS-DFIMD s that Bank is better positioned to facilitate and catalyse, rather than lead reforms. The Bank should enter the reform picture when reforms are already well-entrenched among the clients, especially among the government managers. Thus, until there are clear operational manifestations of these reforms in the concerned agencies, the Bank should focus its involvement on helping establish a solid foundation for reform. This could be undertaken through focused SILs and TAs to pilot innovations and build capacities along with AAA activities for building awareness and constituency for the reforms.

v) When to use Project Implementation Units as opposed to Strengthening of Existing Institutional arrangements?- This is a common dilemma in project design and one which depends very much on both existing circumstances and the longer term implications. The experience from NPS-ENRMP would seem to pose a lesson for DENR as to how future projects should be implemented. FASPO was initially established to help DENR attract and effectively implement foreign assisted projects under circumstances where limited capacity/experience existed in other implementing units/bureaus. This has served DENR well and indeed the implementation of NPS-ENRMP benefited greatly from FASPO's expertise in project management. It supports the value of establishing Project Management Units where institutional capacity is weak or where inexperience, particularly with external development assistance, requires establishment of a core staff with appropriate expertise. But as noted in this ICR, as institutional capacity develops, such units may stifle development of capacity and initiative by other implementing units. In the case of DENR, the findings suggest the Management Committee now needs to take more responsibility for project/ program implementation and individual bureaus/implementing units need to be more proactively engaged in implementation in line with their institutional responsibilities. This suggest the role of FASPO may need to revert more to its original facilitative functions in terms of foreign assisted project design collaboration, loan/grant facilitation and reporting.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

The findings of the Borrower's Completion Report largely mirror those of the ICR. There were no significant differences in the reporting of results and outcomes. The Borrower's Completion Report focuses particularly on how the considerable achievements under the project have paved the way for DENR to implement changes introduced under the recently approved Rationalization Plan, notably the shift from sectoral to inter-sectoral functions that better support environmental governance, leveraging and linkages with LGUs and communities. In that context, the Borrower's Completion Report emphasizes both the relevance and importance they attribute to project in assisting DENR to transition its planning, programming and budgeting process to meet the new budget categories (Major Final Outputs) introduced from 2014[17], which have been designed to strengthen inter-sectoral and ecosystem based programming. Noteworthy is the suggested need a for a "transition grant" to support DENR's move to a more ecosystem-based planning and implementation under the Rationalization Plan.

In light of the above, the Borrower makes a compelling case for the World Bank to raise the rating of the project and both the Borrower's and Bank's performance from Moderately Satisfactory to Satisfactory. While accepting the merits of this position, in developing the ICR rating of Moderately Satisfactory, the significant achievements under the project were tempered somewhat by what might have been achieved had there been even stronger management committee support/ buy-in to the project from the outset and that much still depends upon their being active follow-up by DENR to consolidate the achievements of the project. The Borrower's Completion report on the other hand is somewhat more "forward looking" as to how the substantial achievements under the project will enable DENR to meet the challenges and reforms being introduced under the Rationalization Plan and their firm commitment to build upon the project's achievements. From that perspective a Satisfactory Rating for the project would arguably be more appropriate. That said, whether the rating is Satisfactory as rated by Borrower or Moderately Satisfactory as rated by the Bank's ICR team, the outcomes from the project have undoubtedly been significant, well received and implemented, and have laid a strong foundation for sustaining institutional reforms, along with operational and allocative efficiencies in DENR.

(b) Cofinanciers: There were no cofinanciers other than GEF

[17] Major Final Outputs (MFOs): Previous: MFO1-Plans, Policies & Standards promoted, monitored & Evaluated; MFO2-Ecosystems & Natural resource management protected, conserved, enhanced & degraded ones rehabilitated, MFO3-Appropriate regulations & Standards enforced & monitored; New MFO1-Ecosystem policy services; MFO2-Ecosystem management services; MFO3-Ecosystem regulation services

(c) Other partners and stakeholders:
NA

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

National Program Support for Environment and Natural Resources Management Project - P096174			
Components	**Appraisal Estimate (USD millions)**	**Actual/Latest Estimate (USD millions)**	**Percentage of Appraisal**
1. Policy, Planning, Monitoring & Evaluation	36.52	39.95	109
2. Integrated Ecosystem Management	13.63	7.67	56
3. Strengthening Environmental Management	4.58	7.11	155
Total Baseline Cost	54.73	54.73	100
Physical Contingencies	0.00	0.00	
Price Contingencies	2.25	2.25	
Total Project Costs	57.00	57.00	100
PPF	0.00	0.00	
Front-end fee IBRD	0.00	0.00	
Total Financing Required	57.00[18]	57.0	100

[18] As the loan was provided as budget support, it was expected at appraisal that GoP equivalent contribution would be approximately US$30 million. While it is has not been possible to fully determine GoP contribution it has clearly been well in excess of US$30M due to the significant budget increases during the project period. For comparative purposes data is presented in the sam manner as in the PAD.

GEF Program supporting the National Program for Environment and Natural Resources Management Project - P091147			
Components	**Appraisal Estimate (USD millions)**	**Actual/Latest Estimate (USD millions)**	**Percentage of Appraisal**
Policy, Planning, Monitoring & Evaluation	1.90	1.60	84
Integrated Ecosystem Management	4.43	4.41	99
Strengthening Environmental Management	0.67	0.67	100
Total Baseline Cost	7.00	6.68	95
Physical Contingencies	0.00	0.00	
Price Contingencies	0.00	0.00	
Total Project Costs	7.00	6.68	95
PPF	0.00	0.00	
Front-end fee IBRD	0.00	0.00	
Total Financing Required	7.00	6.68	95

(b) Financing

P096174 - National Program Support for Environment and Natural Resources Management Project				
Source of Funds	**Type of Financing**	**Appraisal Estimate (USD millions)**	**Actual/Latest Estimate (USD millions)**	**Percentage of Appraisal**
Borrower		30.00	50.00	166.00
Global Environment Facility (GEF)	Grant	7.00	6.68	95.00
International Bank for Reconstruction and	Loan	50.00	50.00	100.00

Development				
Total Financing		87.00	106.68	123

P091147 - GEF Program supporting the National Program for Environment and Natural Resources Management Project

Source of Funds	Type of Financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		0.00	0.00	.00
GLOBAL ENVIRONMENT - Associated IBRD Fund	Loan	50.00	50.00	100.00
Global Environment Facility (GEF)	Grant	7.00	6.68	95.00

Annex 2. Outputs by Component

Project & GEO Development Objectives: The project was designed to assist the Department of Environment and Natural Resources improve efficiency and effectiveness in its service delivery. More specifically, the project aimed to strengthen the allocative efficiency of DENR's limited budget resources through better prioritization and partnership arrangements, facilitating scaling-up and better linking of plans and budgets. The design of the project sought to address two sets of issues:

i) Build credibility, both within government and with the general public, as to DENR's accountability for resource use and transparency in implementing ENR policies and regulations, as well as to strengthen governance over its operations, and;
ii) Strengthen the manner and efficiency by which core functions are implemented.
7. Project interventions were designed to support compliance with key policies and regulations through enhanced transparency, and through strengthened partnerships with stakeholders. At the watershed level, the project supported a shift away from sub-sectoral interventions (forestry, protected areas, water etc), towards an integration of ENR functions, in partnership with LGUs and communities. There was a close linkage with the GEF grant supported aspects as noted below.

8. Global Environment Objective: This was to enhance ecosystem services for global and local benefits. The project was designed to;

i) Apply an integrated ecosystem management (IEM) approach in priority watershed areas and selected sites of global significance, and
ii) Establish livelihood models and payment for environmental service approaches incorporating carbon finance as a possible source of funds for sustaining the carbon stock.

PDO & GEO Outcomes vis-à-vis the Outcome Indicators for the Project:

i) Implementation of DENR's reform agenda, which includes timely actions on the dated covenants, achievement of the key milestones and continued progress in implementing the Rationalization Plan: Although a draft of DENR's Rationalization Plan was available at the time of appraisal it was not approved until October 16, 2013, virtually at the end of the project. In the short period since approval of the plan, implementation has already been initiated in regard to placement of personnel and preparation of related guidelines. The project design saw the delay in approval of the Rationalization Plan as a risk, and implementation of the project was not directly linked to approval of the Plan. Key institutional reforms which were covenanted under the project were achieved to the extent they were within DENR's control i.e., establishment of the Procurement Unit for Foreign-Assisted Projects, creation of the Internal Audit Service within the Department, updating and implementation of a 3-year Forward Planning and Budgeting strategy and the alignment of annual work plan and budget submissions with this strategy, and restructuring of EMB along functional lines. These reforms are elaborated below.

a) Procurement capacity was significantly strengthened and this is seen by DENR as a significant outcome. In keeping with interim arrangements for the establishment of a unified DENR Procurement Unit, A.O. 2007-32 dated November 14, 2007, provided for a Procurement Unit under FASPO to fulfil the functions as defined under IRR of RA 9184, including overall oversight of procurement functions for the entire DENR. A Procurement Improvement Plan developed with World Bank support was implemented during the third year of the project and significantly improved the pace and quality of procurement. Likewise, the CDD Manual developed under the project has facilitated procurement and proved particularly helpful in providing guidance for field offices in the procurement for the National Greening Program (NGP). The CCD Manual, now renamed as 'Community Participation Procurement Operations Manual (CPPOM) is in its final approval stage by the Government Procurement Policy Board (GPPD). Geo-tagging of investments, including tree planting under the NGP was also introduced and represents a significant innovation in facilitating both the monitoring of investments during implementation and their subsequent maintenance. Despite these substantial achievements, further strengthening of DENRs procurement capacity is needed, particularly in regard to the limited interest of qualified bidders participating in DENR procurement. The conduct of consultation meetings/dialogues with private sector groups as bidders needs to be continuously undertaken to help ensure successful procurement of goods, works and services.

b) An Internal Audit (IAS) Unit was established. The plan to engage a firm to strengthen internal audit services was taken over by DBM. After some delay as a result of restructuring of the World Bank assisted ICS/IA Project, the consultant has now been hired. The IAS has been functioning effectively and has conducted internal audits in various Regions with reports on the audit results submitted to World Bank. For CY 2013, two regions covered by the Forestland Boundary Delineation Assessment are targeted to be subjected to audit appraisal. At the time of project completion IAS was also undertaking audit on CY 2011 NGP activities.

c) DENR's 3-yr Forward Plan National Expenditure Program was approved. The budget trends by MFO were for MFO 1 (Plans and Policies) to decrease while the budget share of MFO 2 (Ecosystems and Natural Resources Management) would increase. For MFO 3 (Environmental Regulations and Standards), a slight increase in budget share was projected. Overall there was little in the 3- year Forward Plan to indicate any significant change in DENRs business or prioritization of its approaches. Although a goal of the project was the strengthening of allocative efficiency through better prioritization and partnership arrangements, no specific indicators or strategic directions were provided at appraisal. That said, the major expenditure items for MFO 1 in developing Decision Support Systems, surveys, data base and information systems development were in line with the NPS-ENRMP goals of improved client satisfaction with the delivery of services, and access to information. Likewise the major expense items for MFO2 and 3 are also consistent with NPS-ENRMP outcome indicators i.e., for MFO2, the major expense items cover the rehabilitation of watersheds, forestlands and protected areas as well as land disposition (e.g., land

patent issuance, identification of school sites and socialized housing, as well as disposition of land cases). For MFO 3, the implementation of the Clean Air and Water Acts were the top priorities. Clearly partnership arrangements with LGUs were strengthened as part of strengthening eco-system management and MFO based budgeting has strengthened the linking of plans and budgets. But the three-fold increase in DENR's budget also lifted a lot of the constraints on DENR's budget that had existed at appraisal. The extent to which allocative efficiency has improved is therefore not clear, although feedback suggests that regulatory activities are still under resourced.

