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IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-H0870 IDA-49650 TF-93177 TF-53226 TF-10466)

ON A

GRANT AND CREDIT

FROM THE

INTERNATIONAL DEVELOPMENT ASSOCIATION

IN THE AMOUNT OF SDR 26.8 MILLION AND SDR 26.0 MILLION
(US$ 40.0 MILLION AND US$ 42.0 MILLION EQUIVALENT)

AND

GLOBAL ENVIRONMENT FACILITY GRANTS

IN THE AMOUNT OF US$ 19.0 MILLION
(US$ 9.0 MILLION AND US$ 10.0 MILLION)

AND A

JAPAN SOCIAL DEVELOPMENT FUND GRANT

IN THE AMOUNT OF US$ 1.9 MILLION

TO THE

REPUBLIC OF MADAGASCAR

FOR A

THIRD ENVIRONMENTAL PROGRAM SUPPORT PROJECT (EP3)

June 28, 2016

Environment and Natural Resources Global Practice
Madagascar, AFCS2
Africa

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2015)

Currency Unit = Malagasy Ariary - MGA
SDR 1.00 = US$ 0.72
US$ 1.00 = MGA 3,222.5

FISCAL YEAR
[January 1 – December 31]

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AFD	French Agency for Development/ *Agence Francaise de Développement*
ANAE	National Association for Environmental Action / *Association Nationale pour les Actions Environnementales*
ANGAP	National Agency for Protected Areas Management */ Association Nationale pour la Gestion des Aires Protégées* (now Madagascar National Parks)
CAS	Country Assistance Strategy
CAZ	Corridor Ankeniheny Zahamena
CPS	Country Partnership Strategy
CELCO	EP3 Project Coordination Unit / *Cellule de Coordination*
CI	Conservation International
CITES	Convention on the International Trade in Endangered Species of Wild Fauna and Flora
CLP	Community Park Committee/ *Comités Locaux de Parcs*
CLS	Community Surveillance Committee */ Comités locaux de surveillance*
COBA	Community Forestry Management Group/ *Communauté de Base*
COFAV	Forestry Corridor Fandriana Vondrozo/ *Corridor Forestier FAndriana Vondrozo*
COSAP	Park Support Committee/ *Comité de Soutien aux Aires Protégées*
CRO	Regional Orientation Committees
DEAP	Protected Area visitor entry fees/ *Droits d'Entrée dans les Aires Protégées*
DFNs	Debt-for-nature swaps
DGE	Directorate General of Environment
DGF	Directorate General of Forests
DREF	Regional Directorate of Water and Forests*/ Direction Régionale des Eaux et Forêts*
EMP	Environmental Management Plan
EP3	Madagascar Third Environmental Program Support Project
ERPA	Emission Reduction Purchase Agreement
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
FAPBM	Madagascar Foundation for Protected Areas and Biodiversity; the Foundation / *Fondation pour les Aires Protégées et la Biodiversité de Madagascar*

FCPF	Forest Carbon Partnership Facility
FID	Intervention for Development Fund Project*/ Fonds d'Intervention pour le Développement*
GDP	Gross Domestic Product
GEF	Global Environment Facility
GELOSE	Locally secured management*/ Gestion Locale Sécurisée*
GEO	Global Environment Objective(s)
GIZ	German Agency for International Cooperation (formerly GTZ)
HIPC	Heavily Indebted Poor Countries
IDA	International Development Association
IFC	International Finance Corporation
IPDP	Indigenous People Development Plan
ISN	Interim Strategic Note
IUCN	International Union for Conservation of Nature
JSDF	Japan Social Development Fund
KfW	German Development Cooperation Agency */ Kreditanstalt für Wiederaufbau*
M&E	Monitoring and Evaluation
MAMABAY	Landscape comprising Masoala National Park, Makira Forestry Corridor and the Antongil Bay/ *Masoala - Makira - Baie d'Antongil*
MAP	Madagascar Action Plan
MDG	Millenium Development Goals
MECIE	Madagascar's environmental impact assessment legal framework/ *Mise en Compatibilité des Investissements avec l'Environnement*
MEF	Ministry of Environment and Forests
MNP	Madagascar National Parks
MRV	Monitoring, Reporting and Verification system
MTR	Mid Term Review
NAP	New Protected Area/ *Nouvelle Aire Protégée*
NEAP	National Environmental Action Plan
NGO	Non-Governmental Organization
NPV	Net Present Value
ODA	Official Development Assistance
ONE	National Environment Office / *Office National pour l'Environnement*
ORAF	Operational Risk Assessment Framework
PA	Protected Area
PAD	Project Appraisal Document
PAP	Project Affected People
PCU	Project Coordination Unit /*Cellule de Coordination (CELCO)*
PDO	Project Development Objectives
PF	Process framework for social safeguards
PIU	Project Implementation Unit
PRPSE	Regional Plateform for environmental planing and monitoring*/ Plateforme Régionale de Planification et Suivi Environnementale*
PSDR	Rural development support project/ *Projet de Soutient au Développement Rural*

REDD+	Reducing Emissions from Deforestation and Forest Degradation, and fostering conservation, sustainable management of forests, and enhancement of forest carbon stocks
R-PP	REDD+ Readiness Proposal
SAGE	Environmental management support services*/ Service d'Appuis à la Gestion de l'Environnement*
SAPM	Protected Area Network in Madagascar / *Système des Aires Protégées de Madagascar*
SDR	Special Drawing Rights
SESP	Social and Environmental Safeguards Plan
TAMS	*Savoka* restoration project*/ Tetik'asa Mampody Savoka*
UNEP	United Nations Environment Program
TTL	Task Team Leader
UCPE	Environmental Projects Coordination Unit*/ Unité de Coordination des Projets Environnementaux*
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VOI	Community Forestry Management Group/ *Vondron'Olona Ifototra*
WB	World Bank
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

Senior Global Practice Director:	Paula Caballero
Sector Manager:	Benoit Bosquet
Project Team Leader:	Giovanni Ruta
ICR Team Leader:	Giovanni Ruta

REPUBLIC OF MADAGASCAR

THIRD ENVIRONMENTAL PROGRAM SUPPORT PROJECT (EP3)

CONTENTS

Data Sheet

Main Text

A. Basic Information			
Country:	Madagascar	Project Name:	Third Environment Program Support Project
Project ID:	P074235, P074236, P113976	L/C/TF Number(s):	IDA-49650,IDA-H0870,TF-93177,TF-53226, TF-10466
ICR Date:	06/28/2016	ICR Type:	Core ICR
Lending Instrument:	SIL,SIL	Borrower:	REPUBLIC OF MADAGASCAR
Original Total Commitment:	XDR 26.80M, USD 9.00M	Disbursed Amount:	XDR 52.20M, USD 8.83M, USD 10M
Environmental Category: B,B		**Focal Area**: B	
Implementing Agencies: Ministry of Environment and Forests			
Cofinanciers and Other External Partners: World Wildlife Fund (WWF), Wildlife Conservation Society (WCS), and Conservation International (CI)			

B. Key Dates

Third Environment Program Support Project - P074235

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	12/10/2002	Effectiveness:	08/21/2004	09/13/2004
Appraisal:	01/07/2004	Restructuring(s):		04/01/2008 01/12/2009 12/18/2009 06/15/2011 10/12/2011 05/28/2013 02/26/2014 06/30/2014 11/30/2014 12/20/2015
Approval:	05/11/2004	Mid-term Review:		07/13/2007
		Closing:	06/30/2009	12/31/2015

Madagascar Third Environment Program Support Project - P074236

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	10/30/2002	Effectiveness:	08/21/2004	09/13/2004
Appraisal:		Restructuring(s):		04/01/2008 12/18/2009

Approval:	05/11/2004	Mid-term Review:	04/15/2007	06/15/2007
		Closing:	12/31/2009	12/31/2011

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes	Moderately Unsatisfactory
Global Environment Objectives, GEO Outcomes	Moderately Satisfactory
Risk to Development Outcome	High
Risk to GEO Outcome	High
Bank Performance	Moderately Unsatisfactory
Borrower Performance	Unsatisfactory

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

C.3 Quality at Entry and Implementation Performance Indicators			
Third Environment Program Support Project - P074235			
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 Unsatisfactory		

Madagascar Third Environment Program Support Project - P074236			
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		
Third Environment Program Support Project - P074235		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Central government administration	25	15
General agriculture, fishing and forestry sector	45	60
Other Renewable Energy	10	15
Sub-national government administration	20	10

Theme Code (as % of total Bank financing)		
Biodiversity	25	40
Climate change	13	15
Environmental policies and institutions	25	15
Other environment and natural resources management	24	15
Participation and civic engagement	13	15

Madagascar Third Environment Program Support Project - P074236		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Forestry	100	100

Theme Code (as % of total Bank financing)		
Biodiversity	50	70
Environmental policies and institutions	50	30

E. Bank Staff		
Third Environment Program Support Project - P074235		
Positions	**At ICR**	**At Approval**
Vice President:	Makhtar Diop	Calixto Madavo
Country Director:	Mark Lundell	Hafez Ghanem
Practice Manager/Manager:	Benoit Bosquet	Richard Scobey
Project Team Leader:	Giovanni Ruta	Martien Van Nieuwkoop Cristophe Crepin
ICR Team Leader:	Giovanni Ruta	
ICR Primary Authors:	Giovanni Ruta, Michael Carroll	

Madagascar Third Environment Program Support Project - P074236		
Positions	**At ICR**	**At Approval**
Vice President:	Makhtar Diop	Calixto Madavo
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ICR Primary Author:	Giovanni Ruta, Michael Carroll	

F. Results Framework Analysis

Project Development Objectives, PDO (from Project Appraisal Document)
The Objectives of the Project are to improve the protection and sustainable management of critical biodiversity resources at the field level, mainstream conservation into macroeconomic management and sector programs, and facilitate the establishment of sustainable financial mechanisms for the environment, thus contributing to the improvement of the quality of life of the population.

Revised PDO (as approved by original approving authority)

To enhance the protection and sustainable management of targeted protected areas (PA).

Global Environment Objectives, GEO (from Project Appraisal Document)
The global objective of the project is to contribute to the preservation of the quality of regional and global commons through improved natural resources management and biodiversity protection in critical ecological regions, defined as national PA and their corresponding buffer zones and corridors.

Revised GEO (as approved by original approving authority)

GEO remained unchanged throughout the life of the project.

Results Framework

	Indicator	**Restr.**	**Baseline value**	**Target Value**	**Actual values Achieved**
A	**Project Development Objective Indicators**				
1	Rate of degradation of forest and wetland resources is less than half the 1993-2000 degradation rate of 0.9%/year (Percentage, Custom)		0.90	0.44	
	Date		15-Jun-00	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008, see below 1.1		
1.1	Rate of degradation of the forest and wetland cover declining from 0.88% a year to 0.44% a year (Percentage, Custom)	2008	0.83	0.44	0.53

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Date		15-Jun-00	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring in 2008: the indicator has been more correctly specified from a baseline of 0.88%/year to 0.44% a year based on satellite data. Substantially achieved (83%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
2	Protected areas management efficiency index increases from 41% (baseline) to 55% (mid-term) to 70% EOP		41	70	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008, see below 2.1		
2.1	Protected area management efficiency index increases from 45% (baseline to 70% by EOP (Percentage, Custom)	2008	45	70	68
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring in 2008: minor adjustment on the baseline. Substantially achieved (97%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
3	Mangrove cover maintained at 2004 area of 2,209 km2		2,209	2,209	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. Indicator 3 was eliminated and replaced (together with indicator 4) by indicator 3.1		
4	Maintenance of coral reef target indicator species (e.g. Ludjanidea family) in all established no-take zones				
			The indicator was revised following the restructuring in 2008. Indicator 4 was eliminated and replaced (together with indicator 3) by indicator 3.1		
3.1	Threat Index in the ANGAP PA Network reduced from 107 to 20 (Number, Custom)	2008	107	20	31

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring in 2008: indicator 3.1 replaced indicators 3 and 4, as part of IUCN standard composite threat index which was considered more relevant to monitor habitat maintenance. Substantially achieved (88%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
3.2	Level of threat in project PAs, threat index (Percentage, Custom)	2011	28	15	
	Date		11-Jan-12	31-Dec-14	
	Comments (incl. % achievement)		AF 2011: indicator 3.1 was revised to 3.2. In Feb 2014, the measurement unit was revised (see below 3.3). In Nov 2014 the target was revised (see 3.4)		
3.3	Level of threat in project PAs, (number of fires declared)	2014 Feb	1 395	980	989
	Date			31-dec-15	31-dec-15
	Comments (incl. % achievement)		Restructuring in Feb 2014: Indicator measurement unit and target were revised during the restructuring of Feb 2014, as the original target was too obscure. Target was set at realistic level. Achieved (101%)		
5	Sustainable financing mechanisms including government contribution cover 70% of core staff and operational costs of the PA system (baseline: 8%; mid-term: 30%)		8	70	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008, see below 5.1		
5.1	Capital mobilized by Foundation for Protected Areas and Biodiversity – from US$3.7 to US$33.0 million	2008	3,700,000	33,000,000	34,000,000
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008: The indicator is equivalent to the original specified in the PAD. Achieved (103%). This indicator was dropped in 2009. However, the current capitalization of the Foundation has currently reached 50 million		
5.2	Surface of PA network with recurrent costs supported with revenues from the	2011	130,000	1,050,000	1,050,000

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	combined project endowment and previous EP3 endowment to the Foundation (ha)				
	Date		11-Jan-12	31-Dec-14	31-Dec-14
	Comments (incl. % achievement)		AF 2011: This indicator was introduced in 2011. Achieved 100%. The monitoring stopped in 2014.		
6	National park visitor numbers increase 5% annually from the 2003 baseline (1 00,000 visitors)		100,000	134,000	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. Indicator 6, 7 and 8 were combined, see below 6.1		
7	Increase of park entrance fees by US$ 670,047 (2003 baseline: US$500,000; mid-term: US$579,000)		500,000	670,047	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. Indicator 6, 7 and 8 were combined, see below 6.1		
8	Sustainable NRM investments generate US$12 million over 5 years (baseline: 0; mid-term: US$ 4 million)		0	12,000,000	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. Indicator 6, 7 and 8 were combined, see below 6.1		
6.1	Number of tourists visiting PAs increasing from 88,000 to 134,000	2008	88,000	134,000	68,755
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008: This indicator corrected the 2003 baseline. Partially achieved (51%). The final target of 134,000 tourists was attained in 2008 but the number of tourists was halved in 2009 due to the political unrest in the country. The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009.		
9	Improved voice of communes in PAs management as reflected in representation on ANGAP's Board of Directors (by mid-term) and by the % of CROs complying with their rights and		0	80	

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	obligations as defined in PA management plans (baseline: 0; mid-term: 50%; EOP: 80%)				
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. Indicator 9 and 10 were combined, see below 9.1		
10	Improved community empowerment in NRM through fully performing GELOSE/GCF arrangements as measured by the % of beneficiary communities who have successfully obtained long-term follow-up contracts after the initial 3 year trial period baseline: 0%, mid-term:70%; EOP: 80%)		0	80	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. Indicator 9 and 10 were combined, see below 9.1		
9.1	Percentage of revenues from PA entry fees redistributed to community projects surrounding the parks (from 22.5 to 50%)	2008	22.50	50.00	22.00
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008: The restructured indicator measures exactly the same impact as the original indicator, but is more quantifiable and precise, and easier to compile across several parks. Partially achieved (44%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
11	Reduction of burned areas to 50% of baseline (650,000 ha a year)	2008	0	50	46
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008: New indicator but consistent with the original forest degradation measurements specified in the original PAD. Substantially achieved (93%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009.		
10.1	80% renewal of natural resources management transfer contracts	2008	Restructuring 2008: equivalent of indicator 10 (see above)		

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
12	70% of public and private investments comply with MECIE legislation (percentage, custom)		30	70	69
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Following the restructuring in 2008. Three indicator were added to indicator 12: 12.1.a, 12.1.b and 12.1.c (see below). Substantially achieved (99%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009.		
12.1.a	Number of regional development plans integrating environmental considerations (from 2 to 22)	2008	2	22	na
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Restructuring in 2008: the indicator was added but was not monitored.		
12.1.b	Rate of environmental claims settled (from 50% to 90%)	2008	50	90	na
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Restructuring in 2008: the indicator was added but was not monitored.		
12.1.c	Rate of integration of environment in school curricula (from 5% to 40%)	2008	5	40	na
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Restructuring in 2008: the indicator was added but was not monitored.		
13	Logging and species collection license fees in line with projected revenues (baseline: 80%; mid-term 87% and EOP: 95%)		80	95	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. See below, indicator 13.1		
13.1	Volume of wood traded following a traceability system (in % of amount of nationally harvested timber) – from 0% to 30%	2008	0	30	70
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008: This indicator was considered a more meaningful and measurable indicator of the shift towards legal forest harvesting.		

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
			Achieved (233%). The supervision team found the figure of 70% provided by the PCU unlikely in a context of collapse in forest governance.		
14	Track record of satisfactory OSF governance audits (mid-term and EOP targets are satisfactory)		unsatisfactory	satisfactory	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. See below, indicator 14.1		
14.1	Rate of efficiency of forestry control units (from 0% to 80%)	2008	0	80	na
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Restructuring in 2008: the indicator was added but was not monitored.		
15	70% of MinEnvEF's budget executed at field level (province or lower by EOP (baseline: 30%; mid-term 50%)		30	70	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in 2008. See below, 2 indicators were added 15.1.a and 15.1.b		
15.1.a	Financial and administrative efficacy index (from 0 to 100%)	2008	0	100	na
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Restructuring 2008: This revised indicator measure the progress of the broader institutional for of the Ministry (including its budget efficacy). The indicator was not monitored.		
15.1.b	Implementation of the new E-governance system within the Ministry (from 0% to 50%)	2008	0	50	na
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Restructuring 2008: This revised indicator measure the progress of the broader institutional reform of the Ministry (including its budget efficacy). The indicator was not monitored.		
16	Cost reduction strategy and action plan developed and implemented within ANGAP,		na	na	na
	Date				

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Comments (incl. % achievement)		Restructuring 2008: The indicator was not monitored. In addition, though critically important, this indicator was considered an output (not an outcome) indicator.		
17	Increased PA management efficiency index from 41% to 70%		See indicator 2 and 2.1 above		
18	Number of households adjacent to the PAs that benefitted from off park natural resource livelihood activities (number of households)	2011	0	90 000	
	Date		11-Jan-12	2014	
	Comments (incl. % achievement)		The indicator was revised following the restructuring in Feb 2014. See 18.1.		
	Of which are female beneficiaries		0	240,000	67,955
	Date			31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Partially achieved (28%)		
18.1	Number of households adjacent to the PAs that benefitted from off park natural resource livelihood activities (social safeguards, local community organizations, and Mature PA micro projects and community ecotourism projects)	2014 Feb	0	86,000	36,310
	Date		11-Jan-12	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Restructuring in Feb 2014. Partially achieved (42%)		
19	A precious woods stockpile use plan has been submitted to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Yes/No, Custom)	2014 Feb	N	Y	Y
	Date		25-Nov-14	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Restructuring 2014: Achieved (100%)		
20	All illegal precious woods stockpiles seized by Government have been audited and secured. (Yes/No, Custom)	2014 Feb	N	N	Y
	Date		25-Nov-14	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Restructuring 2014: Achieved (97%). 97 percent of stockpiles secured and 60 percent marked by SGS.		

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
21	Government has validated and adopted a schedule for the reform of protected areas managed by Madagascar National Parks (MNP) (Yes/No, Custom)	2014 Feb	N	Y	Y
	Date		25-Nov-14	31-dec-14	31-Dec-15
	Comments (incl. % achievement)		Restructuring 2014: Achieved (100%)		
B	**Global Environmental Objective Indicators**				
22	Priority habitats and species in Madagascar brought under effective conservation: increased area of ecosystem included national PA system managed by ANGAP to 2,253,848 (Hectare (Ha), Custom)		1,700,000	2,253,848	
	Date		13-Sep-04	31-Dec-09	
	Comments (incl. % achievement)		Following the restructuring in 2008 the indicator was revised (see below, indicator 22.1)		
22.1	PA surface under provisional or definite status increased to 5 million ha	2008	1,700,000	5,000,000	5,155,632
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008 Achieved (103%)		
23	Indicator species maintained at baseline levels: a) 59 species of lemurs, and b) 105 species of endemic birds		59 species of lemurs and 105 species of birds		
			Following the restructuring in 2008 the indicator was revised (see below, indicator 23.1). Maintenance of species at baseline levels not meaningful as Madagascar has discovered several new species of lemurs since appraisal		
23.1	Representation rate of habitats in system of PA increased from 87 to 96%	2008	87	96	91
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Restructuring 2008: This is simple indicator recommender by biodiversity expert in Madagascar for the system of PA. Substantially achieved (95%).		
24	Level of threat in project supported PAs (number of fires declared) (Number, Custom)	2014 feb	1 395	980	989
	Date			31-Dec-15	31-Dec-15

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Comments (incl. % achievement)		Restructuring in 2014: Same as 3.3. Achieved (101%)		
C	**Intermediate Results Indicators of original project**				
25	Surface reforested (Hectare(Ha), Custom)		0	7,968	10,167
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Achieved (128%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
26	Number of Dinas (traditional agreements) operational for fire control (Number, Custom)		0	500	361
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Partially achieved (72%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
27	Households adopting alternative energy (Number, Custom)		0	5,000	0
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Not achieved (0%). This activity never started and the monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
28	Number of Environmental Tableaux de Boards operational (Number, Custom)		5	20	24
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Achieved (127%) The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
29	Number of Sectors with Environmental Units in place and operational (Number, Custom)		4	15	22
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Achieved (147%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
30	Number of Environmental Impact Assessment permits delivered through a unified system (Number, Custom)		35	61	65
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Achieved (107%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
31	Number of Autonomous Control Units in place and operational (Number, Custom)		0	22	11

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Partially achieved (50%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
32	New staff recruited, integrated and trained by the Ministry (Number, Custom)		0	435	139
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Partially achieved (32%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
33	Quarterly Planning carried out with the involvement of regional stakeholders and disbursements implemented according to the agreed norms (Percentage, Custom)		0	75	31
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Partially achieved (41%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
34	Number of Park Support Committee, COSAP, Operational (Number, Custom)		0	22	21
	Date		13-Sep-04	31-Dec-09	31-Dec-09
	Comments (incl. % achievement)		Substantially achieved (95%). The monitoring stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009		
35	Direct project beneficiaries (Number, Core)		0	26,000	9,261
	Date		13-Sep-04	25-feb-11	30-Jun-11
	Comments (incl. % achievement)		Partially achieved (36%)		
36	Female beneficiaries (Number, Core Supplement)		0	12,000	4,000
	Date		13-Sep-04	25-feb-11	30-Jun-11
	Comments (incl. % achievement)		Partially achieved (33%)		
37	Number of Safeguards plans validated (9 UG) (Amount(USD), Custom)		0	11	10
	Date		13-Sep-04	31-Dec-11	31-Dec-11
	Comments (incl. % achievement)		Substantially achieved (91%). 10 plans have been adopted (representing 8 UG) all of them related to parks managed by MNP.		
38	Rate of implementation of safeguards measures (Percentage, Custom)		0	100	0

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Date		13-Sep-04		31-Dec-11
	Comments (incl. % achievement)		Not achieved (0%). Only Sahamalaza and Mikea safeguard measures were under implementation		
39	Number of squares surveyed and controlled (Number, Custom)		15,426	559,090	589,586
	Date		13-Sep-04	31-Dec-11	31-Dec-11
	Comments (incl. % achievement)		Achieved (105%). Indicator dropped during the 2011 restructuring and additional financing.		
40	Circuits managed and maintained (Kilometers, Custom)		0	1,312	2,367
	Date		13-Sep-04	31-Dec-11	30-Jun-11
	Comments (incl. % achievement)		Achieved (180%). Indicator dropped during the 2011 restructuring and additional financing		
41	Additional Surface of PA (ANGAP and outside ANGAP) created (Hectare(Ha), Custom)		0	491,500	336,136
	Date		13-Sep-04	31-Dec-11	30-Jun-11
	Comments (incl. % achievement)		Partially achieved (68%). Indicator dropped during the 2011 restructuring and additional financing.		
C'	**Intermediate Results Indicators for AF**				
42	Aggregated Management Effectiveness Tracking Tool Scores for the targeted protected areas		69	80	72
	Date		11-Jan-12	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Substantially achieved (90%)		
43	Number of surveillance grids monitored in 30 national parks and 3 corridors (Number, Custom)		0	489,291	424,540
	Date		11-Jan-12	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Substantially achieved 87%		
44	Number of paid patrolling days of local surveillance committees (Number, Custom)		0	126,861	160,382
	Date		11-Jan-12	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Achieved (126%)		
45	Km of PA boundaries materialized and maintained (Kilometers, Custom)		0	7,224	6,552
	Date		11-Jan-12	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Substantially achieved (91%)		
46	Number of regional civil society monitoring groups operational and undertaking regular reporting of results		0	1	na

	Indicator	Restr.	Baseline value	Target Value	Actual values Achieved
	Date		11-Jan-12	31-Dec-14	
47	Rate of total affected households (PAP) economic losses compensated by safeguards plans		25	100	na
			11-Jan-12	31-Dec-14	
48	Number of PAs in the national network complying with national technical standards for social safeguards		10	65	na
			11-Jan-12	31-Dec-14	
49	Number of PAs with operational community co-management structure		1	33	na
			11-Jan-12	31-Dec-14	
50	Surface of forests legally managed by local communities		0	250 000	Na
			11-Jan-12	31-Dec-14	
51	Index of management efficiency of Foundation in implementation of PA network financing		na	na	na
	Km of tourism circuits established and maintained to operational standards		0	60	98
			11-Jan-12	31-Dec-14	31-Dec-14
			Achieved (163%)		
52	Number of community and private sector ecotourism investments commenced in supported PAs		0	23	na
			11-Jan-12	31-Dec-14	
53	Generated funds from direct and indirect fiscal revenues from ecotourism and carbon credits made available for conservation and communities ($/year)		100 000	300 000	na
			11-Jan-12	31-Dec-14	
54	Number of carbon finance pilot sites generating revenues		1	4	na
			11-Jan-12	31-Dec-14	
55	Index of management efficiency of Project Coordination Unite (PCU) in implementation and monitoring of project (Number, Custom)		60	90	85
	Date		11-Jan-12	31-Dec-15	31-Dec-15
	Comments (incl. % achievement)		Substantially achieved (94%)		

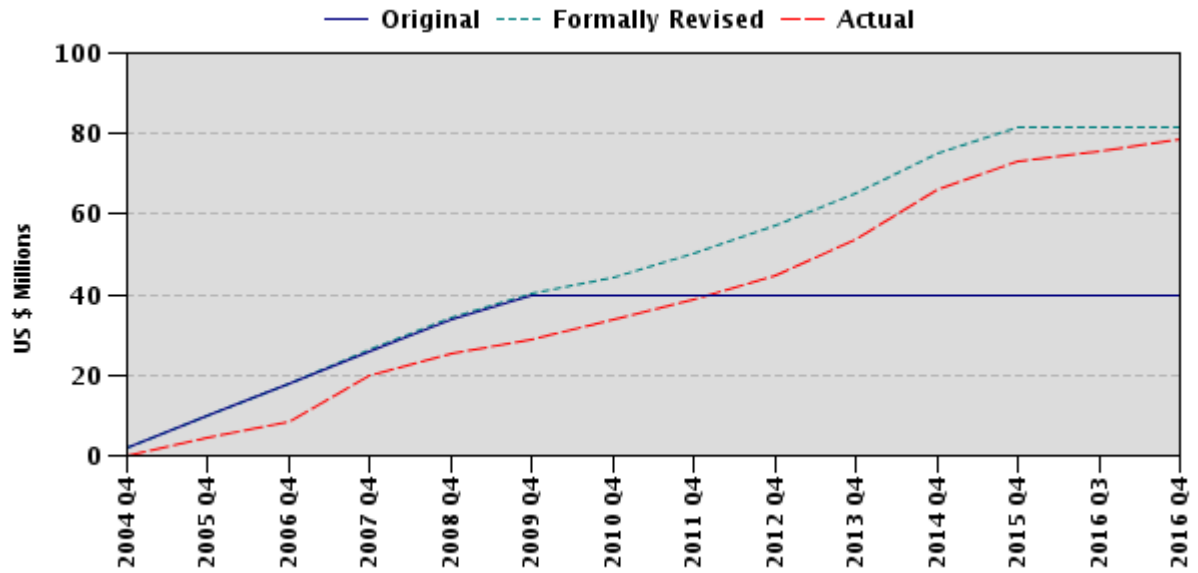
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	GEO	IP	Actual Disbursements (USD millions)		
					Project 1 P074235	Project 2 P074236	Project 3 P113976
1	06/10/2004	S	S	S	0.00	0.00	0.00
2	11/30/2004	S	S	S	1.05	0.30	0.00
3	06/29/2005	S	S	MS	4.31	0.70	0.00
4	12/21/2005	MS	S	MS	6.72	1.18	0.00
5	06/30/2006	MS	S	MS	8.66	2.35	0.00
6	12/17/2006	MS	MS	MS	11.04	3.50	0.00
7	06/26/2007	MU	MS	MU	19.08	3.90	0.00
8	12/18/2007	MU	MS	MU	22.74	5.60	0.00
9	05/30/2008	MS	MS	MS	24.39	6.25	0.00
10	12/01/2008	MS	MS	U	27.90	6.49	0.00
11	05/29/2009	MU	MU	MU	28.89	6.57	0.00
12	09/11/2009	U	U	U	28.89	6.57	0.00
13	06/12/2010	MS	MS	MS	33.73	7.52	0.00
14	03/27/2011	MS	MS	S	37.81	8.11	0.00
15	12/26/2011	S	MS	MS	40.27	8.95	0.00
16	07/09/2012	MS	MS	MS	44.79	8.83	10.00
17	03/07/2013	MU	MS	MU	48.88	8.83	10.00
18	09/29/2013	MU	S	MU	55.57	8.83	10.00
19	02/16/2014	MU	S	MU	61.60	8.83	10.00
20	10/04/2014	MU	S	MS	66.70	8.83	10.00
21	03/05/2015	MU	S	MU	71.26	8.83	10.00
22	09/30/2015	MU	S	U	73.36	8.83	10.00
23	12/21/2015	MU	--	U	74.53	8.83	10.00

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 and Project 3	
04/01/2008	N	N	MU	MS	MU	23.97	6.25	Number of components increased from three to four; change to RF (indicators); reallocation of proceeds.
01/12/2009	N	N	MS	MS	U	28.34	6.57	Reallocation of proceeds.
12/18/2009	N	N	U	U	U	33.15	7.33	18 months extension to June 2011; Reduced project scope: finance PA costs and safeguards action plan.
06/15/2011	N	N	MS	MS	S	38.80	8.43	6 months extension to December 2011.
10/12/2011	Y	N	MS	MS	S	39.81	8.61	3 years extension to December 2014; AF; Substantial change to components and simplification of inst. Arrangements, change to RF (PDO and indicators).
05/28/2013	N	N	MU	MS	MU	40.29+ 12.57= 52.86	8.83	Change in disbursement categories.
02/26/2014	N	N	MU	S	MU	40.29+ 21.30= 61.59	18.83	Allow law enforcement activities for precious woods; change in scope of components; change in disbursement categories; change to RF (indicators).
06/30/2014	N	N	MU	S	MU	40.29+ 24.87= 65.16	18.83	Allow continuation of law enforcement activities.
11/30/2014	N	N	MU	S	MS	40.29+ 26.99= 67.28	18.83	12 months extension to December 2015; change to RF (PDO level indicators and revision of some targets); reallocation of proceeds.
12/20/2015	N	N	MU	S	U	40.29+ 33.84= 74.13	18.83	Reallocation of proceeds to create a livelihood compensation sinking fund at FAPBM.