d) The organization of regional staff of EMB along functional lines was achieved early in the project in keeping with the spirit of a dated covenant under the NPS-ENRMP. With the approval of the Rationalization Plan, the restructuring of EMB from a sectoral to functionally based institution has now been formalized. The Rationalization Plan also provides for a significant increase in EMBs staffing. Nevertheless, the larger issue is the need for institutional strengthening of EMB. This is seen as critical for building DENR's credibility, both within government and with the general public, in terms of accountability for resource use, transparency in implementing ENR policies and regulations, and need to strengthen governance over its operations.

ii) 30% improvement in overall client satisfaction with DENR service delivery by type of client e.g. LGU/communities: The base line survey, although finalized in the third year of the project, showed reasonable levels of satisfaction as shown below. However concerns were raised both by FASPO and the Bank as to the methodology used for the survey19. The sample size was felt to be both limited and biased in that it was focussed on clients who had received DENR services, rather than being representative of the views of the broader population. While DENR is committed to undertaking a follow-up survey using its own resources in 2014, the results will not be available within the time frame for completing this ICR. The findings of the follow-up survey will be important to further assess the perception of DENR's service delivery, accountability and transparency. However the methodological issues that cast some doubt on the validity of the first survey results will need to be corrected. Table 1 presents the main findings of the initial survey which, due to the bias in sampling, were felt to represent more of a best case scenario.

[19] Reflections, Major Findings and Recommendations. E.S. Guiang (DENR-FASPO's Internal Assessment). The report lists a number of short-comings in the survey methodology and a need to better reflect the types and distribution of various ENR clients by region, ENR attributes by region, and what ENR services that each client would require or demand from DENR.

Table 1: Levels of Client Satisfaction Based on the Baseline Survey Conducted in CY 2010.

Indicators	Baseline (June 2010) levels of satisfaction
Transparency	68%
Accountability	64%
Participation	67%
DENR services	74%
MFO 2 Services, all regions	83%
MFO 3 Services, all regions	64%

iii) 15% of reduction of total suspended particulate matter levels in Metro Manila over the 2007 baseline levels;- As of CY 2012, there has been a decrease of 16% from 142ug/Ncm to 119 ug/Ncm compared to 2006 baseline. The decrease is primarily attributed to the inclusion of strategies such as implementation of color coding scheme to reduce traffic for public utility buses and private cars, measures to ensure compliance with emission testing and other important initiatives undertaken by EMB in coordination with other government agencies such as DOTC-LTO, DILG, LGUs/MMDA. The project contribution was primarily in establishing the target and providing the discipline to both reach the target and report regularly on progress. Despite this reduction in suspended particulate matter, levels are still 32% above the standard set for the Philippines of 90ug/Ncm. Much still remains to be done to reduce pollution levels in the Philippines.

iv) 80% of the Project's investment targets in rehabilitation, ecosystem development and assessments being met: This indicator was achieved. Of the 26 Result Indicators for the project (Schedule 2 of Legal Agreement), 22 have been substantially achieved and 4 partially achieved. The Key outputs that contributed directly to the PDO and GEO are summarized below together with some of the challenges that now face DENR if gains made are to be consolidated and expanded.

GEO outcomes vis-à-vis the Outcome Indicators for the Project

i) 106,000 hectares of protected areas, protection forest and wetlands in GEF supported sites under effective management by the end of the Project. 131,886 ha out of a total area of 158,713 ha are under effective management in the four GEF assisted sites in terms of having;

a) Management frameworks with corresponding budgets adopted by WMCs and LGUs;
b) Subprojects under implementation.
c) LGU ordinances/resolutions; and law enforcement under implementation, and
d) A baseline METT information (2010) to be repeated in 2013.

ii) 35% of ecologically sensitive forests (outside protected areas) under effective protection. Of the 358,222 ha of non-protected areas in the four GEF assisted sites, 125,377 ha. (35%) are under effective protection in terms of having:

a) Management frameworks with corresponding budgets adopted by WMCs and LGUs;
b) Subprojects under implementation.
c) LGU ordinances/resolutions; and law enforcement under implementation.

iv) 25% decline in the area under kaingin (as measured by no. of plots) as a result of project interventions. This indicator proved to be un-measurable. Satellite imagery cannot adequately differentiate between active and previous areas affected by Kaingin. However to the extent that "Other woodlands/ brushlands/ grasslands" can be considered as the kaingin areas, the total of such areas rehabilitated, under the IEM framework for the four GEF assisted sites was 69,984 ha. The achievement of a 25% reduction in such activities can therefore be expected to have resulted from implementation of the IEM plans and management activities.

Outputs vis-à-vis Results Indicators for the Project Components

i) Component/MFO1: Policy, Planning, Monitoring and Evaluation (total cost US$30.14 M; of which GEF US$1.90 M): A key thrust was the support for DENR's institutional reform agenda based on the draft Rationalization Plan. While the Rationalization Plan was only approved in October 2013(a delay that has also affected other Government Departments), the key elements of the reform agenda were implemented as summarized in Table 2.

a) Subcomponent 1.1: Rationalization of ENR Plans and Policies: This supported strengthening the efficiency of DENR's organization and operations and its service delivery in the provision of data, information and M&E.
b) Subcomponent 1.2: Surveys and Mapping: This supported the demarcation of forest lands, watersheds, protected areas, foreshores, geo-hazards (high risk areas for landslides and flood-run-off) & groundwater.
c) Subcomponent 1.3: Watershed Development Planning: Support was provided for the characterization of land-use patterns, delineation of forest and protected areas, focused on the watersheds identified for support under Component 2
d) Subcomponent 1.4: Remediation of Risks: Support was provided for rehabilitation and remediation plans for selected abandoned mines and mitigation and remediation measures for the abandoned Bagacay mine site.
e) Subcomponent 1.5: Public Awareness and Environmental Education: Support was provided for identifying best practices in ENR for dissemination and replication.

Table 2: Loan Agreement Targets *vis a vis* Results for Component 1

Loan Agreement Targets Component 1	**Results**
Framework for the rationalization of ENR policies & legislation	Achieved. Framework developed and being updated in line with new priorities. Inconsistencies or overlaps in existing policy legislations are being also addressed. Several joint issuances by DENR with DAR, LRA, DILG and NCIP were made to clarify respective jurisdictions, policies, programs and projects, harmonize the implementation of Indigenous People's Reform Act (IPRA) and ENR laws and policies, and reconcile NIPAS Act of 1992 and IPRA law.
Key databases on-line for public access,	Partially Achieved; Connection of DENR offices and bureaus through Voice Over Internet Protocol (VOIP) is largely completed. The system will facilitate monitoring and reporting as well as updating of databases, land records etc. Procurement for construction of a "Green Data Center" designed to house and integrate all DENR data bases is underway. The enhancement of "Service Delivery" through on-line public accessibility to databases e.g. relating to industrial use, forests and protected areas has yet to be established. Likewise, the service orientation of DENR has yet to evolve to enable on-line permit application, fee schedules and transparent publication of processes, as well as comprehensive and timely environmental reporting. This is felt to be an important area for development. DENR management will need to provide specific guidance on the content and format of management reports, on-line services etc., to ensure the technical aspects of the MIS can deliver on expectations.
Improved tenure instruments	Achieved: Two key activities have been done; i) Cadastral maps have been prepared for 814 (50%) of municipalities in the country. These maps provide the cadastral information for alienable and disposable public lands and are essential for resolving the many competing claims on A&D lands. Completion of cadastral mapping is scheduled for 2015. The maps will be of considerable value to LGUs and are inputs to the Bank assisted LAMP2 project (additional financing). ii) Forest boundary delineation has been completed for 75 provinces and two cities, encompassing 79,245 Square Km. DENR has been proactive in following-up/advocacy for 68 draft bills to define forest boundaries. The maps were required by the legislature as a prerequisite for the legal definition of forest boundaries.
PA rules & regulations. update & policy	Achieved: Revised IRR's for the National Protected Area System (NIPAS) were issued in 2008 (DAO 2008-26). These include the procedure for the issuance of Protected Area Community Based Management Agreement (PACBRMA) which *inter alia* addressed harvesting rights and tenure for those people living within protected areas. The revised IRR has also streamlined the procedures for the establishment and disestablishment of PAs, in particular with respect to the boundary demarcation and zoning, and has further clarified specific provisions that would help improve PA management in general.
Mapping of priority geo-hazard areas completed	Achieved: All of the planned 1,634 geo-hazard maps at a scale of 1:50,000 have been completed. Completion of smaller scale maps (1:10,000) should be completed in 2014. The maps are increasingly being used to help prepare LGUs and national agencies through information on flood/landslide prone areas, especially in advance of typhoons as part of risk mitigation measures.
Rehab. plans for 5 abandoned mines	Achieved: Assessments have been finalized for all 5 sites (encompassing soil & water analysis, geotechnical/geo-hazard assessment, information, education & communication, flora & fauna, air quality and acid mine drainage). Based on the experience acquired under the project in undertaking mine rehabilitation, MGB now plans to undertake interim rehabilitation of the 5 mine sites at the rate of one new site /year, commencing 2013. (There are reportedly some 22 significant abandoned mine sites in the country. The issue this raises is the extent to which DENR should be utilizing its scarce resources for abandoned mine rehabilitation *vis-vis* ensuring

Loan Agreement Targets Component 1	Results
	environmental risks and rehabilitation needs are complied with by the responsible party. (See follow-up actions below- Interim Rehab of Bagacay mine.
Forward Planning & Budgeting	Achieved. The 2010-2012 Medium Term Expenditure Program was completed. Overall there was little in the 3- year Forward Plan to indicate any significant change in DENRs business or prioritization. That said, the major expenditure items for MFO 1 support surveys, data base and information systems development were in line with the NPS-ENRMP planned outcomes of improved client satisfaction with the delivery of services, and access to information. Likewise the major expense items for MFO2 and 3 are also consistent with NPS-ENRMP outcome indicators.
Interim Rehab of Bagacay mine	Achieved. Interim rehabilitation has been largely achieved through construction of diversion channel/pipeline, maintenance of limestone dam and ore/waste stockpile dam, construction of laboratory building as well as research on phyto-remediation and maintenance of the 70-hectare reforestation area around the site. Ongoing activities include: (i) completion of Geo-technical Study, (ii) implementation of Environmental Management Plan, and (iii) re-vegetation /reforestation of 100 ha (to be completed in 2016). Other areas needing follow-up by MGB based on the project outcomes are; i) Undertake cost-benefit analyses of mine rehabilitation as a basis for establishing DENR policy and guidelines on mine rehabilitation including DENR/MGBs direct involvement in such activities. ii) Review environmental safeguard policies to ensure the risks/costs associated with mine abandonment and rehabilitation are adequately covered, and iii) Document the experiences in rehabilitating Bagacay mine and prepare manuals & protocols to guide future rehabilitation of mine sites.

ii) Component/MFO 2: Integrated Ecosystem Management (total cost US$14.09; of which GEF US$4.43)

Subcomponent 2.1 Integrated Ecosystems Management: This supported participatory watershed management, strengthening of LGUs to undertake ENR management, and habitat rehabilitation and restoration in convergence watersheds [20] (GEF) and non-convergence watersheds (SIL).