I. Disbursement Profile

P074235



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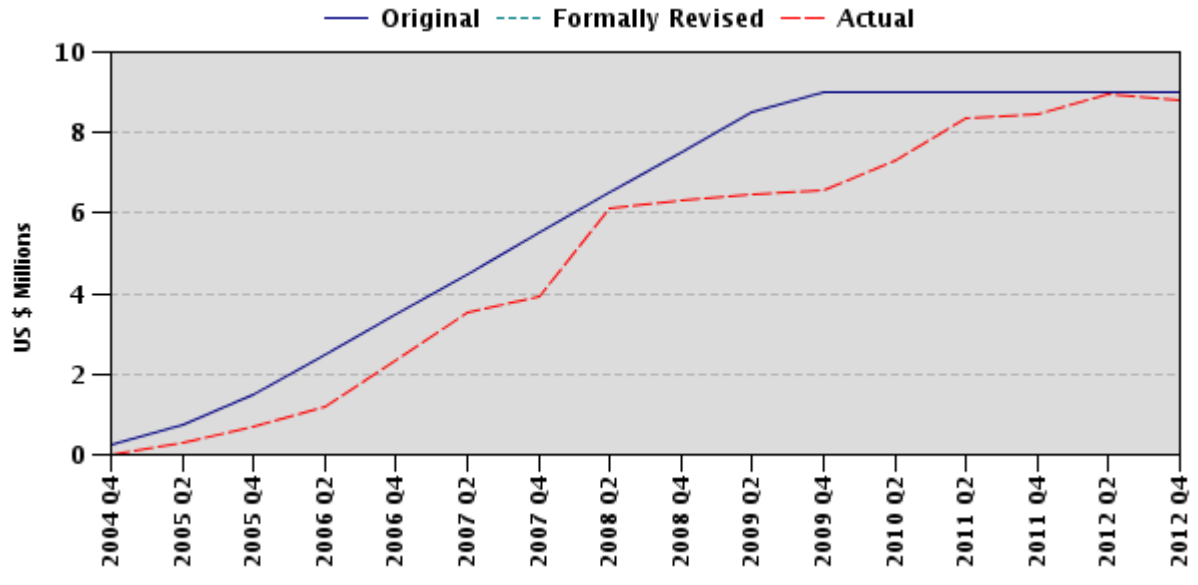

1. Project Context, Development and Global Environment Objectives, and Design

1. Madagascar‘s biodiversity is a unique, irreplaceable global public good representing 5 percent of the world‘s biodiversity on just 0.4 percent of the global landmass. The country has been labeled the “eighth continent” in recognition of its unparalleled biological values. As an example, fifty new species of lemurs, Madagascar’s flagship primate, have been discovered during the last 20 years. However, these unique ecological assets are challenged by the country’s high levels of poverty, particularly in rural areas.

2. In 1989, the Government of Madagascar (GoM) adopted an ambitious investment program known as the Madagascar Environment Action Plan (PAE or NEAP)[1], whose goal was: “natural resources are conserved and wisely utilized in support of sustainable economic development and a better quality of life”. It was implemented in the form of a three-phase Environment Program with a total budget of approximately US$400 million. The first phase of the Environment Program (1990 to 1995) created institutions and implemented pilot activities, including the first protected area (PA) to be established under the NEAP, and put in place the policy and regulatory framework for PA management and for environmentally compatible development.[2] The second phase (1996 to 2004) financed on-the-ground activities at a larger scale and sought to integrate environmental issues into sector and macro-economic policies.[3] The long-term programmatic approach which EP1 launched, and EP2 sustained, was key in addressing long-term, complex issues of environmental degradation. While the NEAP implementation programs in other countries commonly started as long-term multi-phased undertakings, they seldom lasted beyond the first (usually five-year) phase and left most of their agenda unresolved. EP2 was a rare exception of a NEAP-inspired project that continued to pursue the original long-term agenda and brought it to the final phase under EP3.

3. The third phase (2005 to 2015) continued the work of the two previous phases and aimed at improving the protection and sustainable management of critical biodiversity resources at the field level,

[1] Since 1990, the World Bank together with United States Agency for International Development (USAID), Swiss Development Cooperation, and Global Environment Facility (GEF), and more recently United Nation Development Program (UNDP) and the German Agency for International Cooperation (GIZ, formerly GTZ, and KfW) and Agence Française de Développement (AFD), have worked with the three large international Non-Governmental Organizations (NGO) present in Madagascar: Conservation International (CI), World Wildlife Fund (WWF), Wildlife Conservation Society (WCS), and others such as Durell Foundation and Birdlife International to support the Government in the implementation of the NEAP.

[2] Project objectives were the: (a) conservation and management of Madagascar's biodiversity, (b) promotion of the sustainable development and management of the country's natural resources, (c) improvement of the population's living conditions, and (d) development of the country's human resources and institutional capacity.

[3] The original development objectives of EP2 were to (i) reverse current environmental degradation trends and to promote sustainable use of natural resources, including soil, water, forest cover, and biodiversity; and (ii) to create conditions for environmental considerations to become an integral part of macroeconomic and sectoral management of the country.

mainstreaming conservation into macroeconomic management and sector programs and establishing sustainable financing mechanisms, while also commencing activities in marine PA.

4. The combined results of the three phases of the Environment Program are impressive: the creation of 2.4 million hectares of national parks, and 4.5 million hectares of forestry corridors being managed predominantly by non-government organizations (NGOs) on behalf of the State; the establishment of institutions for the management, financial control and monitoring of environment related activities; and the reduction of the rate of deforestation by 75 percent in 20 years. The Bank's contribution to the Environment Program has been through a series of Environmental Support Program projects.

1.1 Context at Appraisal

5. In January 2003, the Government was restructured in a way that was highly significant for the rural/environmental sector. The reform included: (i) the integration of economic programs, land use planning, transport and public works into a single 'super-ministry' under the leadership of a vice Prime Minister, which facilitated an integrated approach to national spatial development planning and represented an important opportunity for the sector to incorporate rural and environmental dimensions into national spatial planning; (ii) the combination of agriculture with livestock and fisheries into a single ministry, which regrouped the 'food production' sectors putting a greater emphasis within the fisheries sector on food security, rural development and poverty reduction; and (iii) the combination of water and forests with environment into a single ministry, which was seen as a radical move to create a forests sector more oriented towards conservation and biodiversity preservation as opposed to extractive production. The latter would greatly facilitate the development of conservation programs outside PA, improve sector governance, and facilitate the efficient capture and distribution of benefits from biodiversity.

6. In line with this significant reform, the President of the Republic announced at the World Parks' Congress in Durban in September 2003, that Madagascar, in line with International Union for Conservation of Nature (IUCN) norms, would increase the area under effective conservation arrangements (covering forest, wetland and marine ecosystems) from 1.7 million ha to 6.0 million ha.

7. The Third Environment Program Support Project (EP3) – the final project in support of the NEAP – aimed to leave a lasting impact by bridging the gap between conservation and development and was fully consistent with the main goal of the Country Assistance Strategy, (CAS, November 2003).[4] Acknowledging the close linkage between poverty and environmental degradation, the CAS recognized that "Madagascar's unique biodiversity resources offer[ed] interesting revenue generating potential, which, if realized, could contribute to the reduction of poverty as well as the conservation of these resources". To unleash potential

[4] The grant was financed through a combination of International Development Association, IDA (US$40 million) and GEF (US$9 million) funds. EP3 followed EP1 approved on February 6, 1991 and closed on June 30, 1997, and EP2, initiated in 1997 and ended in December 2002. EP3 was developed initially by the Ministry of the Environment through the National Environmental Office (ONE), well before the closing of EP2. After EP2 closing, the Ministry created a Committee of experts composed of the Adviser to the Minister, head of this Committee, and representatives of the General Directorate of Forests (DGF), General Directorate of Environment (DGE), the Association Nationale pour la Gestion des Aires Protégées (ANGAP), the National Association for Environmental Action (ANAE), the Environmental Management Support Service (SAGE) and ONE. This Committee was responsible for finalizing the original project document and ensuring implementation. The project was declared effective on 13 September 2004.

in this arena, there was a need to set access to biodiversity resources on a more rational and transparent footing as well as to develop revenue generating sources from non-extractive forest products and environmental services, of which eco-tourism, hydrological services, carbon storage and non-timber forest products were seen as the most promising. Following this principle, the CAS lending scenario included the EP3, which the Bank was uniquely positioned to support, given its prior engagement in the implementation of the two previous phases. In line with sector-specific goals, it was expected that the project would reduce poverty by contributing to broad-based economic growth, sustainable natural resources management and improving governance. The CAS recognized that "considering that Madagascar is a mega-diversity country, this project [was] also of crucial importance to attain the sustainable environmental management objectives as specified under the Millennium Development Goals".

8. Most of Madagascar's biodiversity occurs in forest areas. While 15 percent of the area of these forests was located within a relatively well-managed PA network under the National Agency for Protected Areas Management (ANGAP), the vast majority of forests were unmanaged or poorly managed, constituting a de-facto free access resource. The EP3 proposed a two-pronged approach in line with the Government's objective to increase the area of natural forest under effective conservation arrangements.[5] First, EP3 would support an aggressive move towards the creation of about 4 million ha of conservation sites (corridors).[6] Second, based on the lessons and experiences generated during the second phase of the NEAP, the management transfer of forest resources to communes would be scaled up significantly.

9. Institutionally, ANGAP had built a solid reputation as a relatively effective manager of the country's system of national parks and reserves, through effective donor coordination under earlier phases of the NEAP. In terms of conservation management, however, ANGAP's IUCN-based index for effective management stood at only 41 percent. Areas that specifically required attention included: (i) strengthening management and implementation capacity at the field level; (ii) establishing more effective measures to reduce encroachment; and (iii) developing tourism potential.

10. The relations between ANGAP and communities were predominantly at the level of consultation, thereby falling short of providing decision-making power to local stakeholders whose livelihoods were affected by the creation of PAs. Consequently, there was a need to enhance participation of local stakeholders, while strengthening community-based natural resource management systems that would provide conservation-compatible means of assuring local livelihoods.

11. Further, the project was to facilitate the development of the eco-tourism industry through expansion and improvement of park infrastructure and facilities, and also develop mechanisms so that an appropriate

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[5] ANGAP was responsible for the management of 46 Pas covering roughly 3 percent of the country's total area and 15 percent of its forests. Not all ecosystems were adequately represented in the national PA system, particularly coastal zone and marine ecosystems as well as some key terrestrial ecosystems. For this, ANGAP had prepared a five-year action plan (2001-2006) for the management and expansion of the existing PA system.

[6] Delimited zones with legal status classified according to ecological and socioeconomic criteria. These conservation sites were seen as an ecological and economic necessity given their importance for the conservation of biodiversity, eco-tourism and the hydrological services they provided for people, agriculture and industry.

share of revenues generated by eco-tourism would support ANGAP's budget. The project also meant to explore the establishment of markets for environmental services under which downstream beneficiaries (e.g. farmers owning irrigated lands and urban water consumers) would compensate upstream providers of hydrological services. Given the high incidence of poverty among downstream beneficiaries, actual revenues were reasonably expected at very modest levels, at least in the short run. Most importantly**,** the project intended to support the sustainable financing of the PA system through the newly established Malagasy Foundation for Protected Areas and Biodiversity (FAPBM), seen as the center-piece of the project's efforts in the sustainable financing arena. Finally, the initial stages of the development of reforestation initiatives for carbon sequestration purposes as a means to capture international willingness to pay for climate change containment measures was to be supported.

12. EP3 was implemented in two distinct phases, with a number of restructurings in between: (i) the original project phase that went from 2004 to 2011, passing through a temporary suspension of activities during the political crisis of 2009; (ii) the Additional Financing (AF) phase that went from 2011 to 2015 (although the AF became effective on March 23, 2012).

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

13. The original Project Development Objectives was "to improve the protection and sustainable management of critical biodiversity resources at the field level, mainstream conservation into macroeconomic management and sector programs, and facilitate the establishment of sustainable financial mechanisms for the environment, thus contributing to the improvement of the quality of life of the population."[7]

14. The following key performance indicators and associated targets were developed for the project. A detailed list of PDO level indicators and their applicability throughout the project lifetime is presented in Annex 2.

(1) Rate of degradation of forest and wetland resources less than half of the 1993-2000 rate of 0.9% per year (Percentage, Custom);

(2) PAs management efficiency index increases from 41% (baseline) to 55% (mid-term) to 70% by EOP (Percentage, Custom);

(3) Mangrove cover maintained at 2004 area of 2,209 km2;

[7] This is the objective that appears in the Grant Agreement (H087 MAG). The PAD refers to this as the overall (Government) EP3 objective but notes that the IDA/GEF financing was geared towards assisting the GoM in the implementation of selective elements of EP3, for which two subsidiary Development Objectives were specified: (i) The biodiversity and renewable natural resources of representative eco-regions is conserved and managed on a sustainable footing with active multi-stakeholder participation; and (ii) The framework for sustainable environmental management is further strengthened through the incorporation of said management objectives into public policy making and investments.

(4) Maintenance of coral reef target indicator species (e.g. Ludjanidea family) in all established no-take zones;

(5) Sustainable financing mechanisms including government contribution cover 70% of core staff and operational costs of the PA system (baseline: 8%; mid-term: 30%);

(6) National park visitor numbers increase 5% annually from the 2003 baseline (100,000 visitors);

(7) Increase of park entrance fees by US$670,047 (2003 baseline: US$500,000; mid-term: US$579,000);

(8) Sustainable NRM (natural resources management) investments generate US$12 million over 5 years (baseline: 0; mid-term: US$ 4 million);

(9) Improved voice of communes in PAs management as reflected in representation on ANGAP's Board of Directors (by mid-term) and by the % of CROs complying with their rights and obligations as defined in PA management plans (baseline: 0; mid-term: 50%; EOP: 80%);

(10) Improved community empowerment in NRM through fully performing GELOSE/GCF arrangements as measured by the % of beneficiary communities who have successfully obtained long-term follow-up contracts after the initial 3 year trial period baseline: 0%, mid-term:70%; EOP: 80%);

(11) 70% of public and private investments comply with MECIE legislation (percentage, custom);

(12) Logging and species collection license fees in line with projected revenues (baseline: 80%; mid-term 87% and EOP: 95%);

(13) Track record of satisfactory OSF governance audits (mid-term and EOP targets are satisfactory);

(14) 70% of MinEnvEF's budget executed at field level (province or lower by EOP (baseline: 30%; mid-term 50%);

(15) Cost reduction strategy and action plan developed and implemented within ANGAP.