Subcomponent 2.2 Agro-Forestry and Livelihood Support: Communities were supported to implement demand driven livelihood activities supporting sustainable land management and/or biodiversity conservation identified in micro-catchments.

[20] Convergence: This referred to the specific watersheds selected for support Non-convergence referred to watersheds outside those specifically supported (i.e., i) Kanan, ii) Libmanan-Pulantuna , iii) Ligawasan Marsh, and iv) Bago).

Table 3: Loan Agreement Targets *vis a vis* Results for Component 2

Loan Agreement Targets Component 2	**Results**
Rehab.30% degraded forest in GEF sites with native species	Partially Achieved: Of the 215,315 ha of degraded forest in the GEF sites, it was recognized early in the project's implementation that achieving the 30% target (64,000 ha) was overly optimistic given the resources available under the GEF assisted component. Under the project some 4,666 ha were rehabilitated of which 1,266 ha were done by DENR and 3,400 ha by LGUs. Further plantings are being undertaken as part of the NGP. The Community Participation Procurement Operations Manual (CPPOM) has been approved by the GPPB and is awaiting formal endorsement. Feedback from where this manual has been used in support of GEF assisted operations suggest it has greatly assisted the procurement process by providing clear guidelines as to what is permitted.
Rehab. >30% degraded forest outside GEF sites *Core Indicator: Area restored or re/afforested (ha)	Achieved. The National Greening Program (NGP) was launched in 2011 with a target of planting 1.5m ha by 2016. As of 2013, some 311,581 has. have been planted. Of the 100,000 ha planned for support under NPS-ENRMP, 71,807 ha (71.8%) have been planted. Planting is ongoing for the remaining area with the expectation this will be fully completed. Geo tagging introduced under the project has been used to monitor accomplishments and is being extended to cover all NGP sites. The NGP is an ambitious program that is fraught with implementation & sustainability issues, many of which have been encountered in prior reforestation/replanting schemes with poor sustainability outcomes. Assessments by the Bank during the final review for the project have reinforced earlier findings, recommendations, i.e. (i) further promotion of the CDD approach is required; (b) encourage a "forest business" approach to provide incentives and move away from a primarily conservation focus; (c) provide support for value chain and technology development; (d) foster the convergence between agriculture and forestry; (e) improve provision for longer term maintenance of reforested areas. a) Given the importance of being able to show results from the substantial investments under NGP. It is recommended that the NGP build upon watershed protection activities already underway in the four GEF assisted sites. The substantial achievements could be expanded to "showcase" the results of the NGP, while further consolidating the experience and support for the IEM approach. b) The experience in achieving community stewardship/buy-in through the IEM approach under the NPS-ENRMP suggests the approach to NGP should be broadly aligned with the IEM framework, and c) The incentive framework for enhancing stewardship of tree plantings could be addressed by providing field offices with a menu of options for providing various types of livelihood type activities in conjunction with the NGP. This would address community/ stakeholder needs for more short-term sources of income and be used to encourage their support for maintaining plantings. Ample implementation experience and operational manuals already exists under programs such as MRDP2 and the new nationwide PRDP program which could be drawn upon for such devolved, livelihood programs.
GEF protected area adopt METT	Achieved: METT has been implemented/adopted in all four GEF Sites
60% Protected Areas adopt METT *Core Indicator: Forest area brought under management plans (ha)	Achieved: METT is now being implemented in 64 of the 105 Protected Areas in the country (61%).

<table>
<tr><th>Loan Agreement Targets
Component 2</th><th>Results</th></tr>
<tr><td>60% GEF communities have “micro-catchment” plans</td><td>Achieved: 24 of the 29 LGUs (83%) in GEF supported sites implementing ENR/micro-catchment Plans.

Summary of DENR-led Rehabilitation Activities (as of May 2013)
<table>
<tr><th>GEF-assisted Watershed</th><th>Target (Ha)</th><th>Achievement (ha)</th></tr>
<tr><td>Kanan-Agos River Watershed</td><td>307</td><td>307</td></tr>
<tr><td>Libmanan-Pulantuna Watershed</td><td>230</td><td>195</td></tr>
<tr><td>Bago River Watershed</td><td>284</td><td>284</td></tr>
<tr><td>Liguasan Marsh</td><td>480</td><td>480</td></tr>
<tr><td>TOTAL</td><td>1301</td><td>1,266</td></tr>
</table></td></tr>
<tr><td>30 % households in GEF sites adopt livelihood practices.</td><td>Partially Achieved 17 livelihood activities of 9 LGUs in GEF sites are currently being undertaken in conjunction with the re-vegetation undertaken as part of the watershed rehabilitation activities. Such activities included nursery development, planting of fruit trees, pili nut, coffee, cacao, tiger grass (for brooms), mangrove and bamboo. Collectively these have helped demonstrate to communities the opportunities and benefits from re-vegetation and sustainable maintenance of such. Collectively it is estimated 3,200 households benefited from livelihood activities (4% of the est. 77,152 households within the GEF assisted sites). In retrospect this indicator was overly optimistic given the level of resources available and time needed to develop suitable livelihood subprojects)</td></tr>
<tr><td>75% of activities in GEF sites implemented by LGUs /stakeholders
*Core indicator: People in targeted forest and adjacent communities with increased monetary or non-monetary benefits from forests (number)</td><td>Achieved: All IEM activities implemented in the GEF sites were implemented with the active participation of LGUs/stakeholders. Some 24 LGUs participated, collectively representing some 77,152 households.</td></tr>
<tr><td>Watershed Mgt Councils & MOAs</td><td>Achieved: Watershed Management Councils exist for all of the GEF assisted sites along with MOAs defining their functions</td></tr>
<tr><td>Best management practices replicated in at least 2 non GEF sites
*Core Indicator: Reforms in forest policy, legislation or other regulations supported (Yes/No)</td><td>Achieved: The IEM approach is being replicated as part of the National Convergence Initiative (DENR-DA-DAR) and is being undertaken in the watersheds of Quinali R-5, Pola & Bongabong R-4B. Other foreign assisted projects are also adopting the approach e.g., USAID supported Biodiversity and Watersheds Improved for Stronger Economy and Resiliency Project (B+WISER) & GiZ’s EnRD Project in Region 8.

Best practices have been well documented to facilitate dissemination i.e.,
i) Primer on Governance-Oriented Integrated Ecosystem Management (IEM): Getting Each Stakeholder to Contribute towards common goals
ii) Formulating IEM-Consistent Investment Programs in Watershed and Highly Diverse Landscapes.
iii) Guide for Planning and Conducting Process Documentation in the IEM Framework and LGU ENR Planning and Implementation.
iv) Payment for Ecosystem Services: A Compendium of Relervant Literature
v) Incorporating Integrated ecosystem Management with Local</td></tr>
</table>

Loan Agreement Targets Component 2	Results
	Development Plans: The case of General Nakar and Infanta Municipalities in Quezon Province: An IEM Story vi) Libmanan-Pulantuna Watershed: Replicating Integrated Ecosystem Management for Socioeconomic Development: An IEM Story vii) Province-Led Integrated Ecosystem Management: The Case of Bago River Watershed in Negros occidental: An IEM Story viii) Healing Nature and Contributing to Local Community Development: The Story of Barangay Batangan, General Nakar, Quezon: An IEM Story
ENR fees/ royalties operational in at least 2watershed areas	Partially Achieved. TA on PES has been provided, and a Compendium of Case studies prepared. While user fees/environmental service fees are being collected in a number of Protected Areas, difficulties have been experience in implementing PES suggesting more policy guidance is needed. An important development has been the passage of a law requiring 75% automatic retention by DENR of earnings from Protected Areas, providing both a source of funds for maintaining PAs and an incentive mechanism to promote PES. Additionally, the DENR and Dept. of Tourism have entered into an agreement that would promote ecotourism in some 78 sites that cut across some 238 Protected Areas. Opportunities for PES in the watersheds supported by the project have been developed but not yet implemented: e.g., i) Region 4-Through a MOA with BFAR for mangrove areas. ii) Region 5-For Bamboo harvesting Negros Occidental and iii) Region 6. Opportunities to generate revenues from mangroves The ENRMP supported study and technical assistance provided to PAWB (now Biodiversity Management Bureau (under the RAT Plan), on "Sustainable Financing" has generated promising techniques and approaches for generating PA –sourced revenues as alternative sources of funds for improving PA management.

iii) Component/MFO 3: Strengthening Environment and Natural Resources Management (total cost US$4.77 M: of which GEF US$0.67): This Component targeted the regulatory and oversight functions of DENR.

Subcomponent 3.1 Monitoring Systems for ENR Laws and Regulations**:** Support was for strengthening regulatory and compliance functions related to the issuance of tenure instruments, encroachment into forest areas and air, water, solid waste management, and environmental impact assessments, along with capacity-building for volunteer natural resource monitoring and enforcement.

Table 4: Loan Agreement Targets *vis a vis* Results for Component 3

<table>
<tr><th>Loan Agreement Targets
Component 3</th><th>Results</th></tr>
<tr><td>10%/yr increase in compliance (baseline: Air 55% Water 37%)
*Core Indicator: Particulate matter reduction achieved under the project)</td><td>Achieved:
Air: There have been significant improvements in both the number of company smoke stacks monitored and the level of compliance as shown below.
<table>
<tr><td>Year</td><td>No. Companies monitored</td><td>% Compliance</td></tr>
<tr><td>2007</td><td>9,519</td><td>55%</td></tr>
<tr><td>2008</td><td>9.519</td><td>61%</td></tr>
<tr><td>2009</td><td>10,923</td><td>62%</td></tr>
<tr><td>2010</td><td>10,923</td><td>65%</td></tr>
<tr><td>2011</td><td>11,746</td><td>80%</td></tr>
<tr><td>2012</td><td>11,746</td><td>84%</td></tr>
</table>
* 2013 end year data not yet available
Water: There have been significant improvements in both the number of company water discharges monitored and in the level of compliance as shown below.
<table>
<tr><td>Year</td><td>No. Companies monitored</td><td>% Compliance</td></tr>
<tr><td>2007</td><td>3,747</td><td>37%</td></tr>
<tr><td>2008</td><td>3,747</td><td>45%</td></tr>
<tr><td>2009</td><td>4,088</td><td>54%</td></tr>
<tr><td>2010</td><td>4.088</td><td>58%</td></tr>
<tr><td>2011</td><td>4,067</td><td>63%</td></tr>
<tr><td>2012</td><td>4,067</td><td>63%</td></tr>
<tr><td colspan="3">* 2013 end year data not yet available</td></tr>
</table></td></tr>
<tr><td>Operationalize at least 3 water quality management areas (WQMA)</td><td>Achieved: 3 WQMAs established i) Meycauayan-Marilao-Obando- R3, Jaro-Tigum-Aganan R-6 & Saranggani Bay-R12. Each has a Governing Board and 10- year WQMA action plan.

Benefits associated with increased attention to Water Quality monitoring under the project include:
i) Facilitated implementation of the Adopt-an-Estero Program.
ii) Improved implementation through the provision of materials and equipment
iii) Expanded assistance in engaging the LGUs and communities</td></tr>
<tr><td>128 LGUs implement 3 aspects of ecological solid waste mgt.
*Core Indicator: Industrial or municipal solid waste reduced or recycled under the project (tons/year)</td><td>Achieved: Out of 128 LGUs, 97.4% are implementing segregation at source; 83% practice segregated collection; and 82% operate Material Recycling Facilities.

Benefits associated with increased attention to Solid Waste Management under the project Air Quality include:
i) Helped and encouraged the LGUs and the general public, particularly the Homeowners Associations to undertake effective solid waste management by providing / appropriating funds for the project.
ii) LGUs have been better able to implement R.A. 9003 through IEC campaigns and development of strategies/systems for the target stakeholders.</td></tr>
<tr><td>Monitor 179 Emissions test stations</td><td>Achieved: The number of PETCs monitored has increased to 273 with 100% compliance.
<table>
<tr><td></td><td>No. of Private</td><td>% Compliance</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Loan Agreement Targets
Component 3</th><th>Results</th></tr>
<tr><td></td><td>
<table>
<tr><td>Year</td><td>Emission Test Centers monitored</td><td></td></tr>
<tr><td>2007</td><td>179</td><td>98%</td></tr>
<tr><td>2008</td><td>179</td><td>98%</td></tr>
<tr><td>2009</td><td>210</td><td>67%</td></tr>
<tr><td>2010</td><td>210</td><td>100%</td></tr>
<tr><td>2011</td><td>210</td><td>100%</td></tr>
<tr><td>2012</td><td>273</td><td>100%</td></tr>
</table>
*2013 end year data not yet available
Benefits associated with increased attention to air quality under the project Air Quality include:
i) Strengthened Anti-Smoke Belching (ASB) campaign by fielding additional ASB teams
ii) Reduced vehicle smoke emissions through seminars/lectures on Vehicle Maintenance
iii) Better air quality evaluation/ analysis by establishing more AQM stations
iv) Formulation of science-based air quality policies/abatement measures/strategies
v) Enhanced IEC campaign on air pollution control from area sources
</td></tr>
<tr><td>Monitor 4700 Permits to Operate</td><td>
Achieved: Both the number of companies issued permits to operate and their compliance with requirements have increased significantly as shown below.
<table>
<tr><td>Year</td><td>No. of Companies issued Permits to Operate</td><td>% Compliance</td></tr>
<tr><td>2007</td><td>1,337</td><td>80%</td></tr>
<tr><td>2008</td><td>1,337</td><td>80%</td></tr>
<tr><td>2009</td><td>2,219</td><td>89%</td></tr>
<tr><td>2010</td><td>2,724</td><td>91%</td></tr>
<tr><td>2011</td><td>3,489</td><td>94%</td></tr>
<tr><td>2012</td><td>4,700</td><td>100%</td></tr>
<tr><td colspan="3">* 2013 end year data not yet available</td></tr>
</table>
</td></tr>
<tr><td>Monitor 1600 companies .along water bodies draining into Manila Bay</td><td>
Achieved: Both the number of companies monitored and their compliance with requirements has improved as shown below.
<table>
<tr><td>Year</td><td>No. of Companies monitored along water bodies</td><td>% Compliance</td></tr>
<tr><td>2007</td><td>1,566</td><td>94%</td></tr>
<tr><td>2008</td><td>1,566</td><td>94%</td></tr>
<tr><td>2009</td><td>1,744</td><td>78%</td></tr>
<tr><td>2010</td><td>1,744</td><td>95%</td></tr>
<tr><td>2011</td><td>1,744</td><td>91%</td></tr>
<tr><td>2012</td><td>1,744</td><td>100%</td></tr>
<tr><td colspan="3">* 2013 end year data not yet available</td></tr>
</table>
</td></tr>
<tr><td>Monitor 101bathing beaches for bacterial levels/safety. (It was agreed early in project implementation this was accumulative total)</td><td>
Achieved: The target of measuring a total of 101 beaches was achieved. Safety levels in terms of bacterial load are a concern as shown below with only 50-60% of beaches monitored meeting the water quality criteria suitable for bathing. This is clearly a priority for EMB follow-up.
<table>
<tr><td>Year</td><td>No. of bathing beaches monitored</td><td>% meeting the Water Quality Criteria Suitable</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Loan Agreement Targets Component 3</th><th>Results</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td>for Bathing</td></tr>
<tr><td>2007</td><td>NA</td><td></td></tr>
<tr><td>2008</td><td>23</td><td>60%</td></tr>
<tr><td>2009</td><td>23</td><td>61%</td></tr>
<tr><td>2010</td><td>26</td><td>69%</td></tr>
<tr><td>2011</td><td>26</td><td>58%</td></tr>
<tr><td>2012</td><td>26</td><td>50%</td></tr>
</table>
. * 2013 end year data not yet available</td></tr>
<tr><td>4,216 environmentally critical projects (ECP) obtained Environmental Compliance Certificate (ECC)</td><td>Achieved: Both the number of ECPs monitored and their compliance with ECCs has improved as shown below.
<table>
<tr><td>Year</td><td>No. of ECP projects issued wit ECC.</td><td>% Compliance.</td></tr>
<tr><td>2007</td><td>4,216</td><td>80%</td></tr>
<tr><td>2008</td><td>4,216</td><td>80%</td></tr>
<tr><td>2009</td><td>4,380</td><td>80%</td></tr>
<tr><td>2010</td><td>4,380</td><td>80%</td></tr>
<tr><td>2011</td><td>4,380</td><td>90%</td></tr>
<tr><td>2012</td><td>4,380</td><td>100%</td></tr>
</table>
* 2013 end year data not yet available</td></tr>
</table>

Additional Project Components

Two additional programs were included for support under the NPS-ENRMP, beginning in year four of the project's implementation. Both of these programs developed as core programs of the DENR during the course of the project. To the extent they further enhanced achievement of the PDO for the project and particularly the goals of "Component/MFO2: Subcomponent 2.1 Integrated Ecosystems Management", and "Component/MFO 3 Strengthening Environment and Natural Resources Management," the provision of funding under the project was fully consistent with their inclusion in the project and Schedule 2 of the Legal Agreement. As such the modifications did not require Board approval. Inclusion of these two programs under the project was particularly motivated by need to accelerate the utilization of loan funds which had fallen far short of appraisal projections by mid-term. The main outputs of these programs under the project are discussed below.

Clean-up of Manila Bay and its Inland Waterways. The project supported initial activities of the Manila Bay Coordinating Office (MBCO) of DENR. That office had been established in response to a Supreme Court Directive requiring Government agencies to take action to clean up Manila bay. DENR was designated as the lead agency by the Supreme Court. Support under the NPS-ENRMP was designed to be catalytic in paving the way for planned World Bank follow-on assistance for a "Manila Bay Integrated Water Quality Management Project" which *inter alia* would require long-term programmatic support, considerable inter-agency collaboration and investment, and an institutional framework capable of providing the sustained policy guidance, oversight and leadership that such an ambitious and long term program will require. The NPS-ENRMP funded procurement of "trash barges" as a stop-gap measure to help clean up the

many waterways flowing into Manila bay. More importantly the NPS-ENRMP intervention provided a platform for discussion with DENR on the required institutional arrangements. While at project closing such institutional arrangements have not been resolved, the process is moving forward viz; i) a draft Executive Order establishing the institutional arrangements for Manila bay is under discussion and expected to be submitted to the Office of the President in early 2014, and ii) a draft bill is under discussion that would provide the longer –term legal basis for such oversight institutional arrangements. In that context, the catalytic role of the NPS-ENRMP in moving the process forward was achieved. .

The National Greening Program. This program was initiated by DENR in 2011 as a national tree planting program with the target of planting 1.5m ha by 2016. Of this some 100,000 ha were planned for support under NPS-ENRMP, with the objective of scaling-up the IEM approach developed under the project, and in particular the use of Peoples' Organization to develop the nurseries and undertake the planting and maintenance of trees. Inclusion under the project also provided a platform for engaging with DENR on ways to strengthen the program which was seen as ambitious and fraught with implementation & sustainability issues, many of which have been encountered in previous tree planting programs. As of project completion some 311,581 Has had been planted under the NGP. Of the 100,000 ha planned for support under NPS-ENRMP, 71,807 ha (71.8%) had been planted with the expectation the remaining target area would be accomplished. Geo tagging introduced under the project has been used to monitor accomplishments and is being extended to cover all NGP sites. In keeping with the goal of the project to help strengthen the approach, a detailed review was undertaken by the Bank at project closing to provide feedback to DENR management. The report is available on file.

SIM Loan and GEF grant Utilization

At appraisal it had been anticipated that the US$50 SIM loan would be allocated between Components/MFOs as follows: MFO1-US$36.24M (72%), MFO2-US$ 9.66M (19%) and MFO3-US$ 4.10M (8%). Although as noted in this ICR, DENR used its regular budget to fund many activities that were eligible under the loan, especially up to about mid-term, the actual distribution of the loan proceeds between MFOs was not great different than the appraisal estimates i.e., MFO1-US$35 M (70%), MFO2- US$11M (22%) and MFO3-US$4 M (8%). The bulk of expenditures under the loan were used for Forest Boundary Delineation (43%), Development of the MIS System (15%), followed by Cadastral Survey (14%), National Greening Program (12%),), EMB strengthening (7%), Manila bay Clean-up (4%), and remediation measures at Bagacay Mine (2%). Other aspects supported as shown below were around 1% or less.

Table 5: Loan Proceed Cumulative Disbursement by Major Activity from CY2008 to December 31, 2013

ENRMP Activity supported	In Php Million	% of Loan
Forest Boundary Delineation and Land Use Allocation	593.835	43
Data Management including System Development	208.788	15
Conduct of Cadastral Survey	194.865	14
National Greening Program	170.850	12
Procurement of Equipment; Intensification of Environmental Compliance Monitoring; Improvement of Water Quality; Toxic Substances and Waste Management	97.881	7
Manila Bay Rehabilitation	58.419	4
Implement Rehabilitation of Bagacay Mines and Assessment of Abandoned and Inactive Mine site - Ecosystem Research and Development	23.047	2
Biodiversity Conservation Program	18.458	1
Conduct of Special Studies	14.562	1
Soil Conservation and Watershed Management	9.500	1
Protected Areas and Wildlife Management	0.529	<0.1
Total based on partial data	**1,390.739**	100

Data source: DENR FMS

Annex 3. Economic and Financial Analysis

1. At appraisal, a conventional cost-benefit analysis (CBA) that would allow for the calculation of economic rate of return (ERR), net present value (NPV), and benefit-cost ratios was not undertaken. To this end, the ICR team employed other recommended measures of efficiency, such as cost per unit of input/output to measure the project's efficiency. The team also explored other important aspects (operational, financial and administrative) of the project that contributed to the project's efficiency.

2. ***Methodology.*** The team reviewed all costs data, including procurement reports, financial management reports, monitoring and evaluation reports and physical progress reports produced throughout project implementation. Project inputs and outputs of activities for which costs data were available were collated, synthetized and analysed using a spreadsheet. Except for compliance related activities, which consisted of monitoring the number of emission test stations and permits, all outputs were measured in hectares of land/protected areas. The outputs were then aggregated from key project reports stated above. The results were tabulated to provide much more clarity and easy comprehension. Key project documents were also reviewed to enable the team to provide a qualitative analysis of aspects of the project that increased or reduced efficiency. The qualitative review enabled the team to compare the forest development costs under the project with similar projects implemented by other donors in the Philippines.

3. ***Analysis of cost per input.*** The analysis included costs associated with procurement of goods and services, with a focus on seedlings data under the national greening program (NGP). The project supported the NGP, which aimed to establish 1.5 million hectares of trees throughout the country. Its implementation was primarily based on the principle of social mobilization whereby stakeholders and volunteers were mobilized to undertake tree planting activities.