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

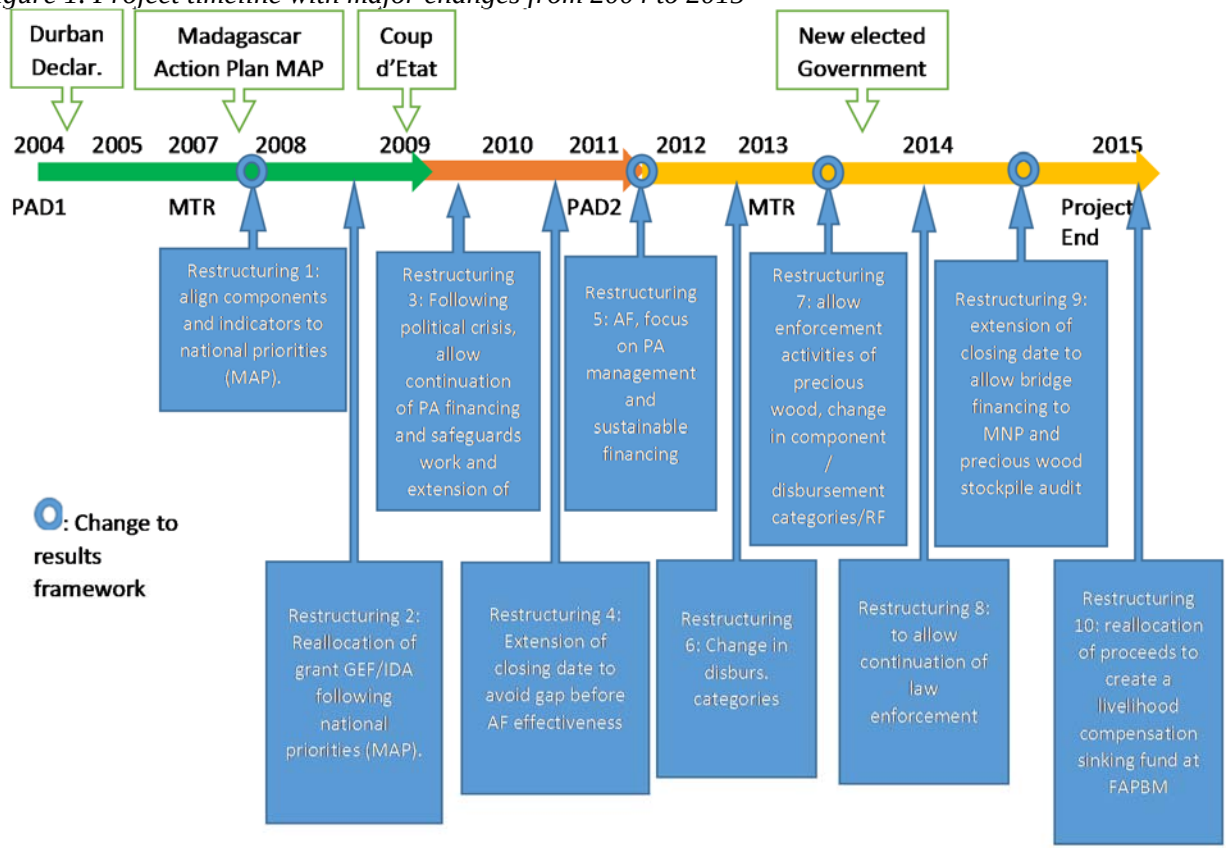
15. The global objective of the Project is "to contribute to the preservation of the quality of regional and global commons through improved natural resources management and biodiversity protection in critical ecological regions, defined as national PAs and their corresponding buffer zones and corridors."

1.4 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

16. "To enhance the protection and sustainable management of targeted PA."

17. Project indicators had been revised in 2008 under the original PDO. With the project was restructured for a fifth time with the restricted exception to OP7.30, in 2011, a new PDO was put in place and new and modified activities included in the AF. Four of the original PDO indicators and fifteen of the intermediate results indicators were continued or revised. Subsequent to the restructuring, monitoring was entirely focused on the activities financed by the AF. The major changes during the Project timeline are summarized in Figure 1 below. Table 9 in Annex 2 provides the sequence of PDOs and their changes throughout the project's life.

Figure 1. Project timeline with major changes from 2004 to 2015



1.5 Revised GEO (as approved by original approving authority) and Key Indicators, and reasons/justification

18. The original GEO remained unchanged.

1.6 Main Beneficiaries

19. The Project had direct and indirect beneficiaries. The direct beneficiaries included local households and communities living around the targeted PAs where livelihood improvement were supported through income and employment generation in conservation and tourism. Local communities also benefited from remunerated participation in Community Patrols (CLPs), employment in civil works during project implementation (such as construction of infrastructure), as well as from technical training on conservation and productive skills and technologies. The formalization of community associations promoted by the project has also strengthened local-level communities' and individuals' capacity to undertake new

businesses. Community subprojects also generated meaningful revenue for local communities. Communities around the PAs likewise benefitted from higher fees collected by the PA administration. Other than the number of communities benefitting from reforestation and efficient charcoal production (700), no specific number related to beneficiaries was included in the PAD.

20. While at the time of writing the PAD there was no requirement to measure direct beneficiaries, it can be inferred that other beneficiaries included management and technical staff of project-related institutions, both at the national level (i.e. ONE, ANGAP, FAPBM) and particularly at the regional and PA level, who received salaries, training and improved working conditions (infrastructure and equipment).

1.7 Original Components (as approved)

21. EP3 was implemented through three components:

22. **Component 1: Forest ecosystems management (IDA: US$ 18 million)** - supporting the Department of Water and Forests to better conserve natural forests and streamline the use and management of national forests;

23. **Component 2: PAs Management** (**IDA US$ 13.5 million; GEF: US$ 9 million)** - addressing issues related to PA management, eco-development, eco-regional planning, ecotourism and the endowment of a trust fund;

24. **Component 3: Environmental Mainstreaming (US$ 8.5 million)** - supporting selected elements of the environmental mainstreaming agenda through improved knowledge and information, as well as the creation and/or strengthening of environmental units in all sectoral ministries.

1.8 Revised Components

25. As a result of the Mid Term Review (MTR) conducted in June 2007, a fourth component was added to strengthen the core functions of the Ministry of Environment and support the renovation of its staff.

26. Following the political crisis in March 2009, OP 7.30 on “dealing with de facto governments” was applied. Due to the context of OP 7.30 and the adoption of an Action Plan in 2009, an exception was granted to allow continuation of Component 1, while the remaining three Project components were suspended.

27. The original components were revised and re-activated as part of the AF approved by the Bank in 2011. The revised components were as follows:

28. **Component A: PA and landscape management (IDA: US$ 16 million)** (across 2.7 million hectares including three forestry corridors and one pilot landscape) - including surveillance, conservation infrastructure investment and piloting of integrated management approaches in one landscape and support to the institutional reform of Madagascar National Parks (MNP);

29. **Component B: Local community support and development (IDA: US$ 14 million)** (approx. 90,000 households and over 1,000 grassroots community organizations) - including monitoring of safeguards implemented under EP3, implementation of compensation for communities surrounding two

new forest corridors, mitigation of remaining conflicts around established PAs, and support to community based organizations to increase involvement in PAs management notably through the community based forestry management contracts;

30. **Component C: Sustainable financing mechanisms for PAs (IDA: US$ 9 million; GEF: US$ 10 million)**- including a US$10 million endowment to FAPBM from GEF, ecotourism infrastructure development / Public-private Partnership (PPP) investments to optimize the generation and use of tourism revenue to support the PA network, and development of market mechanisms (carbon finance and other payments for environmental services); and

31. **Component D: Project management (IDA: US$ 3 million)** - including Project implementation, coordination, supervision, monitoring and evaluation.

1.9 Other significant changes

Restructuring

32. The project experienced ten restructurings, four of which incorporated significant changes to adapt project implementation to both identified shortcomings of original project design as well as the major disruption caused by the protracted political crisis that developed in 2009 (Table 1).

Table 1. Restructurings of EP3

Restr. date	Appr. Level (* if signif.)	Chg. to Design	Chg. to fin'g	Chg. to Impl. Arrang.	Chg. to Closing Date	Chg. to RF	Comment and background
04/01/ 2008	**VP (*)**	**Number of components increased from three to four; change to RF (indicators); reallocation of proceeds.**	No	No	No	**Yes**	This RP follows MTR in June 2007.
01/12/ 2009	CD	Reallocation of proceeds.	No	No	No	No	--
12/18/ 2009	CD (*)	**18 months extension to June 2011; Reduced project scope: finance PA costs and safeguards action plan.**	No	No	**Yes**	No	This RP follows the political crisis, and senior management decision to tackle safeguard issues.
06/15/ 2011	CD	6 months extension to December 2011.	No	No	**Yes**	No	To minimize PA and safeguards financing gap before effectiveness of AF.
10/12/ 2011	**Board (*)**	**3 years extension to December 2014; AF; Substantial change to components and simplification of inst. Arrangements, change to RF (PDO and indicators)**	**Yes**	**Yes**	**Yes**	**Yes**	Exception to OP7.30; Focus on PA management, safeguards and sustainable financing.

05/28/ 2013	CD	Change in disbursement categories.	No	No	No	No	--
02/26/ 2014	CD	**Allow law enforcement activities for precious woods; change in scope of components; change in disbursement categories; change to RF (indicators).**	No	No	No	**Yes**	--
06/30/ 2014	CD	No	No	No	No	No	Allow continuation of law enforcement activities.
11/30/ 2014	**VP (*)**	**12 months extension to December 2015; change to RF (PDO level indicators and revision of some targets); reallocation of proceeds.**	No	No	**Yes**	**Yes**	The Bank resumes normal operations following the elections in December 2013 and extension allows to finance MNP and precious woods activities while eventual new operations are prepared.
12/20/ 2015	CD	Reallocation of proceeds to create a livelihood compensation sinking fund at FAPBM.	No	No	No	No	--

33. EP3, which supported two thirds of the established network of national parks, originally was scheduled to close in December 2009. Following the MTR in 2007, the project was restructured into four core components to better align activities and indicators with national priorities. This restructuring also provided the needed resources for the implementation of environmental and social mitigation measures, leading to the preparation of eleven social safeguards plans. Following the political crisis of 2009, an assessment carried out by the World Bank in the context of applying OP 7.30 concluded that the reputational risk to the Bank that would result from the suspension of EP3 activities was unacceptably high. As a result, the restructuring in 2009 authorized implementation of an Environmental and Social Safeguards Action Plan and allowed continuation of a limited number of activities linked to PA management (the other three project components were dropped).

34. As the political crisis continued into 2011, the rationale to extend the project closing date and provide more resources through AF was supported by the assumption that ending the project would cause the immediate suspension of surveillance measures across 1.9 million hectares of PAs, including 28 established national parks and one newly created forest corridor, as well as the termination of social safeguard activities for 26,000 households. This posed a particularly grave risk to the country's environmental assets, given the increased pressures from illegal logging and poaching that had resulted from the political instability. The Government of Madagascar was unable to cover the financing gap, while donors were unlikely to commit funds given the prevailing political uncertainty.

35. Following Board approval in 2011, the AF provided bridge financing to 33 PAs (four additional PA were included to the ones supported by the original project) covering 2.7 million hectares, with a focus on surveillance and implementation of safeguards-related activities. Four additional PAs were included: two national parks in the northeast where illegal logging was the most intense and two forestry corridors with high potential to generate carbon revenues. In addition, the AF was designed to support the creation

of sustainable financing mechanisms and the promotion of longer-term community development. The AF was expected to address in the situation in the remote rural areas surrounding the 33 PAs, where around 200,000 households live in absolute poverty. Institutionally, the AF was structured to be implemented without the direct involvement of the central government, which had not been recognized by the African Union (AU) and the international community.

Community support through sustainable cotton private sector partnerships around Mikea PA

36. As part of EP3, in 2008 an agreement was reached for a grant from the Japanese Social Development Fund (JSDF) in the amount of US$ 1,875,650 (TF-93177), but approval of the grant was delayed by the Bank's suspension of disbursements. The grant agreement was eventually signed on June 13, 2012. The objective of the project was to pilot environmentally sustainable cotton production, and to establish a cotton-to-garment value chain. The grant recipient was the Wildlife Conservation Society (WCS). The project was implemented in the cotton growing areas adjacent to the Mikea National Park in southern Madagascar. As designed, the project's strategic link with the objectives of EP3 was to improve the incomes of the cotton farmers in order to reduce the pressure of communities on the resources of the Park. Additionally, the development of organic production systems would reduce the use of chemicals affecting the health of communities and the overall environment.

Addressing governance challenges related to precious woods

37. In light of the deleterious impact of precious wood illegal logging as well as the EP3 AF legal covenant stipulating that the Government shall not repeal or waive the Decree prohibiting illegal extraction and export of precious woods, the Bank agreed to support the Government in its endeavor to combat illegal logging. A non-lending technical assistance (TA) (P144062) was then the Bank's first attempt to find practical ways to improve environmental governance, having come under criticism for financing biodiversity conservation in a poor governance context. As part of the TA, and following extensive local consultations, the Bank agreed to allow the use of EP3 AF proceeds to undertake three technical studies to provide necessary analytical information to formulate a detailed national action plan to dispose of illegal precious wood stockpiles: i) a legal study identifying options available under the law for seizing and disposing of felled rosewood and ebony; ii) an inventory and labeling feasibility study; and iii) a disposal options and feasibility study. The studies helped to fill the information gap on the costs and methodological best practices for various possible courses of action, taking into account the political context at the time.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

38. **Soundness of background analysis.** Preparation of EP3 was rich in background analysis and knowledge of the sector and was partially guided by the experience and lessons learned from the implementation of the predecessor projects EP1 (1992-1996) and EP2 (1997-2002). The lessons taken into consideration, to various degrees, were (i) the need to pursue a streamlined program approach to avoid fragmentation of efforts, a lesson that was taken on only partially, owing to the inherent difficulty of the multi-donor program; (ii) the importance of improved coordination with other programs, in particular the Bank-financed rural development project (PSDR), which turned out to be challenging; (iii) to incorporate

performance-based implementation mechanisms and explicit measures to address governance weaknesses, a lesson taken up to a relatively good extent; and (iv) in terms of desired operational features, the recommendation to justify design features through a robust economic analysis and a decision-oriented M&E system, also implemented to a good extent.

39. **Adequacy of government's commitment and stakeholder consultations.** In 2004, government commitment was strong. Government participated in project design, which coincided with a period of political stability and a high-level government vision and decisions aimed at the protection of the country's biodiversity, of which the most important was the President's commitment to increase the area under effective conservation from 1.7 to 6.0 million ha, formally announced at the World Parks' Congress in Durban in September 2003. This positive environment combined with the challenge to support the ambitious government target had a significant influence on project design. Consultations were carried out during the preparation of the required safeguards instruments, but the PAD has no information on stakeholder consultations regarding the design of the project.

40. **Assessment of the project design.** The objectives of EP3 were complex and required the collaboration and coordination of a large number of stakeholders and sectors. The range of activities to be supported was very broad and the surface to manage very extensive, increasing the project's complexity. This was partly the consequence of the encouraging political momentum, driving expectations upwards, and the fact that the Project was linked to a multi-phase and multi-donor government program, tying the project to a broader agenda. In fact, project design was aligned with the government's vision, which was in itself rather ambitious and broad ranging[8].

41. In addition, the intended and well-justified focus on supporting the conservation of Madagascar's unique biodiversity was somewhat expanded by the overall poverty reduction objectives imposed by the framework and guidelines of the Heavily Indebted Poor Countries (HIPC) initiative and IDA grants. As a result, one of the challenges of Project design was to generate strong links between environmental benefits and poverty reduction. In 2011, the AF Project Paper involved a substantial simplification of project objectives, institutional arrangements and results indicators.

42. Within this design scenario, one element that had later on strong implications for implementation was the fact that all activities related to community development would not be funded by EP3 but rather by companion projects such as the Rural Development Support Project. This was possibly a sound decision at the time but was later affected by both the Bank's suspension of the Rural Development Support Project (and the exception granted to EP3) together with the internal restructuring of the Bank that replaced the single ESSD with two operationally independent sectors (agriculture and environment).