4. The results of the analysis show that total and average costs per seedlings procured, for tree planting in the beneficiary regions, amounted to PhP12.3 (US$0.27) and PhP12.10 (US$0.27) respectively. This cost is far lower than the prevailing market prices in the country (see www.OXL.ph). The lower cost per seedling could be attributed to the innovative procurement process used for the procurement of seedlings and maintenance of planted trees. The project established contracts with the People's Organizations (POs) in the communities, and also provided technical support in developing guidelines for procuring seedlings by POs. This allowed the DENR to use the Community Driven Development (CDD) approach in procuring seedlings from POs' nurseries as well as developing and maintaining afforestation/reforestation areas with POs under a Memorandum of Agreement (MoA) contract. Table 1 provides cost per seedling procured for implementation of the NGP in 19 bureaus/regions.

Table 1. Costs per seedling procured by region

No.	Bureau/Region	Item	Quantity	Costs (in PhP)	Costs (in US$)	Cost per input (in PhP)	Cost per input (in US$)
1	NCR	Seedlings	120,000	1,440,000.00	32,244	12.00	0.269
2	Boac 1	Seedlings	46,000	552,000.00	12,360	12.00	0.269
3	Boac 2	Seedlings	55,146	662,000.00	14,823	12.00	0.269
4	Mamburao 1	Seedlings	100,000	1,500,000.00	33,587	15.00	0.336
5	Mamburao 2	Seedlings	233,000	2,563,000.00	57,389	11.00	0.246
6	Sublayan 1	Seedlings	50,000	599,653.97	13,427	11.99	0.269
7	Sublayan 2	Seedlings	30,000	359,792.38	8,056	11.99	0.269
8	Sublayan 3	Seedlings	64,500	773,553.65	17,321	11.99	0.269
9	Socorro 1	Seedlings	114,828	1,377,936.00	30,854	12.00	0.269
10	Rocas 1	Seedlings	242,135	2,905,620.00	65,061	12.00	0.269
11	Calapan 1	Seedlings	100,349	1,204,188.00	26,963	12.00	0.269
12	Pricesa 1	Seedlings	50,000	600,000.00	13,435	12.00	0.269
13	Quezon 1	Seedlings	76,505	920,000.00	20,600	12.03	0.269
14	Narra 1	Seedlings	17,184	206,000.00	4,613	11.99	0.268
15	Brokes Pt 1	Seedlings	12,888	155,000.00	3,471	12.03	0.269
16	Taytay 1	Seedlings	26,313	316,000.00	7,076	12.01	0.269
17	Roxas 1	Seedlings	196,875	2,356,593.75	52,767	11.97	0.268
18	Roxas 2	Seedlings	84,375	1,009,968.75	22,615	11.97	0.268
19	Odiongon 1	Seedlings	212,000	2,544,000.00	56,964	12.00	0.269
	Total		**1,832,098**	**22,045,306.50**	**493,625**	**12.03**	**0.269**
	Average		***96,426***	***1,160,279***	***25,980***	***12.10***	***0.271***

Source: ICR team's own calculation with data from DENR FASPO. Exchange rate: $1=PhP44.66

5. ***Analysis of cost per output***. In addition to input-costs efficiency analysis above, the team also calculated project costs per output for activities for which data were available. Those activities include: (i) Conduct of Cadastral Survey; (ii) Production of seedlings and plantations under the NGP; (iii) Protected Areas and Wide life Management; (iv) GEF-assisted Watershed (v) Manila Bay Rehabilitation; (vi) Intensification of Environmental Compliance Monitoring. As shown in table 2 below, the total cost per project output amounted to PhP2, 690.62 (US$60.25). On average, it cost PhP28,941.00 (US$648.00) to produce an average output of 80,904 for all the activities included in the analysis.

Table 2. Cost per output

N	Activity	Output	Costs (in PhP)	Costs (in US$)	Cost per output (in PhP)	Cost per output (in US$)
1.	Conduct of cadastral Survey	4,063	535,776,067.00	11,996,777	131,867	2,952.69
2.	National Greening Program	311,581	434,778,993.79	9,735,311	1,395	31.24
3.	Protected Areas and Wide life Management	131,886	237,964,263.13	5,328,353	1,804	40.40
4.	GEF-assisted Watershed	31,320	229,980.00	5,150	7.00	0.16
5.	Manila Bay Rehabilitation	1,600	44,812,631.36	1,003,418	28,008	627.14
6.	Intensification of Environmental Compliance Monitoring	4,973	52,525,000.00	1,176,108	10,562	236.50
	Total	***485,423***	***1,306,086,935***	***29,245,117***	***2,690.62***	***60.25***
	Average	***80.904***	***217,681,156***	***4,874,186***	***28,941***	***648.00***

Source: ICR team's own calculation with data from DENR FASPO. Exchange rate: $1=PhP44.66 Note 1: (i) Conduct of cadastral survey include (a) mapping of priority geo-hazard area and (b) Geo-hazard maps; (ii) National Greening Program include: seedlings production and planation GEF-assisted watershed activities include: (a)Kanan-Agos river watershed, (b)Libmanan-Planatula watershed, (c) Bago River watershed, (d)Liguassan Marsh. Note 2: all outputs were measured in hectares, except outputs for activity number 6, which were measured in numbers.

6. Other aspect of the project that affected efficiency include:

7. ***Financial, Administrative and operational efficiency.*** The project got off to a slow start due to fiduciary and administrative inefficiencies, which caused considerable amount of delays. For example financial management performance was rated moderately unsatisfactory due mainly to delays in submission of IFRs and persistent weaknesses in FM capacity, which led to delay in reporting and slow utilization and disbursement of funds. But, FM performance improved significantly and was upgraded to moderately satisfactory during the 10th supervision mission. The improvement was attributed to the increased efforts by DENR FASPO and FMS staff to ensure timely submission IFRs and actions taken to improve overall FM performance. As noted in section 2.4 in the main text, project implementation progress was also constrained due to weakness in procurement capacity.

8. Despite the above issues, the project recorded significant operational efficiencies as follows:

9. ***Significant savings in project funds***. Procurement bidding processes in 2011 and 2012 resulted in significant savings amounting to PhP62.9 million (US$1.4 million). The savings were used to support additional 24 contracts under the cadastral survey and this resulted in (i) provision of comprehensive and accurate data on land resources of the country; facilitation of land disposition; accelerated settlement of claims and

adjudication of land cases and conflicts; delineation of boundaries of all political subdivisions of the country; provision of economic data for land-based development studies of the country; provision of map-based data for zoning and land use programming. The rehabilitation activities under the GEF-assisted IEM program in Calatrava and Ngros Occidental LGU at a total proposed cost of Php 3812,290 (US$84,143.50) did not, however, progress due to the LGUs failure to prepare the IEM linked ENR Plan and integrate it into its Municipal development plan. As a result, the initial GEF fund amounting to PhP1, 978,000(US$43,657.70) to LGU Calatrava was refunded to MDFO. The amount was reallocated as additional funds to support the establishment of Hydro Meteorology Automatic Weather Station [(PhP2, 000,000)-US$44,143.30] subproject of LGU in Infanta. Other livelihood subprojects were also supported. They were: (i) establishment of woodlot for fuel and charcoal [(PhP120, 000)-US$2,648.60]; (ii) swine breeding and dispersal (PhP500, 000)-US$11,035.80]; and (iii) goat production (PhP1, 760,750)-US$38,862.60].

10. ***Significant Lower Forest Development Costs:*** Due to the utilization of the social mobilization initiative, NGP standard costs norms per hectare was on average less than half of the costs of comparable afforestation/reforestation projects such as Upland Development Project (UDP) and JICA Forest Land Management Project [(PHP 33,000)-US$728.36], and the Forest Land Project supported by the JBIC and ADB [(PHP 35,000)- US$772.51] in the Philippines. The low cost of the NGP suggests that more areas could be covered with limited budgetary resources. As noted above, the lower cost is attributed to free labor from volunteers in tree planting through NGP's social mobilization program. This strategy appears to be very effective in developing urban forestry and roadside tree plantation where access is easy. The involvement of municipalities and barangays in the NGP also generated positive responses in terms of cost sharing in site maintenance as well as increase of ownerships of the planted trees. DENR also applied the CDD approach flexibly to the PO contracts and included planting labor as a part of the seedling procurement package.

11. The project strengthened the capacity of DENR to prioritize key activities that show improvements in allocative efficiency such as increased investments in forest delineation, rehabilitation, cadastral surveys, and enforcement systems. The project played a major role in supporting the completion of forest delineation, a task that has been under-funded and received low priority in previous years. The results of the forest delineation and the cadastral surveys will help lay down and strengthen the ENR database. These will provide a strong foundation for DENR's future actions to strengthen property rights, curb encroachments in lands of the public domains, and indirectly support appreciation of land and resource assets through various land and resource planning and management processes.

12. The introduction and establishment of geo-tagging of trees planted for site validation improved operational efficiency through better reporting and payment of contractors. Through the project, the NGP established an innovative system for tagging trees planted for site validation by incorporating available technologies into management and monitoring and evaluation of activities. Field officers were equipped with tablets

with Geographic Positioning System (GPS) capacity, and were trained to use the equipment effectively. The GPS equipped tablets enabled payments of contractors to be accompanied with geo-tagged photos for the site validation to ensure transparency in operations. The geo-tagged photos are sent to the NGP Unit in the central office for uploading onto the NGP website. The tablets are also used in measuring the area size with its GPS. Area information of each site are then sent to the GIS-RSU of FMB, which manages a reforestation registry system by assigning each site with a unique code.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Andrew Garcia Mendoza	Investigative Assistant	INTOP	Program assistance
Carolina V. Figueroa-Geron	Lead Rural Development Special	EASPS	Rural Development
Christopher Gilbert Sheldon	Sector Manager	SEGOM	Management
Dominic Reyes Aumentado	Senior Procurement Specialist	EASR1	Procurement
Enos E. Esikuri	Senior Environmental Specialist	LCSEN	Environment
Esperanza Sadiua	Program Assistant	IEGCS	Program Assistance
Gilbert Magno Braganza	Consultant	EASPS	Env Specialist
Idah Z. Pswarayi-Riddihough	Director	SARSQ	Task Team Leader
Jitendra J. Shah	Lead Environmental Specialist	ECSEN	Env Specialist
Jose Tiburcio Nicolas	Operations Officer	EASSO - HIS	Program assistance
JosefoTuyor	Senior Operations Officer	EASPS	Safeguards
Joseph G. Reyes	Financial Management Specialist	EASOS	Financial Management
Kathleen S. Mackinnon	Consultant	EASER	MIS specialist
Maya Gabriela Q. Villaluz	Senior Operations Officer	EASPS	Environment
Samuel G. Wedderburn	Sr Natural Resources Mgmt. Specialist	EASER	Co-task Team Leader
Supervision/ICR			
Andrew Garcia Mendoza	Investigative Assistant	INTOP	Program assistance
Arne Erik Jensen	Consultant	EASER	IEM Specialist
Carolina V. Figueroa-Geron	Lead Rural Development Special	EASPS	Rural Dev. Specialist
Christopher Gilbert Sheldon	Sector Manager	SEGOM	Management
Douglas A. Forno	Consultant	EASPS	Instit. Specialist
FelizardoJr K. Virtucio	Operations Officer	EASPS	Economist
JosefoTuyor	Senior Operations Officer	EASPS	Safeguard Specialist
Tomas Sta. Maria	Financial Management Specialist	EASOS	Financial Management
Aisha de Guzman	Financial Management Specialist	EASOS	Financial Management
Minneh Mary Kane	Lead Counsel	LEGES	Legal
Noel Sta. Ines	Senior Procurement Specialist	EASR1	Procurement
PreselynAbella	Senior Finance Officer	CTRLN	Disbursement
R. Cynthia Dharmajaya	Program Assistant	EASER	Program Assistance
Samuel G. Wedderburn	Sr Natural Resources Mgmt. Specialist	EASER	Task Team Leader
Ngozi Blessing Malife	Program Assistant	GSDDR	
Victoria Florian S. Lazaro	Operations Officer	EASPS	Social Safeguards

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY06	54	217.70
FY07	59	263.73
FY08	8	10.27
Total:	121	491.72
Supervision/ISR		
FY08	17	111.34
FY09	30	123.59
FY10	17	89.68
FY11	32	158.83
FY12	25	124.68
FY13	17	96.75
FY14	4	28.48
Total:	141	733.44

Annex 5. Summary of Borrower's ICR

1.0 Background

The Department of Environment and Natural Resources (DENR) has the prime responsibility of managing the country's environment and natural resources – with the objective of optimizing resource use and equitably distributing the resource wealth of the country, while also tasked to maintain a high quality environment. To partly support its objectives, the Government of the Philippines has obtained from the World Bank (WB) a loan amounting to US$50 Million and from the Global Environment Facility a grant amounting to US$7 Million for the National Program Support for Environment and Natural Resources Management Project (NPS-ENRMP). The Project became effective on November 27, 2007 up to December 31, 2012. However, the Project was extended up to the end of December 2013.