43. **Assessment of risks.** While the project's risks were rated 'Substantial', the assessment of 'critical risks' in the project document did not foresee the risk of political instability. This was an eventuality that, if taken into account, could have led to a more resilient design for example by envisaging activities at the

[8] The government's contribution to Project design was framed by a Letter of Environment Policy based on the Environment Charter.

local level that could continue even in the case of a change in government. No risk was deemed 'high'. A number of risks were deemed 'substantial' such as: low capacity of local communities, mitigated through capacity building; low ability of the Ministry to promote environmental stewardship across sectors, mitigated through the strengthening of environmental units in sector ministries; inability of the Ministry to streamline existing environmental institutions, mitigated through an institutional assessment that would link budget decentralization to a consolidation process at central level; the lack of required funding in trust funds, mitigated through the effort to develop sustainable financing mechanisms.

2.2 Implementation

44. Implementation was marked by high political turmoil, following the relative stability during project preparation, and the World Bank's response both at the senior level and at the technical level. The project had 10 restructurings which reflected the proactive stance on the part of the task team operating in a difficult and changing environment.

45. **Political instability.** Shortly after the restructuring that had followed the Mid-Term Review (MTR), in the onset of the political crisis of 2009 resulted in the unconstitutional departure of President Marc Ravalomanana and the installation of a *de facto* transitional government which was not recognized by the international community. In the case of the Bank, this led to an assessment of the portfolio in line with OP/BP 7.30, and the subsequent suspension of the implementation of various programs and projects, including EP3. In 2011, a transition government was put in place but election only took place in December 2013. The election did not result in a clear majority in parliament and the President had to build an alliance of parliamentarians that would be willing to support him. Between April 2014 and the closing of EP3, in December 2015, two different Prime Ministers and two different Ministers of Environment were in office.

Factors that gave rise to problems.

46. **In face of political turmoil, the Bank consistently decided to stay engaged in the sector.** This was a deliberate decision, involving senior management and the technical team, which however exposed the project to considerable failure risks. In May 2009, an internal Bank assessment of the implications of OP 7.30 for the Project concluded that the continued suspension of Project activities would: (i) leave approximately one-third of Madagascar's PAs (covering 1.9 million hectares) and the forest corridors under creation at risk without environmental protection, (ii) place approximately 26,000 households without access to socio-economic mitigation measures. The assessment also concluded that the reputational risk for the Bank was unacceptably high and needed to be addressed. Consequently, the Project was granted exceptional conditions by the Bank, which allowed for partially resuming implementation and an extension of the closing date to June 2011. In line with the decision to stay engaged, the conditions imposed by OP 7.30, and the lessons learned from EP3, the Bank agreed to the design and approval of a 3-year AF, for a total amount of US$52 million (US$10 million from GEF4 and US$42 million from IDA15).

47. **The decision to suspend activities and dialogue with senior government officials.** In particular, the Bank: (i) suspended disbursements on all projects (with the exception of some human development lifeline activities which the continued activities under the project were deemed part of) between March 2009 and May 2011 (22 months); (ii) applied OP 7.30 between March 2009 and December 2013 (57

months).[9] In addition, the Bank suspended dialogue with government and teams on the ground were not in contact with senior government officials. The Bank may at this stage have underestimated the importance of government ownership when it decided to proceed with the project restructuring without allowing the government to implement activities directly (a political move dictated by management, more than a technical one). Thus, implementation of the AF was affected by very low government ownership, whose role as implementing agency had been banned by the restrictions imposed by the application of OP 7.30. This meant, for example, that key aspects of the community development approach, such as the official approval of management transfers between government and local communities, took place at a slower pace.

48. **An over-ambitious AF and a departure from government capacity building.** While the objective of the project had been simplified, the scope of the project was extremely ambitious, with US$42 million to be disbursed in a limited span of 3 years (eventually four, following the extension of closing date in 2014). The Bank possibly overestimated the capacity of the PCU and implementing agencies to carry out the required activities. This anticipated a level of disbursement never experienced before during EP3. Moreover, while the design of the AF was characterized by simplified operational and institutional arrangements, these were at the same time far from ideal and departed from the primary objective of strengthening all the entities involved in the NEAP, one of the pillars of the three-phase program supported by the Bank.

Factors that contributed to mitigate the risks of failure.

49. **Close implementation support.** The Bank's overall supervision efforts benefited by the fact that all four Task Team Leaders (TTL) responsible for the project (a relatively small number considering the nearly 12 years of implementation) were senior environmental specialists/economists who were based in Madagascar. Because they were based in country, implementation support was undertaken as an ongoing activity, but was at the same time formalized through regular multidisciplinary missions and comprehensive reporting through well prepared Implementation Status and Results Reports (ISRs). This presence of the TTL also allowed rapid responses to critical situations.[10] As described in the fiduciary section, project supervision included adequate support to the TTL in dealing with the complexities and problems associated with procurement, financial management and especially safeguards.

50. **Mid-Term Review in 2007.** After 3 years of implementation, at the MTR (June, 2007), project performance was well below expectations and considered to be affected by a combination of design flaws (over-ambitious targets, institutional complexity, geographic dispersion, and lack of budget for safeguard compliance), as well as a series of internal institutional, governance and managerial weaknesses, all of

[9] The application of OP7.30 was particularly strict with the first emergency projects being approved in November 2012 (after 38 months).

[10] The project team dealt proactively with huge challenges, with mixed success. Examples include the renewal of project staff contracts on the night of the coup, to allow continuity in technical dialogue; the efforts to reform the forestry staff; to argue for the contracted Madagascar Protected Areas staff to be given the right to bear arms and to harmonize their terms and conditions vis-à-vis forestry staff; to rotate cases of illegal logging away from known corrupt judges.

which challenged the realism and operational consistency of project design. As a result, an initial restructuring was processed, scaling down a number of results indicators, adding a component to strengthen core institutional functions, as well as a sub-grant category to support safeguard compliance under OP 4.12 (Involuntary Resettlement).

51. **Adaptive safeguards supervision.** With the resumption of disbursement in 2009, the implementation of an Environmental and Social Safeguards Action Plan was authorized for a limited range of activities under a single project component related to PA management through a US$12 million budget. Moreover, with the AF a much greater emphasis was placed on social safeguard compliance (i.e. compensation).

52. **An AF with a narrower focus.** The Bank identified critical areas for attention and provided the elements for a much focused project. The AF included a comprehensive restructuring of EP3 that among other things included formalizing the cancellation of the three suspended components of EP3. The PDO, components and activities were modified in line with the exception granted under OP 7.30 to allow a refocusing of project activities for the enhanced protection and sustainable management of targeted PAs. As part of the alignment with OP 7.30, major institutional changes were introduced, removing government participation from project implementation, while enhancing the roles of parastatal or private institutions such as FAPBM, MNP (formerly ANGAP) and two international NGOs, CI and WCS.

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

53. **M&E design.** Project design included the establishment of a robust system for monitoring project activities, consistent with the indicators in the Results Framework. However, the original PDO was overly ambitious and complex including five distinct outcomes. Some of the outcomes were open to interpretation, i.e. protection and management of critical biodiversity resources could include species, representation, targeted habitats and ecosystems. Also, 'mainstreaming conservation' was poorly defined. The alignment of the original PDO to the PDO indicators was weak with, for instance, no PDO indicators directly capturing mainstreaming. Furthermore, the number of indicators was exceptionally high, 15 PDO indicators (PAD pp. 52-58), and placed an undue burden on the M&E system. Many of the original targets were overambitious, requiring subsequent adjustments during implementation, particularly at the time of the restructuring under the AF, where a considerable number of indicators were dropped in order to align the M&E system with the revised PDO and components. The PDO was revised in the 2011 restructuring to become more focused but an important outcome on poverty/livelihoods was not included while the project continued to have a component on livelihood support to the local population.

54. **M&E implementation.** The M&E system was managed by CELCO (the Project Coordination Unit /Cellule de Coordination), which was renamed the *Unité de Coordination de Projet Environnemental* (UCPE) under the AF, and was headed by a specialized professional. The M&E framework was updated on a regular basis by the dedicated specialist. Reporting by implementing agencies, particularly MNP, was of mixed quality, making implementation of the M&E difficult. The numerous indicators were difficult to track on a regular basis. Following the political crisis, in March 2009, there did not appear to be a follow up on indicators and it was not until the additional financing in 2011 that a revised results framework was available. During the additional financing, reporting on the safeguards and community development activities was slow and often inaccurate, requiring periodic revisions.

55. **M&E utilization.** The M&E framework played a marginal role during much of project implementation. This was partly due to reporting delays and data inaccuracies attributable to the implementing agencies (e.g., information on safeguards and community development activities and information on infrastructure construction progress). This marginal role of the M&E system may have also resulted from the PCU's coordination focus on delivering a very large number of outputs spread across many implementing agencies.

2.4 Safeguard and Fiduciary Compliance

2.4.1 Procurement

Compliance Rating: Unsatisfactory

56. As explained previously, the project was implemented in two distinct phases: an initial phase covering the period between 2004 and 2011 ("original project"), and a second phase, AF, covering the period between 2012 and 2015. Overall procurement performance for the entire project is rated Unsatisfactory.

57. During the implementation of the "original" project, procurement performance was rated Moderately Satisfactory, mainly due to the low implementation rate of the procurement plan and the lack of proactivity in preparation of procurement activities. Performance was affected by several issues: occasional noncompliance with the procurement guidelines by the Regional Directorate for Environment and Forests (DREF); difficulties with the verification of land titling (which is a Bank requirement for the construction of buildings, such as Park interpretation centers); slow preparation of technical specifications and Terms of Reference; limited participation and interest by service providers (supplier, enterprises) caused by the earlier experience with EP2, during which payments had been slow and irregular; and lack of coordination between technical and procurement teams within the CELCO.

58. During the implementation of the AF, procurement performance was rated Unsatisfactory. Procurement activities encountered a number of issues related to the recruitment processes and the execution of contracts. In 2013, a senior procurement consultant and a procurement technical assistant were recruited to support the procurement team to improve compliance with the Bank procurement guidelines and to reduce delays. Initial procurement arrangements were revised during project implementation; in particular, the management of the majority of infrastructure contracts planned for MNP was delegated to the Intervention for Development Fund (*Fond d'Intervention pour le Développement*, FID) project PCU, which was more familiar with management of infrastructure construction works. However, construction works experienced delays even under this arrangement.

59. Concerning activities related to the management of precious woods stockpiles, feasibility studies were conducted on time. However, the subsequent field operations to undertake the counting and physical marking of seized stockpiles were initiated with major delays, and some activities were initiated only 45 days before the project closing date. In spite of this, except for a limited number of sites for which the team conducting the marking could not obtain access authorization, the activities were completed according to the contract.

60. Ex-post reviews were conducted regularly throughout project implementation. Recommendations were formulated in the mission Aide Memoires with the aim of improving the management of procurement matters (e.g. compliance with the proposal/offer preparation timelines, payment periods, and inadequate charging procedures with respect to the IDA funds). Every mission verified the compliance with the recommendations of the previous mission and monitored the preparation and approval of Annual Work Plans and Procurement Plans for the corresponding period. The ex-post review of providers' contracts by the Bank led to the identification of a number of episodes suggesting noncompliance with the Bank procurement guidelines.

2.4.2 Financial Management

Compliance Rating: Moderately Unsatisfactory

61. Financial Management performance varied between Moderately Satisfactory and Unsatisfactory. The main reasons were questionable and ineligible expenditures identified resulting mainly from undocumented expenditures. The 2014 EP3 financial statements audit pointed at anomalies with respect to financial management and procurement procedures as part of the implementation of component B, especially the income-generating activities around the PAs managed by MNP. An independent external "value for money" audit carried out during the October 2013 - July 2014 period identified US$ 2 million in potential ineligible or questionable expenditures, and the subsequent review by the fiduciary team carried out between June 2014 and November 2015 confirmed that a total of 885,054,310 Ariary (US$ 307,000 equivalent) were not disbursed in accordance with Bank rules and procedures. These expenditures were declared ineligible. A notification letter was sent to the Government including a request for reimbursement. Following a downward adjustment in the amount deemed ineligible and progress achieved in the resolution of the issue (i.e. notification sent to the Government and letter received from the Government with commitment to pay by June 2017, although at the time of this ICR repayment had not begun yet), the final Financial Management rating was Moderately Unsatisfactory.

2.4.3 Safeguards

62. The project was rated throughout as "B – partial assessment" in terms of environmental category, and four safeguards policies were triggered at approval: Environmental Assessment (OP 4.01), Natural Habitats (OP 4.04), Indigenous Peoples (OP 4.10) and Involuntary Resettlement (OP 4.12). There was no significant deviation or waiver from the Bank safeguards policies and procedures during preparation and implementation. Three safeguards instruments (Environmental and Social Management Framework (ESMF), Process Framework (PF) and Indigenous People Plan (IPP)) were prepared by the borrower, approved by the Bank and disclosed in-Country and through Infoshop during project preparation.

Environmental Aspects

Compliance Rating: Satisfactory

63. At the end of project implementation, the environmental safeguard rating was Satisfactory. The PAs had been delimited in compliance with the conservation management plans developed with local communities based on the sensitivity of ecosystems and biodiversity found in individual sites.

64. In compliance with the ESMF, an Environmental Impact Assessment with an Environmental and Social Management Plan (ESMP) was prepared for each PA created or extended with project financing. This was done using a participatory approach to delimit and elaborate the zoning in the PA. Mitigation measures were developed and appropriately implemented by the project, with the aim of preserving ecosystems and maintaining the existing biodiversity. The environmental safeguards documents were disclosed in the project area and through Infoshop before the implementation of project activities. Local communities actively and satisfactorily participated in the management of the PAs. Conservation measures were implemented, including: community surveillance groups; preparation of fire breaks to avoid wild fires in the PAs; ecological and biodiversity surveys. The ESMPs developed and implemented by the project were appropriate and sufficient to reduce the identified risks and potential impacts.

Social Aspects

Compliance Rating: Moderately Unsatisfactory

65. At the end of project implementation, the social safeguards rating was Moderately Unsatisfactory.

66. In compliance with the ESMF and the Process Framework, 13 safeguard plans were prepared, approved by the Bank, and disclosed in Country and through the Infoshop. In addition, the Government of Madagascar submitted a commitment letter, accepted by the Bank, that all creation and extension of PAs in the country would be conducted in a manner that would not cause any physical displacement of communities and local populations. Therefore, no Resettlement Policy Framework (RPF) was prepared for the project. The 13 safeguard plans were prepared following a participatory approach to identify all impacts on communities due to the access restrictions and the loss related to the restricted collection of natural resources in the PAs by the local populations. Mitigation measures to reduce the impacts on the daily activities of local communities were proposed, and local communities were meant to play an active role in the restoration of economic well-being.

67. The financing strategy for social safeguards intended to piggyback on parallel rural development projects. EP3 was prepared in parallel with three other Bank financed projects: (i) the Rural Development Support Project; (ii) the Community Development Project; (iii) the Rural Transport Project. The social safeguard aspects of EP3 were designed in a way that all impacts on communities caused by access restrictions to natural resources in the EP3 project zones and the consequent community development activities would be financed and implemented by these three 'companion' projects. During project implementation, supervision missions confirmed that local populations living inside PAs were maintained in their own villages. The process of PAs delimitation was done through strong public consultations led by the project itself. However, despite all the efforts and coordination put in place across the different projects, implementation was affected by conflicting project implementation schedules, interventions and programming which in the end resulted in no funds available for the social activities from the other projects. Since the original EP3 had allocated no budget to the social safeguard dimensions in the cost table (i.e., to finance the activities in the safeguard plans such as community development activities and compensation of household income lost due to the access restrictions to the natural resources), at MTR the project was restructured to reallocate US$ 2 million to finance the mitigation measures to reduce all impacts of access restriction to natural resources with the activities identified in the safeguard plans.