The NPS-ENRMP's overall development objective is to assist the DENR to improve efficiency and effectiveness in its service delivery. Specifically, the NPS-ENRMP aims to strengthen the allocative efficiency of DENR's limited budget resources through better prioritization and partnership arrangements facilitating scaling-up, and through better linking of plans and budgets. The project's global environment objective is to enhance environmental services for global and local benefits, through GEF financing in strategic areas, with the application of IEM approach in priority watersheds and selected sites of global significance.

Accordingly, NPS-ENRMP was designed address two sets of issues:

a) Build credibility, both within government and with the general public, as to DENR's accountability for resource use and transparency in implementing ENR policies and regulations, as well as to strengthen governance over its operations, and;

b) Strengthen the manner and efficiency by which core functions are implemented.

The Project interventions supported compliance with key policies and regulations through enhanced transparency, and through strengthened partnerships with stakeholders. At the watershed level, the project supported a shift away from sub-sectoral interventions (forestry, protected areas, water etc.), towards an integration of ENR functions, in partnership with LGUs and communities. An integrated ecosystem management (IEM) approach was piloted in priority watershed areas and selected sites of global significance. Interventions supported livelihood models for communities and payment for environmental service approaches incorporating carbon finance as a possible source of funds for sustaining the carbon stock.

To operationalize the NPS-ENRMP, three major components with 7 sub-components supported the DENR Major Final Outputs (MFOs 1, 2, and 3). These components were implemented to achieve the ENRMP goals and objectives.

Component/MFO1: Policy, Planning, Monitoring and Evaluation (total cost US$30.14 M; of which GEF US$1.90 M): A key thrust was the support for DENR's institutional reform agenda under the DENR Rationalization Plan. The sub-components are:

a) Subcomponent 1.1: Rationalization of ENR Plans and Policies for strengthening

the efficiency of DENR's organization and operations and its service delivery in the provision of data, information and M&E.

b) Subcomponent 1.2: Surveys and Mapping for the demarcation of forest lands, watersheds, protected areas, foreshores, geo-hazards (high risk areas for landslides and flood-run-off) and groundwater.

c) Subcomponent 1.3: Watershed Development Planning for the characterization of land-use patterns, delineation of forest and protected areas, focused on the watersheds identified for support under Component 2.

d) Subcomponent 1.4: Remediation of Risks for rehabilitation and remediation plans for selected abandoned mines and mitigation and remediation measures for the abandoned Bagacay mine site.

e) Subcomponent 1.5: Public Awareness and Environmental Education for identifying best practices in ENR for dissemination and replication.

Component/MFO 2: Integrated Ecosystem Management (total cost US$14.09m; of which GEF US$4.43m)

a) Subcomponent 2.1: Integrated Ecosystems Management for piloting participatory watershed management, strengthening of LGUs to undertake ENR management, and habitat rehabilitation and restoration in convergence watersheds (GEF) and non-convergence watersheds (SIL).

b) Subcomponent 2.2: Agro-Forestry and Livelihood Support for implementing demand driven livelihood activities supporting sustainable land management and/or biodiversity conservation identified in micro-catchments.

Component/MFO 3: Strengthening Environment and Natural Resources Management (total cost US$4.77m: of which GEF US$0.67m): This Component targeted the regulatory and oversight functions of DENR.

c) Subcomponent 3.1: Monitoring Systems for ENR Laws and Regulations for strengthening regulatory and compliance functions related to the issuance of tenure instruments, encroachment into forest areas and air, water, solid waste management, and environmental impact assessments, along with capacity-building for volunteer natural resource monitoring and enforcement.

2.0 ENRMP Results

Over the last six years (November 2007-December 2013), the NPS-ENRMP has considerably achieved both its development and global environmental objectives. From the overall DENR perspective, the project deepened understanding, links and correlations of the different outcomes and outputs with the department's efficiency and effectiveness in protecting, developing, conserving, and regulating the environment and natural resources. The NPS-ENRMP invested in laying the foundation and planted the "seeds" for future DENR policies, programs, and strategies. As such, the joint DENR and World Bank Completion Report should rate the NPSENRMP implementation and management as SATISFACTORY.

As approved in the WB-GOP Loan and Grant Agreement and PAD and the changes made during the course of implementation, the ENRMP Results Management

Framework expected the achievement of several targeted outcomes and outputs based on reporting on key core indicators. Of the 33 Result Indicators for the project (Schedule 2 of Legal Agreement), 28 have been substantially achieved and 5 partially achieved. Moreover, of the 26 agreements on targets, 22 were fully achieved while 4 were partially met. The accomplishments, substantiated by the delivery of the key outputs and completion of the agreed targets, have yielded results that contributed directly to the project development and global environmental objectives. The overall results from the core indicators and actions on the agreed targets substantiate and explain the project's SATISFACTORY RATING.

The NPS-ENRMP has directly and indirectly influenced DENR's policies, allocative decisions, and delivery of various ENR services. Despite changed in leadership and some delays, DENR seriously carried out its reform agenda, which includes timely actions on dated ENRMP covenants and achievement of key milestones and progress in implementing the Rationalization Plan. Over the course of the project, DENR has demonstrated commitment to becoming more effective and efficient in carrying out its institutional mandates. Project management explored innovative solutions to confront bureaucratic delays, resolve procedural and policy issues with the DOF/MDFO and concerned LGUs, advocated the modification of DENR processes to surmount implementation problems. DENR in collaboration with the oversight agencies, other departments, local government units, and other partners has acted on several institutional reforms.

Over the course of ENRMP, DENR has taken steps to improve its policies, transition towards new and ecosystem-based major final outputs for planning and programming, implementation of the Rationalization Plan, improvement of procurement and audit systems, setting up database and M&E system including ENR enforcement, and increased investments in rehabilitation and reforestation activities. With and through the NPS-ENRMP implementation, DENR has been able to prioritize key programs and activities that show improvements in allocative efficiency such as increased investments in forest delineation, rehabilitation, cadastral surveys, and enforcement systems. The project played a major role in supporting the completion of forest delineation, a task that has been under-funded and received low priority in the previous years. The results of the forest delineation and the cadastral surveys will help lay down and strengthen the ENR data base. These will provide a strong foundation of DENR's future actions to strengthen property rights, curb encroachments in lands of the public domains, and indirectly support appreciation of land and resource assets through various land and resource planning and management processes.

The project has indirectly and partly contributed in prioritizing and increasing DENR's limited budget especially from 2011-2013. DENR's adoption of the new ecosystem-based major final outputs (MFOs) in planning and programming funds is and will complement the Rationalization Plan. Together, DENR's implementation of the new MFOs, the RAT Plan, and policies on devolution, sustainable financing of protected areas, tenure rights strengthening, participatory governance, and protection of highly diverse natural forests are laying down foundation for improving overall DENR's

effectiveness and efficiency in ENR management. Challenges remains in implementing the RAT Plan as there will be a reduction of about 11% of DENR personnel, shifting towards functional from sectoral form of organizational structure, completing and periodically updating the data base, aligning programs, projects, and activities (PPAs) in support of priority ecosystems, and responding positively to various DENR clients as an institution. But the experience, lessons, practices, the hard and soft investments under ENRMP will continue to help steer and sustain DENR strategic direction even with institutional, legal and leadership changes in DENR in the coming years.

Results from the ENRMP/GEF Component have operationalized integrated ecosystems management (IEM) approaches in watersheds, protected areas, and wetlands. The pilots which placed more 131, 886 hectares (more than the project target of 106,000 hectares) of protected areas, protection forest and wetlands under effective management have generated models on how DENR could replicate and scale the planning and implementation of governance-oriented and participatory-based IEM approaches in priority ecosystems. This approach is expected to increase LGU and community buy-ins for joint management, protection, and development activities. In fact, 35% (125,377 ha) of ecologically sensitive forests (outside protected areas) have been put under effective protection. In these areas, it was estimated that there was an overall reduction in kaingin, illegal encroachments, and land conversion by at least 25%.

The IEM pilots and their spill-overs have and will continue contribute to the global and local benefits from watersheds and protected areas. Learnings and emerging best practices from the pilots will be further refined and simplified for replication and scaling up. Further, the adoption of many best practices (which are now found in different knowledge products) including models of payments for environmental services (PES) in watersheds and protected areas will enable improvements in PA management and increase buy-ins of LGUs, and communities from the retention of at least 75% of funds under the Integrated Protected Area Fund (IPAF).

3.0 Loan and Grant Disbursements

As of December 30, 20213, the total disbursements under the SIM loan as per Bank records amounted to USD 50 million or 100% of the total approved loan. The designated account of the DENR and the EMB still has a remaining balance of USD 6.098 million and USD 0.2 million, respectively which are still to be reported for liquidation to the Bank. As for the GEF grant, disbursements amounted to USD 6.677 million (including the USD 0.223 million and USD 0.5 million of the DENR and the MDFO) or 95.38% of the total approved grant amount.

With respect to loan utilization, 43% of the amount was used in forest boundary delineation and land use allocation, followed by investments in data management and system development, cadastral survey, and National Greening Program. At this point, it could be surmised that at least 55% of the loan proceeds was used to strengthen the

forestry sector, and maybe a small portion to biodiversity conservation and protected area management.

The ENRMP/GEF component was mainly used for piloting IEM in several watersheds – KananAgos, Libmanan-Pulantuna, and Bago River Watersheds. These watersheds include protected areas as sub-resource management units e.g. parts of Kanlaon National Park and North Negros Natural Park in Bago River Watershed, PP 1636 in Kanan-Agos Watershed, and Bicol National Park in Libmanan-Pulantuna Watershed. The IEM pilot in Ligawasan Marsh was an investment for conserving highly diverse marsh habitats as part of the key biodiversity area on wetlands. At least 60% of the ENRMP/GEF grant was used for rehabilitation and livelihood support in partnership with the concerned LGUs and communities in the IEM pilots. The DENR share from the ENRMP/GEF was largely used for technical assistance support services, capacity building, and on-site support for IEM piloting activities.