68. Since the budget allocated at MTR was insufficient to implement the restoration of economic activities for project-affected households, the AF contributed US$ 6 million in additional budget. The initial safeguards plan survey had identified 26,952 Project Affected People (PAPs) (Table 2). A survey conducted in 2015 showed that 4,028 PAPs dropped out of project-financed income restoration activities (because of relocation, migration, death or other reasons). Thus, the project ended up supporting the restoration of economic activities to the 22,924 PAPs in and around supported PAs. In general, the principles and directives of the process framework and the safeguards plan for each PA have been respected. The project-financed activities aiming at restoring the economic well-being of households affected by the access restrictions due to the creation of the PAs have been implemented. However, the survey conducted in 2015 showed that the affected households have not seen their incomes restored to the levels before the creation of the PAs. The audit noted that 7,819 of the 22,924 identified PAPs saw their incomes restored to appropriate levels, resulting in a 34 percent compensation rate.

69. The results of resettlement audit on the implementation of safeguards plan in each PA have been approved by the Bank and are considered coherent.[11] Detailed activities with action plans and budget were identified for every household that has not yet seen its income restored to a level commensurate to the one before the creation of PAs. With the aim of supporting the realization of such activities beyond project closure, EP3 AF proceeds equivalent to US$ 2,900,000 were transferred to a Sinking Fund managed by FAPBM during the last EP3 restructuring in December 2015.

Table 2. Summary of PAPs situation

PA	Number of PAPs identified by the safeguard plan survey (1)	Number of PAPs having dropped out of restauration economic activities (relocated, migrated, deceased, other reasons) (2)	Number of PAPs fully compensated From resettlement audit (3)	Number of PAPs still requiring compensation (1)-(2)-(3)
MNP (10 PAs)	11,058	1,366	3,962	5,730
CAZ	2,500		1,488*	1,012
COFAV	10,947	2,287	1,116	7,544
Makira	2,447	375	1,253	819
Total	**26,952**	**4,028**	**7,819**	**15,105**

* This figure is the sum of (2) and (3) for CAZ

70. Implementation of safeguard instruments in the sector has recorded an improvement on the management of social and environmental dimensions to be taken into account to ensure the correct implementation of the Conservation Management Schemes of PAs and to improve understanding in terms

[11] According to paragraph 24 of OP 4.12 and to paragraph 16 of BP 4.12: “The borrower is responsible for adequate monitoring and evaluation of the activities set forth in the resettlement instrument. The Bank regularly supervises resettlement implementation to determine compliance with the resettlement instrument. Upon completion of the project, the borrower undertakes an assessment to determine whether the objectives of the resettlement instruments have been achieved. The assessment takes into account the baseline conditions and the results of resettlement monitoring. If the assessment reveals that these objectives may not be realized, the borrower should propose follow-up measures that may serve as the basis for continued Bank supervision, as the Bank deems appropriate”.

of ownership of PA management by the PAPs and potential threats in terms of PA integrity in the future. Following one of the project activities, the Government now counts on background studies that would allow it to develop national standards for the implementation of social safeguard aspects related to the management of PAs (including those financed by the project).

2.5 Post-completion Operation/Next Phase

71. Madagascar's unique biodiversity is not only a world heritage but can be a growth engine favoring poverty reduction efforts and shared prosperity. While the World Bank's 26 years of uninterrupted engagement reaches a key milestone with the closing of the Environment Program, efforts to preserve biodiversity while promoting better livelihoods are as important as ever. The Bank is currently pursuing a suite of options to support the agenda, including: (i) the sustainable management of resources at the landscape level; (ii) the support of a national strategy for Reducing Emissions from Deforestation and Forest Degradation, and fostering conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+) and the development of forest carbon purchase deals with international donors; (iii) technical assistance on dealing with precious woods.

72. The Bank and GOM have agreed to the preparation of the US$ 65 million Sustainable Agriculture Landscape Project (P154698/P157909), which to a large extent is expected to fill the vacuum created by the closing of EP3. The project PDO is to improve agricultural productivity and management of associated natural resources in selected landscapes, a multi-sectoral objective grounded in the principle that the sectoral approaches adopted so far, of which the Environment Program is a notable example, are ill-suited to address risks that are found outside the boundaries of the sector. The Environment Program implementation showed that pressures on PAs and forests come from low agricultural yields, weak enforcement and rule of law, and little participation of decentralized government. EP3 implementing agencies, such as MNP, FAPBM, CI and WCS have only partial control over these factors. Deforestation has to be dealt with by giving sustained development opportunities to local communities, while agricultural productivity relies on effective watershed planning and water resources management. In the past, these problems have not been dealt with in an integrated way. The vision for the future of watershed management is to strengthen the links between agriculture and environment, both on the Malagasy and the Bank sides. The design would contemplate the full spectrum of the agriculture-environment and development-conservation nexus.

73. Achieving sustainable financing of conservation at scale will take time and in the short term, the country should exploit the opportunities linked to carbon finance. The work to establish a forest carbon reference level done under EP3 showed that there is a largely unexploited potential for generating carbon credits from avoided deforestation and from degraded forests restoration. The Bank is providing ongoing support to scale up REDD+ capabilities in Madagascar. Through a grant made available through the Forest Carbon Partnership Facility (FCPF), the Bank is supporting Madagascar in reinforcing institutional capacity for REDD+, develop a national strategy, develop a national reference level for emissions from deforestation and forest degradation and other aspects necessary for implementing REDD+ at a national scale. This support has allowed the country to enter the Carbon Fund pipeline for a potential Emission Reduction Purchase Agreement (ERPA) of US$ 50 million. If successful, this ERPA will provide important co-financing to the Sustainable Agriculture Landscape Project mentioned above.

74. With respect to local community development, the AF has played a key role in financing income restoration for local communities, in spite of mixed results on the ground. To ensure a smooth transition after project closure, funds were reallocated in December 2015 to a sinking fund managed and set up at FAPBM that will allow implementing entities managing relevant PAs (MNP, CI, WCS) to support sustainable revenue generating activities (rice growing, chicken farming, honey production, fishing, cattle ranching, and other generally small scale activities linked to the agricultural, livestock and fishery sectors) benefitting households whose livelihoods have been affected by the enforcement of PAs. It is estimated that livelihood restoration activities will amount to about US$ 2 million and will benefit an estimated 15,000 households (this was estimated based on the experience with previous safeguards work financed by the EP3 Support project). The sinking fund, established in December 2015, is governed by agreements between the FAPBM and the PAs managers (MNP, CI, WCS) establishing the eligible activities to be financed, the calendar of disbursement, and the reporting procedures. A portion of the sinking fund will be used to cover fund management fees by FAPBM and fees of implementing agencies, and to hire the services of a third party auditor that will provide quarterly reports to Government and the World Bank.

75. Following the EP3 support to the implementation of the CITES action plan for the species of Dalbergia and Diospyros from Madagascar, the World Bank, in partnership with the World Resources Institute, is finalizing an assessment of the scientific needs to correctly identify and monitor the status of these species, a critical condition for the CITES action plan and the eventual development of sustainable silvicultural activities. The assessment, which constitutes the first systematic effort in this direction, has revealed significant gaps in the knowledge and available tools needed to implement the CITES action plan and to support the sustainable management of precious hardwoods in Madagascar. But it has also revealed that a solid foundation exists for overcoming each of these gaps. The country has a unique opportunity to harness the engagement and commitment of Malagasy experts and their international partners in a coordinated effort to develop the information base and tools that will be required to help transform the government's aspirations into a structured and organized industry that makes a significant contribution to the national economy. If the required resources can be mobilized, the successful establishment and implementation of such a program would be the first of its kind in the developing world.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Rating: Substantial

76. The relevance of the *original project objective* remained *substantial* throughout the project. The objective clearly identified the need to contribute to the improvement of the quality of life of the population while improving management of biodiversity and mainstreaming conservation into sector programs. This was in line with the Madagascar Action Plan (MAP), established in 2004, and is in line with the National Development Plan (NDP) 2015-2019, approved in 2014, as well as GEF's Biodiversity Conservation Focal Area. Specifically, the NDP 2015-2019 puts an accent on "inclusive growth and territorial anchoring of the development process" (Axis 3 of the NDP) and on "harnessing the value of natural capital and strengthening resilience to disasters" (Axis 5). The NDP recognizes that the fast pace of environmental degradation brings a heavy cost in terms of water, transport and agricultural infrastructure. Moreover, law 2015-003, which updates the Malagasy Environment Charter established the general principles for environmental

management in the country and confirmed the key role PAs play in the country's sustainable strategy. Finally, the Environmental National Policy for Sustainable Development, stresses the importance of environmental conservation for promoting healthy livelihoods (e.g., by improving food security and access to energy, and by reducing environmental health risk factors). The relevance of the original project objective is substantial vis-à-vis the Country Assistance Strategy (2007-2011), which aimed at better management of the environment and explicitly referred to the establishment of 6 million ha of PAs, more transparent management of forest concessions, and better mainstreaming of environmental considerations into national policies. Relevance was substantial with respect to the Interim Strategy Note (FY12-FY13), which explicitly refers to the continued protection of at least 32 national parks and to the social safeguards work. Finally, relevance is substantial vis-à-vis the Systematic Country Diagnostic (SCD), which identifies the importance of closing the link between conservation and livelihoods.

77. The relevance of the *original project design and implementation* is *modest*. The complex design proved difficult to implement and led to redesigning part of the project components to mirror the government's priorities.

78. The relevance of the *revised project development objective* remained *substantial* throughout the implementation of the additional financing. Its relevance is substantial to the MAP and the NDP. Its relevance is also substantial vis-à-vis the country's Interim Strategy Note, approved in 2011 and natural capital is a key opportunity for shared prosperity in the SCD elaborated in 2015. The objective identified the need to target conservation efforts, an issue that is important today in light of the very limited, both nationally and globally, financial resources for conservation.

79. The relevance of the *AF design and implementation* is *substantial.*[12] The rationale for the AF stated that the political situation in Madagascar was not conducive to the use of other lending tools, such as a repeater project or a new project. Termination of Bank support to PAs and conservation in Madagascar was not considered a feasible option given the status of the country's natural resources as a global public good and the international community's obligation to contribute to their conservation and their importance for the rural poor. As such, AF was selected as the preferred mechanism. Justifying a higher rating on this dimension is the fact that the design of the additional financing put a strong accent on critical PAs, community development and safeguards. Implementation, moreover, has showed adaptability and flexibility in using project proceeds to address important governance issues related to the precious woods crisis. On the other hand, the design removed the government from actual implementation, drastically reducing ownership by the client.

80. In terms of the GEO, the project was fully aligned with the Bank emphasis on climate change mitigation and adaptation, particularly with respect to the rural land use sectors of forestry and agriculture. The vision promoted by the project, namely linking conservation to economic growth and to rural poverty

[12] It is important to note how the PDO of the additional financing dropped the reference to improving livelihoods, somehow reducing the relevance of the PDO to the Bank's and the GoM's focus on reducing poverty. It has to be noted however that the additional financing has a much more developed livelihood improvement component compared to the original project.

reduction through nature-based tourism development, remains highly relevant to the Bank's current natural resources management strategy.

3.2 Achievement of PDOs and GEOs

Rating: Modest

Original PDO: To improve the protection and sustainable management of critical biodiversity resources at the field level, mainstream conservation into macroeconomic management and sector programs, and facilitate the establishment of sustainable financial mechanisms for the environment, thus contributing to the improvement of the quality of life of the population. (Overall achievement: Modest; Period: 8/2004 – 12/2011; Disbursement: US$40.29 million).

81. While monitoring and evaluation under this project has been particularly challenging, the assessment of each outcome is based on the progress of targets and indicators for which data is available. When possible, additional information has been used to provide more detail and a better evaluation of project outcomes.

To improve the protection of critical biodiversity resources at the field level

82. This objective was achieved to a "modest" extent. The results of the Bank's support to the environmental program are impressive in terms of establishment of PAs. The project was instrumental to the increase of PA surface from 1.6 million ha in 2004 to over 5 million hectares in 2009, enabling the formalization of a major effort toward habitat and biodiversity preservation. Specifically, EP3 contributed to the materialization of the Durban Vision (September 2003). The project did less well in terms of representativeness of ecosystems: the level of representativeness of habitats in the system of PAs went from 87 percent in 2004 to 91 percent in 2009 (rather than 96 percent as originally envisaged). Moreover, PAs continued to be threatened by slash-and-burn practices and by illegal exploitation of timber and other natural resources (though at a significantly lower rate than other non-PAs).

To improve the sustainable management of critical biodiversity resources at the field level

83. This objective was achieved to a "modest" extent. Despite the effort shown in the maintenance of areas of natural forests, and the relative success in conserving PAs, the results obtained on the management of forests and reduction of the process of degradation of natural resources outside PAs were disappointing. The efforts made to promote sound forest management, reforestation, and combating forest fires were ineffective in reducing or stabilizing the deforestation rate, or in discouraging the use of wood for fuel or charcoal production. The annual rate of deforestation rose from 1 percent during the initial phase of EP3 to 1.9 percent from 2010 to 2013, considerably higher that the target of 0.44 percent by the end of the project. PAs however were less affected than other areas (0.2-0.5 percent versus 2.4), demonstrating the relative success of the project in protecting the most critical ecosystems. The current deforestation rate is equivalent to a loss of 122,957 ha of forest per year. The highest deforestation rates have been recorded in Menabe (4.05 percent), Atsimo Andrefana (2.80 percent) and Alaotra Mangoro (2.14 percent) Regions.

To mainstream conservation into macroeconomic management and sector programs

84. This objective was achieved to a "modest" extent. On the one hand, a substantial number of projects and program conformed to the MECIE law on EIA (69 percent in 2009, against a target of 50 percent), but on the other hand, sector laws and policies have not adopted environmental sustainability as a key objective. Moreover, training programs for government staff by the Ministry of Environment have progressed slowly (with 41 percent of the target being achieved between 2004 and 2009).

To facilitate the establishment of sustainable financial mechanisms for the environment

85. This objective was achieved to a "modest" extent. The creation of the FAPBM as a private institution was part of the design of the initial phase of EP3. FAPBM was created with the aim of generating sustainable financing for the PA system. The US$ 7.5 million of the original grant helped capitalize the FAPBM and place it as a key player in the sustainability of PAs management.

86. The project supported eco-tourism activities. However the political crisis and insecurity have affected the number of tourists. The number of tourists went from 88,000 in 2004 to 69,000 in 2009 (against a target of 134,000).

To contribute to the improvement of the quality of life of the population

87. This objective was achieved to a "negligible" extent. While during the period 2004-2011 the project did not contribute in any substantive way to livelihood activities, the AF was key in covering a financing gap for community development and safeguards work. In spite of this, the project outcomes were largely unachieved. Only 42 percent of households adjacent to PAs have benefitted from park, natural resources and livelihood activities. This was in large part due to implementation issues: MNP's limited capacity to perform community development work, and lack of appropriate control on service providers leading to less than optimal allocation of resources and ineligible expenditures.

88. Households located adjacent to the PAs supported by the project benefited directly from technical and financial support to improve their livelihoods. The number of subprojects awarded was 25,777 in 2014 and 27,182 in 2015, compared to the original target of 90,000 (revised down to 86,000). In the same years, compensation subprojects to eligible PAP benefited 7,840 and 9,245 PAP respectively, representing 63 percent and 74 percent of the annual target of 12,414 beneficiaries. During interviews conducted in 2015, households living around only 5 of the 26 PAs surveyed expressed appreciation for the quality of the support provided by the project, including training, inputs, materials and tools. In terms of indicators the number of direct project beneficiaries was 46,305 against a target of 129,605, of which female beneficiaries were 20,000 against 65,000 targeted. In addition, the number of households adjacent to the PAs that have benefitted from park, natural resource and livelihood activities totaled 27,182 against a target of 86,000 households.

89. In addition, the majority of beneficiaries also participated in conducting community patrols (CLP). Although CLPs represent a valuable project initiative that contributed to raise awareness and increase understanding of the value of conservation among communities surrounding the PAs, participants of community patrols highlighted the risks faced when encountering illegal activities (hunters, miners, or precious wood loggers) and the low remuneration received during patrols (5,000 Ariary/day).

90. Ecological monitoring, patrol activities, participatory ecological restoration and reforestation all helped recipients to become accountable for the conservation of biodiversity and ecosystem services, and to strengthen their capacity to undertake these activities. As a result, unsustainable practices such as slash and burn and bush fires have largely been abandoned by the population targeted by the project in buffer zones surrounding the PAs, providing evidence of a positive behavioral change in favor of biodiversity conservation. As noted above, deforestation has increased more in areas not targeted by the project than in areas targeted by the project.

91. A positive example of sustainable livelihood improvement is the community support through sustainable cotton private sector partnerships around the Mikea PA, supported by the JSDF grant added in 2012. The project's attempts to promote organic cotton production around the Mikea PA were largely unsuccessful due to the unusually high levels of pest infestation during the cotton growing season, which made impossible the total elimination of chemicals. Still, the project has made substantial progress in promoting uptake of integrated pest management (IPM) practices, which allowed the cotton produced to be marketed under the African Better Cotton Initiative (BCI). Helvetas, the institution hired to implement key project components, is not only promoting this alternative among more than 2,000 cotton smallholder producers, but it also has identified a potential buyer for BCI cotton, thus improving the likelihood that the project will achieve its objective of developing a sustainable value chain. As part of this effort, a farmer training center is being constructed in partnership with a local entrepreneur (Bionex) on land provided by the rural Comune of Ankililaoka. The project closed in June 2016.

Revised PDO. To enhance the protection and sustainable management of targeted PAs. (Overall achievement: Modest; Period: 3/2012 – 12/2015; Disbursement: US$36.35 million)

To enhance the protection of targeted PAs.

92. This objective was achieved to a "substantial" extent. The AF supported the definitive creation of an additional 1.7 million ha of PAs. By 2015, a total of 122 PAs were gazetted in Madagascar, of which 43 are managed by MNP, 63 NAPs are administered with support of international organizations and 16 are administered by the Ministry of Environment. From the initial ecosystem representation rate of 87 percent, the expansion of the PA system has allowed the rate to increase to 100 percent by 2015. Although the project allowed to control threats to the biodiversity of Madagascar, they still remain high. The number of points of wild fires detected by satellites in PAs reached a high of nearly 2000 in 2013. While the number had fallen to 990 in 2015, it was still very high. The socio-political and economic crisis of 2009 affected the pace of progress and conservation efforts significantly, while poaching, gold and precious stones, and illegal logging of precious wood continue to challenge the biodiversity of the PAs.

To enhance the sustainable management of targeted PAs.

93. This objective was achieved to a "modest" extent. In spite of the project's support, the PA network remains largely dependent on external financing.

94. The AF supported a study for an institutional reform aiming at the financial sustainability of MNP management efforts. The study identified a number of recommendations at the institutional level (e.g. role of the State and governance of MNP) and operational level. Some of the study's recommendations were

taken up, e.g. the increase in PA entry fees. Other recommendations, e.g. diversification of management strategies by type of PA, outsourcing of ecotourism activities, have not yet been followed.

95. The AF contributed an additional US$ 10 million to the FAPBM endowment, bringing it to an impressive US$ 50 million. The performance of FAPBM in the management of the invested capital (5.3 percent return from capital investments abroad in 2014; Source: FAPBM, Annual Report 2014) has earned the Foundation considerable confidence of donors in the implementation of its activities. During the AF, more specifically by the end of 2014, the added value generated by the FAPBM was estimated at US$ 5,725,780. The Contribution of GEF/IDA, totaling US$ 17,500,000 (which represents 34.8 percent of the total Capital of the FAPBM to date) has contributed US$ 1,992,571. With these funds, the Foundation has been able to finance 40 percent of the recurrent costs of the 10 PAs managed by MNP.

96. Thanks to the support of EP3, a number of carbon projects have made their way into actual carbon deals. The Makira carbon project, the most advanced of the REDD+ projects in Madagascar, is located in the Eastern humid forests in the northeast of the country. The project is managed by WCS and is expected to have a 30-year life span, with an estimated 38,000 tons of avoided carbon emissions during this period. A REDD+ sale of about US$ 400,000 was concluded in 2014 with Microsoft. The CAZ carbon project is also located in the country's Eastern humid forest and is being managed by CI. The CAZ project has certified over 3 million Emission Reductions (ER), of which the BioCarbon Fund (BioCF) has agreed to purchase 430,000, for an equivalent of US$ 1.5 million (expected to be finalized in 2016).

97. In terms of eco-tourism, the number of visitors was stable at around 150,000 visitors per year (after having recovered from the 2009-2010 drop). In 2012-2013 the political environment was still very tense, with elections taking place in December 2013, and in 2012-2013 the protracted crisis was having consequence on security with a number of accidents involving tourists (sometimes in PAs) taking place. The project had envisaged support to Public-Private Partnerships in eco-tourism but partly owing to the crisis and low capacity in MNP, no tourism concession has been fully achieved during the project's course.

GEO: To contribute to the preservation of the quality of regional and global commons through improved natural resources management and biodiversity protection in critical ecological regions, defined as national PAs and their corresponding buffer zones and corridors. (Overall achievement: Modest)

To contribute to the preservation of the quality of regional and global commons.

98. This objective was achieved to a "substantial" extent. The network of PAs supported by the project is important not only in terms of area, but also in terms of diversity, because it affords broader representation of the different ecosystems that comprise the natural wealth of Madagascar. From the initial ecosystem representation rate of 87 percent, the expansion of the PA system has allowed the rate to increase to 91 percent by 2009 and to 100 percent by 2015.

To improve natural resources management and biodiversity protection in critical ecological regions, defined as national PAs and their corresponding buffer zones and corridors.

99. This objective was achieved to a "modest" extent. See explanation in related sections above.

Summary

100. Overall, 27 percent of the project indicators exceeded target, 22% achieved target and 57% were not achieved. The table below summarizes the overall indicator achievement.

Table 3. Indicators achievement

	Total indicators	**Achieved**				**Not achieved**	
		On target		**Over target**			
PDO	15	6	40%	3	20%	9	60%
GEO	3	0	0%	2	67%	1	33%
Int. Result Indicators	33	5	15%	9	27%	19	58%
Total	51	11	22%	14	27%	29	57%

101. Because some of the project objectives under each of the PDOs and the GEO overlap, one can identify five key objective categories: (i) biodiversity protection; (ii) mainstreaming conservation into macroeconomic management and sector programs; (iii) sustainable management for the environment; (iv) sustainable financing; (v) improvement in the quality of life of the population. The bearing of each of outcome category to the original PDO, the revised PDO and the GEO is summarized in Table 4 below.

102. Overall achievement of the objectives was modest. EP3 contributed substantially to achieving the objectives stated in the Durban Vision. Over 860,000 hectares of PAs (five new PAs and six expansions) were developed under EP3. In addition, the project provided support to the management of 1.9 million hectares of PAs, representing nearly one third of the network, including 60 percent of national parks (28 parks covering 1.6 million hectares) and 10 percent of new PAs (the COFAV covering 0.3 million hectares). Safeguards were implemented for 26,000 households, but only 60 percent of targeted PAPs were compensated. EP3 supported the initiation of sustainable financing sources for the network, notably through capitalization of the Foundation and preparation for the entry of Madagascar into the carbon market.

Table 4. Outcome categories under PDOs and GEO of EP3, importance to PDO/GEO and degree of achievement

Outcome category	**Original PDO**	**Revised PDO**	**GEO**	**Outcome achievement**
(i) Biodiversity and PA protection	High (explicit)	High (explicit)	High (explicit)	
Achievement	*Modest*	*Substantial*	*Substantial*	*Substantial*
(ii) Mainstream conservation into macroeconomic management and sector programs	High (explicit)	Negligible	Negligible	
Achievement	*Modest*	*n/a*	*n/a*	*Modest*
(iii) Sustainable management of biodiversity and PAs	High (explicit)	High (explicit)	High (explicit)	
Achievement	*Modest*	*Modest*	*Modest*	*Modest*
(iv) Sustainable financing	High (explicit)	High (implicit)	High (implicit)	

Achievement	*Modest*	*Substantial*	*Substantial*	*Substantial*
(v) Improving the quality of life of the population	Modest (explicit)	High (implicit)	Negligible	
Achievement	*Negligible*	*Modest*	*n/a*	*Negligible*
Overall achievement of objectives	***Modest***	***Modest***	***Modest***	***Modest***

3.3 Efficiency

Rating: Modest

103. Efficiency is rated "modest" for both the original project and the AF.

104. As shown in Table 5, the Net Present Value (NPV) of the project is slightly negative, with a value US$ -4.6 million. This value however switches sign, i.e. the NPV is nil, for a slightly higher global value of biodiversity, i.e. US$ 3.425 per hectare instead of US$ 3 per hectare (a 14 percent increase) assumed at appraisal. The economic analysis shows how the assumed value may actually be quite conservative and how a US$ 5 per hectare may be a better benchmark.

105. Total project costs, including conservation management costs and forgone revenues for farmers and communities faced with access restrictions, came to about US$ 305 million. Costs were higher than originally envisaged. This was in large part due to the increase in forgone revenues for farmers compared to the counterfactual without project, since PAs experienced much lower deforestation rates than non-PAs. Forgone revenues from unsustainable timber production also contributed to this difference.

106. Total project benefits are estimated at US$ 300 million. The most important contribution is from watershed management services provided by the area under protection. REDD+ carbon revenues, which came towards the end of the period of analysis, contributed relatively little to benefits, but are likely to become a growing source of revenues for conservation efforts.

Table 5. Ex-post cost/benefit of natural forests conservation (US$ million)

Present value (10%, 15 years)	**Protected Areas**	**Conservation Sites**	**Management Transfer sites**	**Total**
Management costs	-48.3	-33.3	-8.5	-90.0
Tavy[13] foregone revenues	-64.9	-74.7	-	-139.6
Fuelwood foregone revenues	-20.2	-23.9	-	-44.1
NTFP foregone revenues	-10.4	-15.7	-5.2	-31.3

[13] Tavy: conversion of forest into agricultural land through slash and burn

Total costs	**-143.8**	**-147.6**	**-13.7**	**-305.0**
Biodiversity conservation	32.5	39.4		71.9
Eco-tourism	58.7			58.7
Watershed protection	60.7	87.0		147.7
REDD+		0.6		0.6
Sustainable fuelwood collection			8.5	8.5
Sustainable NTFP collection			13.1	13.1
Total benefits	**151.9**	**127.0**	**21.6**	**300.4**
NPV	*8.1*	*-20.6*	*7.9*	*-4.6*
IRR	--	--	--	--

107. From a financial point of view, one can identify three key stakeholders: (i) Madagascar National Parks; (ii) farmers and local communities; (iii) the global community.

108. With respect to MNP, results are mixed. While the Foundation has surpassed its capitalization target of US$ 50 million, a slump in the financial markets has meant that the revenues generated have been less than originally expected. Moreover, the political crisis has held back much of the tourism development potential of the country, which means in turn that this source of endogenous financing has not grown as much as it should have. As a result, MNP today still depends on international partners for the financing of about 80 percent of its recurrent costs. With the closing of the AF, MNP faces a financing gap of Euro 10 million over the next five years.

109. From the local communities' standpoint, the analysis shows that net costs to farmers and local communities could have been in the order of US$40 million. This was due to relatively high forgone slash and burn and unsustainable timber harvesting earnings (compared to the without project scenario). This estimate excludes the efforts made to compensate farmers both directly through EP3-financed community development support activities and indirectly through the support provided by companion projects such as the Social Protection and the Rural Development Support IDA-financed projects. However, the economic analysis shows that even if 100 percent of the additional financing project proceeds used for livelihood development and safeguards are accounted for, this would not be enough to fully compensate the opportunity cost imposed by the project on communities.

110. From the point of view of global biodiversity, it is estimated that the Project produced sizeable benefits, i.e. in the order of US$ 70 million (see Annex 3). This compares very well to the GEF financing which totaled US$ 17.5 million over the project period.

3.4 Justification of Overall Outcome and Global Environment Outcome Rating

Overall Outcome Rating: Moderately Unsatisfactory

111. The *overall outcome of the original project (2004-2011) is rated moderately unsatisfactory*, based on substantial relevance of objectives, modest relevance of design and implementation, modest achievement of objectives, and modest efficiency. Although partially justified by the prevailing positive environment at project preparation (including the Durban Declaration), project objectives and design were assessed as overambitious, a major quality-at-entry factor which negatively affected implementation. Achievement of outcomes has been mixed. On the one hand, the project effectively increased the areas

under protection, but on the other hand, it only partially achieved the mainstreaming objective and the sustainable financing objective.

112. The *overall outcome of the AF (2012-2015) is rated as moderately unsatisfactory*, based on substantial relevance of objectives, modest relevance of design and implementation, modest achievement of objectives, and modest efficiency. The realistic focus of the objective is still relevant today, but the exclusion of government staff from implementation was a major drag on ownership. Achievement of outcomes has been mixed. The AF effectively allowed the continued protection of targeted PAs during a very difficult historical period for the country. The project also allowed to increase the FAPBM endowment fund and provide valuable support for REDD+. Moreover, the project allowed the Government to tackle, for the first time, the important governance challenges around precious woods. However community development and safeguards implementation faced serious shortcomings and represented a major constraint affecting the project's overall outcome.

113. In general, the outcomes of EP3 can be summarized as having achieved significant levels of conservation with limited relevance for development. Project support contributed substantially to impressive levels of conservation in PAs, but with insufficient results in areas surrounding the PAs, and limited progress in addressing threats. In spite of the achievements in biodiversity conservation, the project was affected by a number of design shortcomings and implementation delays that affected the overall outcomes, particularly in relation to a number of the original indicator targets, which by the time of the MTR had been recognized by both the Bank and the counterpart as having been too optimistic.

114. Efficiency results are mixed. Sustainability is threatened by a lack of strong political will, limited capacity-building for the administration, and most importantly the shortcomings in developing self-financing mechanisms and achieving the necessary interaction between PAs and communities. Other than ecotourism, few, if any, meaningful results were achieved regarding the development of economic opportunities valuing biodiversity and making it an engine of sustainable economic development. The influence of the political and economic crisis resulted in the increased utilization of natural resources more as a safety net than a sustainable source of improved livelihoods.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

115. **Employment:** The rate of 'official' unemployment in Madagascar remains low (2.2 percent). Unemployment is primarily an urban phenomenon, reported as 5.5 percent in towns and only 1.4 percent in rural areas. In areas peripheral to the PAs, the unemployment rate is very low thanks to activities related to ecotourism: employment in hotels and restaurants, provision of guide services, production and sale of agricultural products and accessories. However, the results of the sub-projects compensation or income-generating activities (sub-projects of social safeguards, sub - CLP, VOI, AP mature, community ecotourism projects) are far from being satisfactory.

116. **Health:** Malaria, diarrhea and respiratory diseases are the main diseases in areas peripheral to the PAs. Tangible impact of the project on population health included opportunity to access medical treatment

for people living around PAs. In general, the health care services are funded by PA visitor entry fees or funds from sub-projects.

117. **Education:** The impact of the construction and rehabilitation of schools in the outlying areas of PAs is significant at the local level. Sometimes accompanying measures such as the training of teachers and the establishment of school canteens are indispensable. Concerning environmental education, since 2007 the rate of integration of environment into the curriculum remains stable: 50 percent in 25 percent in private institutions and public institutions.

(b) Institutional Change/Strengthening

118. The initial phase of EP3 included considerable resources to support institutional strengthening and reform, spanning from agencies directly involved in environment and biodiversity conservation at the central and regional level, as well as other public institutions, where efforts to mainstream environmental aspects were actively pursued. However, these much-needed activities were unfortunately discontinued with the enforcement of OP 7.30, as support to public institutions was suspended.