4.0 Lessons and Opportunities for Improving DENR's Efficiency and Effectiveness

ENRMP through its various components and sub-components have generated valuable lessons including best practices, approaches, outputs, and tools that could be used by DENR and its partners for improving ENRM in the Philippines. The project was designed and implemented in support of DENR's priority policies and programs. Over the course of more than 6 years of implementation, however, the project's external environment has changed. DENR's budget has gradually increased. Priorities have changed with increasing focus on rehabilitation, biodiversity conservation, climate change mitigation and adaptation, governance, and inter-sectoral integration. The lessons that are summarized below are useful for DENR's re-configuration of ongoing programs and design of future initiatives.

- Externally-funded projects such as ENRMP that are designed to provide budget support for DENR priorities need certain flexibility in work plan preparation and implementation. Such type of project needs strong central direction from DENR senior management. When leaders change, priorities also change. Under ENRMP, that needed flexibility was quite limited. ENRMP-type of project will also need well-crafted stories to "leverage" internal support and buy-ins of implementation partners – LGUs, media, NGOs, and the private sector. This means that ENRMP-type of projects should be clearly designed to have "connection" with implementing units and those "clients" that they serve i.e. LGUs, holders of mining permits, community tenure holders, PA and watershed managers, ENR-dependent facilities and enterprises. There is also the need to allocate more resources for a well-designed and supported "capacity building" at all levels of implementation – from coordination, oversight, implementation, monitoring, and database management.

- DENR's shift towards its ecosystem-based MFOs and its ongoing Rationalization Plan will greatly benefit from the initial approaches and best practices from the IEM pilots and replication sites. The DENR field units can build on from the initial learnings and outputs from the forest boundary delineation, cadastral survey, geo-hazards mapping, and enforcement sub-component and activities. The "ecosystem-focused"

delivery of ENR services will facilitate the integration of sectoral programs and guide DENR towards the establishment of functional organization. NGP investments and the government's continuing program on greening and protecting the remaining natural forests under different management regimes will benefit from ENRMP's investments in delineation, cadastral surveys, geo-hazard mapping, and database improvement.

- Policies have been issued on the moratorium for logging natural forests, providing tenure security in PAs and forest lands, generating PES from various user's fees and charges and be part of IPAF, and nationwide greening program. Benefits and returns from the implementation of these policies and programs will be partly coming from ENR-sourced revenues.

- As mentioned several times, the ENRMP-supported database system, cadastral survey, enforcement, forest boundary delineation, and enforcement may serve as building blocks for improving DENR's M&E with clearly defined outcomes and outputs. Current database systems are fragmented, sectoral, lack robustness and adequate validation. They could also be useful for designing replicating and refining innovative approaches such as REDD+, integrating FLUP and ICM into the CLUPs, designing localized incentives, social marketing and communication campaigns, and social enterprises. When completed and become fully functional, the ENRMP-supported establishment and management of ENR databases could serve various clients responsively and timely. For instance, DENR may make it easier, affordable, and accessible maps on geo-hazards, watersheds, cadastral surveys and delineation of forest lands.

- The experience in rehabilitating and remediation in Bagacay abandoned mining area including emerging best practices from what were carried out in assessment and planning may be used as model for assessing abandoned mines for rehabilitation. In Bagacay abandoned mining area, the use of engineering mitigating measures and phytoremediation proved to be useful and cost effective. Some forest species are showing potentials in absorbing toxic chemicals in the soil with high rate of survival. Lessons may also be used for other abandoned mining areas and as basis for imposing mitigating measure of existing and future mining areas.

- Sub-project grants incentivized LGUs to assist their communities to rehabilitate degraded forest lands and engage in livelihoods/enterprises provide. The sub-grants opened opportunities for DENR field units to demonstrate how they can be effective partners of LGUs to support various resource management units in conservation, protection, and development activities. It is noted, however, that when a city or municipality is not part in the design and implementation of sub-grants to the communities, there is less ownership and commitment to continue supporting the communities when the sub-grants are over. Thus, the sub-grants to the communities under the ENRMP/GEF that were coursed through the DOF/MDFO have shown stronger ownership and support from the local government units (LGUs). Some LGUs even provided funding counterpart that resulted to increase funding for the community's rehabilitation efforts, livelihoods and enterprises. These lessons are useful in the future design and implementation of CDD projects.

- The IEM pilots and replication sites provided various models on how "IEM" may be planned and implemented in watersheds, protected areas, highly diverse habitats, ancestral domains, or combinations of these types of lands within a landscape. For IEM to be effective, local governance system and partnership arrangements with LGUs must be established as early as during the planning stage to ignite buy-ins from local stakeholders. IEM also requires initial public investments for local coordination, planning, capacity building, communication campaigns and social marketing, database development, facilitating strategic plan approvals, and setting up RBME system. The IEM framework lays down the foundation of collaborative management of a watershed or highly diverse areas for assisting land and resource management units, aligning investments to increase resiliencies of ecosystems, communities and their livelihoods, and directing and coordinating strategic public and private sector investments that are based on the ecosystem's comparative and competitive advantages.

5.0 Issues and Challenges

ENRMP has opened up many opportunities for refining policies including replication, expansion and scaling up DENR programs. Some of these are summarized below:

- Aligning existing programs and projects along the lines of the new MFOs that are going to be carried out by the revitalized DENR under the Rationalization Plan. DENR has yet to issue the final version of the DAO for operationalizing IEM at the national, regional, provincial, and community environmental offices. There will be a need to intentionally link the PPAs with MFOs in the IEM priority areas for coordinated and complementary planning, implementation, monitoring, and evaluation

- Refining, organizing, and making the information and data on forest boundary delineation, cadastral survey, watersheds, geo-hazards maps, tenure maps, and policies available to LGUs and local partners for the integration of lands of the public domains and ENR concerns in the preparation and zonification in the CLUPs of LGUs.

- Revising and harmonizing policies to accelerate DENR's issuance of tenure and domain rights to legitimate occupants in the lands of the public domains using the results of the forest delineation and cadastral surveys. Interim measures should be put in place (in the absence of Congress approval of the forest boundary delineation) in order for DENR clients and partners to use and be able to access the key maps and information from ENRMP to improve their planning, investments, and support to their constituents. There might be a need for an organized advocacy for the enactment of the forest delineation bills in the Congress.

- Establishing, completing, updating, and managing the DENR database that are fed by information and data from the DENR field units and LGUs will be a challenge. These efforts will continue to require technical assistance and capacity building support until the system becomes fully functional and client-friendly. Moreover, the setting up of an integrated, user-friendly, and updated ENR data base at various levels will be a challenge especially if the system will be used for informed decision making and for establishing

governance-based key outcome and output indicators. The database will be the basis for RBME especially in periodically assessing air and water quality, solid waste management, forest cover, highly diverse habitats, investments, ENR-dependent enterprises and facilities, and key compliance and enforcement activities.

- Incorporating the lessons on "abandoned mine rehabilitation and remediation" in Bagacay as part of the EIA requirements for existing and potential mining areas and making these interventions be part of the operations of existing and future mining permit holders will require political will and support from those who will be affected at the local level.

- The need for DENR and DILG to establish clear guidelines for long-term institutional arrangements between DENR field units and LGUs as partners in IEM planning and implementation

- Experiences from the IEM pilots show that setting up sustainable financing for IEM requires a stable policy environment as it is a long-term strategy of partnership between the DENR and LGUs. There is increasing number of areas where ENR-sourced revenues may be pursued - ecotourism, water for various uses, user fees and charges, joint ventures or co-investments in social enterprises. Focus should be on the following major aspects:

    - Joint efforts of valuation and setting up negotiation agenda,
    - Setting up sustainable co-financing or co-investment arrangements,
    - Carrying out output and outcome-based monitoring and evaluation system, and
    - Improving local governance to incentivize investments of various resource management units, land owners, and private sector.

- Monitoring compliance to air, water and solid waste standards was strengthened thru provision of appropriate equipment, enhanced IEC, capacity building and engagement of LGUs and communities. But for the continuous buy-ins of LGUs, DENR with EMB might need to link the improvements of air and water quality and solid waste management with MDG indicators that are relevant to the LGUs, DSWD, DOT, and DOTC, and DOH, e.g. Health.

6.0 Key Recommendations for Moving Forward

The following key recommendations will help DENR continue to improve its effectiveness and efficiency with respect to planning and implementing client-supportive ENR programs.

1. Complete the development, establishment, data updating, storage, access and retrieval, and accuracy of the integrated DENR data. This database should be developed/ established based on inputs from the community environmental offices,

governance bodies of priority ecosystems, province, region, sector, and national/central levels. With support for capacity building, guidance, analysis, and reporting systems, the ENR database will be useful for integrated and coordinated planning especially with the ongoing implementation of the RAT Plan, for improving governance and responsiveness to the agency's clients and partners, and for results-based monitoring and evaluation (RBME).

2. Design an investment support as the core for replicating, scaling up and improving DENR and LGU capacities in the collaborative planning and implementation of integrated ecosystems management in priority ecosystems and landscapes.

3. More replications that will eventually lead towards a scaled up approach are needed to solidify initial experience in planning and implementing the IEM approach. A project investment in these areas will enable the provision of on-site technical assistance and capacity building support for improving local capacities in addition to investments that are targeted to achieve multiple benefits from climate change-related watershed rehabilitation and management, forest plantation and fuel wood development, biodiversity conservation and links with growing nature-based tourism, and mainstreaming these with the local stakeholders including the LGUs, private sector, and communities. There are increasing demand for public investments in priority ecosystems to enhance their comparative advantage to support and sustain competitive ecosystems goods and services in the upstream, lowland, and coastal/marine areas. Building on the ENRMP-supported integrated ENR data base and initial experience in IEM planning and implementation including the gradual shift towards more client-oriented and partnership-based approach in carrying out various ENR regulation and enforcement activities, a follow-on project investments will certainly endear DENR services with local stakeholders, communities, the private sector, media, and the academe.

4. Approve and issue the DAO on IEM to provide guidelines for implementation especially under the RAT Plan and the new DENR MFOs. The approval of the DAO will trigger activities for prioritizing various "manageable ecosystems", planning and budgeting, monitoring and evaluation, linking with partners and local stakeholders, and minimize duplication and fragmentation of the different sector programs and projects. The DAO approval will trigger the setting up of mechanism and context in providing technical and institutional operational support for replicating and scaling up the ecosystem-based approach especially in harmonizing the implementing various ENR enforcement programs – air, water, forests, lands, environment, mining - to link what DENR will be doing with the local stakeholders and various clients. ENR programs should be clearly linked with climate change mitigation and adaptation, ecosystem resiliency, livelihoods, disaster risk reduction and management, supply of ecosystems goods and services, food production, ecotourism, and security.

5. With the RAT Plan implementation, the new DENR MFOs, the almost complete setting up of the integrated ENR database and the gradual shift towards functional organization, DENR should take a more pro-active decisions and actions to align key

policies, programs, and investment packages towards the following areas:

a) Concentrate public investments (with NGP, other donor funded projects) in priority ecosystems to increase their resiliencies, support local sustainable local development and minimize risks and damages to lives, crops, livelihoods, enterprises, and industries.

b) Through the IEM planning and implementation processes with the joint DENR-LGU implementation of approved FLUPs and integrated coastal resources management plans in the CLUPs, strengthen support to the different land and resource management units in conserving, developing, and managing ENR that are within their respective responsibility, accountability, and authority. The DENR, LGUs and NCIP will have to increasingly collaborate in harmonizing land uses and management regimes for land and natural resources.

c) Directly link public investments with the development and establishment of "social enterprises" – those that target to achieve multiple bottom lines (profit, sound environment, and equity and poverty reduction) with strong support for communication and social marketing campaigns. This strategic shift in public investments will increase DENR's responsiveness to its clients, improve ENRM, address climate change impacts, trigger local economic development, and sustain the supply of direct (wood, fuel wood, water, attractions for ecotourism) and indirect ecosystems goods and services. The Philippines has huge potential to move towards small scale production of plantation wood and fuel wood for its growing population, attract more local and foreign visitors to its highly diverse biophysical landscapes, increase agricultural productivity (especially in high value irrigated agriculture, mariculture, and aquaculture), and renewable energy. This means that public investments should be directed to enhance the ecosystem's comparative advantages that will increase the supply and competitiveness of various goods and services e.g. plantation timber, fuel wood, water, food, attractions for ecotourism, others.

d) Develop a new cadre of DENR executives, technical staff, and scientists that are more competent in addressing issues arising from management of integrated ecosystems which are inter-connected, inter-dependent, and with inter-generational impacts. Sectoral specialists must be honed towards "ecosystems" thinking as all ENR sectors are beginning to understand how they are connected and how externalities impact each other i.e. mining with water, fisheries, disasters; biodiversity conservation with marginalization of upland farmers; tourism with protected areas, and others.

6. Increasingly link regulatory and enforcement functions and support for improving air and water quality and solid waste management with the needs and interest of the local stakeholders – LGUs, communities in on- and off-site, health and sanitation, disaster risk reduction and management, urbanization, livelihoods, and other related areas. A social marketing approach is needed to reach out to the upstream and downstream target markets to change desired behaviour changes. A sound RBME system for all these efforts will have to be set up, analysed and feedback with LGUs,

partner agencies, media, academe, and communities.

7. DENR should anchor its policies on devolution, collaborative and partnership, and investments with the end view of improving ecosystems management, strengthening ENR enforcement, achieving synergy, improving biodiversity conservation and watershed management, expanding plantations of wood and fuel wood, improving local/sectoral/ENR governance, promoting private sector investments, and supporting the productivity of various land and resource management units in terrestrial and coastal/marine areas.

8. Share and promote the best practices and the ENRMP-supported database systems with new and ongoing DENR programs and projects - such as NGP, INREM, FMP, GiZ, and others. There should be intentional effort on the part of DENR for these current initiatives to further refine, enrich, complete or improve local capacities to improve its allocative efficiency, effectiveness, and absorb innovations towards better ENRM.

9. The above recommendations for moving forward (Items 1-7) will need a transition grant support as DENR moves towards a more ecosystem-based planning and implementation under the RAT Plan and the new MFOs. As of December 31, 2013, there is an estimated amount of US $ 306,445 from the ENRMP/GEF component that will not be expended and disbursed. A new follow-on project that will be supported by the remaining ENRMP/GEF amount should be designed to provide a "transition grant support" for many of the ENRMP-initiated innovations that formed the above recommendations. The follow-on grant support (from the ENRMP/GEF component's unexpended amount) may be the following:

a) Training and technical assistance support for establishing and making the integrated ENR data base functional from the DENR field units (CENRO, PENRO, Region) up to the DENR central level (sector, planning, and other related offices). This may include the development, replication, and scaling up of ecosystem-based RBME systems especially for PAs, watersheds and basins, critical habitats and other IEM sites.

b) Training and technical assistance support for DENR's shift to IEM-based RAT Plan implementation under the new MFOs. This may include more replication and some scaling up of the IEM approach and conduct of region and nationwide initial orientation and capacity building on IEM after DENR has issued the DAO on IEM. Part of this orientation and training will be how to effectively collaborate with LGUs, land and resource management units, other departments, and the private sector for improving ENRM at the ecosystem or landscape unit level.

c) Pilot support with training and technical assistance for operationalizing the PES approach and increasing shares from ENR assets that may arise from business contracts and agreements in PAs, watersheds, and other highly diverse areas.

d) A major focus on assisting DENR units develop and carry out social marketing and communication campaigns in order for DENR to effectively connect with its clients,

target needed behaviour changes in both upstream (policy makers) and downstream markets (LGUs, tenure holders, communities, media, private sector, others). This is a key for strengthening the linkages between ENR enforcement and their positive impacts in communities, ecosystems, and overall ENR health.

Annex 6. List of Supporting Documents

i) Governance of Natural Resources in the Philippines.

ii) Natural Resources Management Way Forward Action Plan for the Philippines

iii) Improving Government Performance: discipline, Efficiency and equity in Managing Public resources. PEPFMR 2003. World bank, Asian development Bank and GoP

iv) Rationalization Plan for DENR.

v) Primer on Governance-Oriented Integrated Ecosystem Management (IEM): Getting Each Stakeholder to Contribute towards common goals

vi) Formulating IEM-Consistent Investment Programs in Watershed and Highly Diverse Landscapes. ES Guiang. Technical Report, DENR/FASPO, Philippines

vii) Guide for Planning and Conducting Process Documentation in the IEM Framework and LGU ENR Planning and Implementation. R.C. Serrano. Technical Report, DENR/FASPO, Philippines

viii) Payment for Ecosystem Services: A Compendium of Relevant Literature. N.S.Lasmarias. Technical Report, DENR/FASPO, Philippines.

ix) Incorporating Integrated ecosystem Management with Local Development Plans: The case of General Nakar and Infanta Municipalities in Quezon Province: An IEM Story. National Program Support for Environment and Natural Resource Management Project. DENR/FASPO, Philippines

x) Libmanan-Pulantuna Watershed: Replicating Integrated Ecosystem Management for Socioeconomic Development: An IEM Story. National Program Support for Environment and Natural Resource Management Project. DENR/FASPO, Philippines

xi) Province-Led Integrated Ecosystem Management: The Case of Bago River Watershed in Negros occidental: An IEM Story. National Program Support for Environment and Natural Resource Management Project. DENR/FASPO, Philippines.

xii) Review of the National Greening Program, January 2014.

xiii) Healing Nature and Contributing to Local Community Development: The Story of Barangay Batangan, General Nakar, Quezon: An IEM Story. National Program Support for Environment and Natural Resource Management Project. DENR/FASPO, Philippines.

Map


IBRD 33466R4
PHILIPPINES
SELECTED CITIES
PROVINCE CAPITALS
REGION CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
PROVINCE BOUNDARIES
REGION BOUNDARIES
INTERNATIONAL BOUNDARIES
I Ilocos
1 Ilocos Norte
2 Ilocos Sur
3 La Union
4 Pangasinan
CAR Cordillera Admin. Reg.
5 Abra
6 Apayao
7 Benguet
8 Ifugao
9 Kalinga
10 Mountain Province
II Cagayan Valley
11 Batanes
12 Cagayan
13 Isabela
14 Nueva Vizcaya
15 Quirino
III Central Luzon
16 Aurora
17 Bataan
18 Bulacan
19 Nueva Ecija
20 Pampanga
21 Tarlac
22 Zambales
NCR National Capital Reg.
IV-A CALABARZON
23 Batangas
24 Cavite
25 Laguna
26 Quezon
27 Rizal
IV-B MIMAROPA
28 Marinduque
29 Mindoro Occidental
30 Mindoro Oriental
31 Palawan*
32 Romblon
V Bicol
33 Albay
34 Camarines Norte
35 Camarines Sur
36 Catanduanes
37 Masbate
38 Sorsogon
VI Western Visayas
39 Aklan
40 Antique
41 Capiz
42 Guimaras
43 Iloilo
44 Negros Occidental
VII Central Visayas
45 Bohol
46 Cebu
47 Negros Oriental
48 Siquijor
VIII Eastern Visayas
49 Biliran
50 Eastern Samar
51 Leyte
52 Northern Samar
53 Samar
54 Southern Leyte
IX Zamboanga Peninsula
55 Zamboanga del Norte
56 Zamboanga del Sur
57 Zamboanga Sibugay
--- Zamboanga City
X Northern Mindanao
58 Bukidnon
59 Camiguin
60 Lanao del Norte
61 Misamis Occidental
62 Misamis Oriental
XI Davao Reg.
63 Compostela Valley
64 Davao del Norte
65 Davao del Sur
66 Davao Oriental
XII SOCCSKSARGEN
67 North Cotabato
68 Sarangani
69 South Cotabato
70 Sultan Kudarat
XIII Caraga
71 Agusan del Norte
72 Agusan del Sur
73 Dinagat Islands
74 Surigao del Norte
75 Surigao del Sur
ARMM Autonomous Reg. in Muslim Mindanao
76 Basilan
77 Lanao del Sur
78 Maguindanao**
79 Sulu
80 Tawi-Tawi
** Shariff Aguak (Maganoy) and Sultan Kudarat serve as co-capitals of the province.
* Executive Order 429, May 23, 2005, provides for the transfer of Palawan province (#31) from Region IV to Region VI; Administrative Order 129 holds EO429 in abeyance until an implementation plan is approved by the President.
Luzon Strait
Babuyan Islands
Babuyan Channel
Batan Islands
Basco
Laoag City
Vigan
Bangued
Tuguegarao
Cabarroguis
Bayombong
Lagawe
Baguio
San Fernando
La Trinidad
Lingayen
Tarlac
Iba
Baler
Palayan
San Fernando
Malolos
Balanga
MANILA
Pasig
Makati
Pasay
Quezon
Trece Martires
Calamba
Santa Cruz
Lucena
Batangas
Daet
Virac
Pili
Legaspi
Sorsogon
Boac
Mamburao
Calapan
Romblon
Masbate
Catarman
Catbalogan
Borongan
Tacloban
Kalibo
Roxas City
Iloilo
San Jose de Buenavista
Jordan
Bacolod
Cebu
Maasin
Tagbilaran
Dumaguete
Siquijor
Dipolog
Oroquieta
Cagayan de Oro
Iligan
Pagadian
Ipil
Tubod
Marawi
Malaybalay
Butuan
Tandag
Prasperidad
Nabunturan
Tagum
Cotabato
Davao
Digos
Mati
Koronadal
General Santos
Isulan
Shariff Aguak (Maganoy)
Zamboanga
Isabela City
Jolo
Panglima Sugala
Bongao
Puerto Princesa
Bugsuk
Balabac
Cuyo Islands
Semirara Islands
Lubang Islands
Polillo Islands
Catanduanes
Marinduque
Busuanga
Culion
Linapacan
Dumaran
Basilan
Tawi-Tawi
Luzon
Mindoro
Panay
Negros
Cebu
Bohol
Samar
Leyte
Mindanao
Palawan
Sulu Sea
Philippine Sea
Celebes Sea
Mindoro Strait
Visayan Sea
Leyte Gulf
Moro Gulf
Davao Gulf
Sibuyan Sea
Tablas
Masbate
Burias
Ticao
Maestique
Camiguin
Siargao
Dinagat
Sarangani
MALAYSIA
ZAMBOANGA CITY
ARMM
CAR
NCR
I
II
III
IV-A
IV-B
V
VI
VII
VIII
IX
X
XI
XII
XIII
PHILIPPINES
0 50 100 150 Kilometers
0 50 100 Miles
5°N
10°N
20°N
120°E
125°E
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