119. Following the exception granted to the project, the AF was designed to maintain the status quo in terms of the well performing implementation arrangements of EP3, while at the same time responding to the prevailing political instability in Madagascar. The existing PCU (known locally as CELCO) which had been operating autonomously since the beginning of the political crisis, including during the exception phase (January 2010 – June 2011), has been proven to be relatively competent and staffed with IDA-financed professional specialists. As such, CELCO remained in place as the implementing unit for the AF.

120. Two additional project implementing entities were included in AF design to undertake operational activities. MNP – an institution that is legally and financially autonomous and that works at arms-length from the administration – carried out activities in 30 national parks, while the FAPBM – an equally autonomous entity – was expected to carry out activities aimed at strengthening its own technical and management systems and provide financing to 10 PAs using the revenues from the Endowment Fund. In addition, a subset of activities was implemented by the private sector, namely the three main international conservation NGOs (CI, WWF and WCS) involved in the management of three corridors.

121. Specifically, the IDA contribution to the AF was managed by the existing CELCO, which was further strengthened and supported by the Bank. The IDA funds were channeled *directly* through the PCU to contract the autonomous project implementing entities (MNP and the civil society organizations - CI, WWF and WCS), and *indirectly* through FAPBM.

122. The significant changes regarding the institutional arrangements for the different phases of EP3 are illustrated in Table 6.

Table 6. Evolution of institutional arrangements of EP3

Institutions	EP3	EP3 Extension	AF
CELCO/UCPE	X	X	X
ANGAP/MNP	X	X	X
DGF	X	X	
DGE	X		
ONESF	X		

ONE	X		
FAPBM	X	X	X
WCS			X
CI			X

123. The provision of equipment helped to improve the general working conditions within the implementation agencies, both from the technical and managerial point of view. Time-saving, good reporting, staff motivation were among the main benefits. However, it is important to mention that the acquisitions suffered from inadequate operation and maintenance.

124. At the decentralized level, the project made efforts to support the integration of the environmental dimension through the creation and operation of regional environmental boards at the national and regional levels (24 out of the 20 planned); 22 environmental cells have been set up against the 15 planned. Out of a forecasted number of 61 environmental permits, a total of 65 permits have been issued in the context of the implementation of the MECIE Decree.

125. The Steering Committee of the project (CPP) was introduced on January 30, 2012 according to order No. 1395/2012/MEF on the establishment of the CPP of the AF of the PE3. The Committee was composed of 12 members, including the Coordinator of UCPE which provided its secretariat. Following the recommendations of the Bank, the number of CPP members was increased to 17. In addition to 12 representatives of the Ministry of environment and forests, the Ministry of finance, MNP, the Foundation and three NGOs, five other members were appointed, including three representatives of the three Corridors (Makira, CAZ and COFAV), one each for the National Tourism of Madagascar and the communities around 30 parks in the MNP network.

126. **The creation of FAPBM** as part of the project is a key feature and represents a highly relevant factor towards achieving the PDO. The creation of the FAPBM as a private institution was included in the design of the initial phase of EP3. It was created for the sustainable financing of the PA system. Thus, its performance is closely linked to the performance of both the initial EP3 and the subsequent AF, since US$ 7.5 million of the original credit helped establish the FAPBM capital and an additional US$ 10 million were allocated for the financing of 10 PAs as part of the AF. Its creation is therefore aligned with the national policy to increase the area of PAs. The Foundation's demonstrated effectiveness and efficiency in the management of the invested capital (11.9% return on capital investments) has earned the Foundation considerable confidence of donors in the implementation of its activities.

127. The relevance of FAPBM has been reduced by the fact that the sustainability of the actions financed by the resources mobilized is not entirely guaranteed, mainly due to its limited financial coverage and to a lack of integration of conservation with development**.** Given that FAPBM is assessed not only by financial outputs, its performance is affected by the absence of actions to attend the basic needs of local communities. The creation and operation of the FAPBM therefore follows (or continues to follow) an approach to conservation which has already shown as being ineffective to ensure the integrity and sustainability of the individual PAs and the entire system.

(c) Other Unintended Outcomes and Impacts (positive or negative)

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

128. A beneficiary survey was conducted from October to December 2015. The survey covered 32 PAs and 766 beneficiaries participated in the survey. The survey concluded that beneficiaries were satisfied with the overall project results. However, the majority of PAPs were not satisfied with the compensation activities.

129. A stakeholder workshop was held on December 22, 2015. Over 200 people participated in the workshop, including Government, technical and financial partners, international and national NGOs, civil society and private sector representatives. The majority of the participants agreed that creation of PAs was relevant. Nevertheless, 19 percent of the participants argued that PAs were not well-managed and a number of improvements in terms of management were crucial to ensure sustainability and local community ownership.

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

The risk to development outcomes is High

130. The main risks are linked to the political fluctuations that took place during the life of the project, which rendered policy dialogue difficult. Moreover, a variety of factors generated negative perceptions on the part of stakeholders (e.g. slow progress on community development activities generated frustration by farmers and forest users). Had the Bank closed the EP3 Support project in 2009, as originally scheduled, it would have exposed the country's unique biodiversity and would have placed at risk nearly 20 years of successful Bank support for the protection of Madagascar's biodiversity assets. Without a continuation of this support, permanent losses of the unique global patrimony are likely to occur, arguably giving rise to an emergency situation that will increase the reputational risk to the Bank as existing environmental and social safeguards will lapse, and completion of safeguards for all PAs supported by EP3 will not be achieved.

131. The AF was expected to build on this experience of the Bank in the environment sector in Madagascar to optimize project efficiency and manage the risks associated by establishing adequately robust implementation arrangements, specifically by ensuring that key institutions involved in project implementation were independent and had the technical and fiduciary capacity to fulfill their project related responsibilities.

132. MNP sustainability: sustainability remains uncertain, because it is obvious that the organization can survive only if revenues from ecotourism can cover research costs and other expenses. The revenue generated through the FAPBM are still far from sufficient. Although the operational sustainability of the Foundation itself is guaranteed through the returns of the endowment fund, it has to be reflected on the real impacts of actions on sustainable development, and therefore on the integrity of the PA system. The main potential risk that could affect the sustainability of the Foundation would be the interference by external actors (such as the State or Technical and Financial Partners). Good governance in the financial and technical management of the Foundation (transparency, accountability and participation), and active fundraising for the identification and development of new sources of financing are key factors to the long-term contribution of the Foundation to the sustainable conservation of Madagascar's biodiversity.

133. EP3 has been affected by bad governance (widespread corruption), which has undermined its ability to contribute to the eradication of illegal trafficking, mainly of precious woods, in PAs. The political crisis in 2009 led to the non-recognition of the government by the international community (2009-2013). Thus, funding was suspended and the project was restructured in 2009 and 2012. The pursuit of the intervention rationale of the three Bank-funded phases was disrupted. It has contributed significantly to the major risks of potentially rapid deterioration of the PDOs and GEOs.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Unsatisfactory

134. The initial preparation of EP3 was strongly influenced by three major factors (i) the prevailing optimism (and challenge) resulting from the Durban Declaration; (ii) the guidelines imposed by HIPC and IDA policies for countries such as Madagascar; and (iii) the fact that EP3 represented the last phase of the Bank's support to Madagascar's EP.

135. Despite the commendable preparation efforts to accommodate these somewhat opposing elements, project design was clearly impacted and resulted in some weaknesses. These included overly ambitious objectives, targets, and institutional arrangements, an unrealistic project scope, and the need to develop the required link between environmental benefits and poverty alleviation as required by IDA and HIPC.

(b) Quality of Supervision

Rating: Moderately Unsatisfactory

136. The Bank proactively identified and addressed threats to the achievement of relevant development outcomes (see Section 2 for details). The team proactively identified and resolved threats during a turbulent period when the project faced a very dynamic context which included a political crisis in 2009, the establishment of a transition government in 2010, a new (elected) government in 2014 and a government reshuffling in 2015 (the project was overseen by at least five ministers of environment) (see also section 2). Proactive project supervision is exemplified by the ability to tackle governance issues related to precious woods traffic and by the ability to make progress on key issues such as REDD+ readiness. Sector/Global Practice Management provided adequate support to the team with timely guidance (e.g., to deal with slow progress on community development and infrastructure construction during the AF) and continued attention. Supervision budget was not reported to be a constraint.

137. However, the decision to resume disbursement after the political crisis and to extend the closing date to June 2011, and the subsequent decision to process an additional financing and extend the closing date by three years (and then one more year), while not working directly with government, increased substantially the risk of failure. These decisions were deliberate and taken in order to avoid the (higher) risks of inaction, but put the project against a very difficult reality. After 2009 the project faced increasing

difficulties including: weak government ownership; virtually absent law enforcement by forest agents; increased pillage of natural resources from PAs; very little private sector appetite to invest in ecotourism infrastructure. All these factors limited the project's chances to achieve its objectives.

(c) Justification of Rating for Overall Bank Performance

Rating: Moderately Unsatisfactory

5.2 Borrower Performance

(a) Government Performance

Rating: Unsatisfactory

138. The Government's ownership and commitment to the successful implementation of EP3 can be split in two dimensions: (i) a high-level political dimension; and (ii) an operational dimension. High-level political commitment was marked by the signature of the 2003 Durban Declaration, with its engagement to increase the PAs network, and the stated intention to curb the illegal exploitation of precious woods. The government also contributed to the ambition of the EP3 agenda. At the operational level, honoring of these commitments fell very much short of expectations, as evidenced by the negligible public budget allocated to PAs management, the very limited number of forest law enforcement agents detached to parks, the reported corruption in dealing with offenders of the forest laws at the judicial level, the inadequate implementation of the law on land management transfers to local community (GELOSE, from its French acronym), among other things. The political crisis of 2009, and the resulting decision of the Bank and other development partners to withdraw financing have contributed to this weak performance.

(b) Implementing Agencies Performance

Rating: Moderately Unsatisfactory.

139. The project was implemented by CELCO (which changed its name to UCPE for the AF), ANGAP (which changed its name to MNP in 2008), ONE, FAPBM, WCS and CI. CELCO/UCPE performed in an unsatisfactory manner, particularly in terms of readiness for implementation (hiring of the Director of Operations was done way into the project implementation), timely resolution of implementation issues (action to address delays in infrastructure work took time), procurement issues (noncompliance with the procurement guidelines, slow preparation of technical specification and terms of reference), fiduciary issues (particularly related to ineligible expenditures on community based support), adequacy of monitoring and evaluation arrangements (reflections on the results framework were often an afterthought). ANGAP/MNP also performed in a unsatisfactory way. While implementation of the conservation activities work plan took place as envisaged, delays kept accumulating requiring periodic amendments to the subsidiary agreement with UCPE. MNP showed tangible weaknesses in implementing and supervising infrastructure construction works and in community development activities. FABPM performed satisfactorily, particularly in terms of its ability to consult regularly with MNP and in coordinating with other partners. WCS and CI performed in moderately satisfactory way as they executed their contracts in a timely manner.

(c) Justification of Rating for Overall Borrower Performance

Rating: Unsatisfactory.

6. Lessons Learned

140. **Multi-donor projects may impose constraints that could affect quality at entry.** The EP3 project was built on the government-led EP3 multi donor program. The latter was characterized by a very ambitious and all-encompassing set of objectives, reflected in the project's ambitious and overly complex results framework. For future projects, it would be important to clearly identify a narrow and well defined area of the government program that the Bank would support.

141. While operating under OP 7.30, the Bank should favor the use of fast-track operations such as under the provisions for "Situations of Urgent Need of Assistance or Capacity Constraints" rather than additional financing of existing ones. Although possibly justified by the prevailing circumstances, the Bank used the additional financing instrument to implement a project with objectives, components and institutional arrangements substantially different from the ones in the original operation. This resulted in a markedly different project following the restructuring. This also meant that government expectations about its involvement in the project were frustrated and created a tension that the additional financing phase had to deal with until closing. Going forward, the closing of the project according to the timeline, and the development of an emergency operation would provide the team with a more effective dialogue with government.

142. **Government ownership and public sector capacity is an essential element of project implementation.** The EP3 project was managed by parastatal organizations: initially ONE, then CELCO and finally UCPE. The AF, moreover, required that neither the central nor the local government could implement project activities. As a consequence, learning by doing and capacity building through the project mostly benefitted staff that did not work for the government and resulted in a weakening capacity of the public sector. This also had negative impacts on project implementation, such as the limited presence of forest law enforcement agents in PAs and the slow progress in management transfers. The choice to work 'at arm's length' with government was ill-conceived. As a recommendation, future projects in the sector should seek implementation arrangements that involve government structures directly, while strengthening their capacity. Governance constraints force us to think in a new way how to engage with government at national level and at local level, placing environmental issues more squarely at the center of the Government agenda.

143. **Bank support for biodiversity needs to be reconciled with the Bank's inability to use IDA funds for livelihood compensation.** It was not possible to pay for compensation for lost access to PAs through the EP3 project proceeds. The team identified companion projects that would facilitate compensation through community development activities. This however turned out to be an inappropriate solution as the different projects followed different implementation schedules. Even the efforts made under the additional financing to bring conservation and livelihoods restoration activities were affected by implementation difficulties. Going forward, it is important for the Bank as a whole to reflect on how the application of safeguard policies can be made compatible with the Bank's efforts to protect global biodiversity.

144. **Since poverty and natural resource degradation are closely linked, economic development needs to be part of all conservation efforts, and local communities need to have economic incentives to engage in conservation activities.** The project has done an unsatisfactory job at addressing the needs of local communities. The AF had established that economic development support would be provided by conservation implementing agencies, such as MNP. These often lack the experience and knowledge about what works and what doesn't in development. The arrangement turned to be an inadequate one and led to severe delays. The original project had delegated economic development activities to companion projects, but this turned to be ineffective as implementation schedules did not align. As a recommendation, a shift towards a more integrated approach of conservation and development partnership is necessary.

145. **Related to the above, efforts to promote conservation should be clearly embedded in a national development strategy.** EP3 was designed and implemented under the assumption that the country's natural resource base can "pay its own way". This may be true in the long term but in the short term, natural resources management requires government engagement and a clear budget commitment. Going forward, it is crucial that the government allocates sufficient human and, if possible, financial resources to achieve conservation goals. At the same time, it is important that conservation goals are set in a way that contributes to poverty alleviation.

146. **Community participation is instrumental in reducing pressures on natural resources.** Community participation in natural resources management has been underutilized in EP3 and has not produced the expected results. Despite the inherent complexities, the Bank must make all possible efforts to identify effective and suitable models of integration between PAs and communities.

147. **Addressing the illegal exploitation of flora and fauna species requires a set of skills often found in enforcement agencies.** EP3, particularly following the approval of the AF, supported the efforts of the government to curb the traffic in precious woods. It was thanks to the collaboration with Interpol and the World Customs Organization that the satellite surveillance activities financed by EP3 could help track shipments of precious woods from Madagascar. Future projects dealing with natural resources poaching should be designed in partnership with organizations such as the ones that form the International Consortium on Combating Wildlife Crime (ICCWC), of which the Bank is a partner.

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

148. The ICR was shared with the government and the implementing agencies, who were overall in agreement with the ICR conclusions and commended the team for having taken a balanced approach in assessing the Bank's and borrower's performance. Counterparts agree with many of the identified lessons learned and consider these very useful as the government embarks on a new set of operations in the sector.

149. It was noted that, at the time of conception of the environment program, the government probably had not invested enough time and resources in understanding the poverty-environment linkages in and around PA and forestry corridors. What resulted was a program that had a bias towards conservation and against community livelihoods. The Durban vision was in itself a fruit of this vision. Going forward, it is important that farmers' livelihoods and poverty reduction be put at the center of conservation strategies. For this, the government needs capacity and resources.

150. It was also noted that the role of decentralized authorities has been underplayed during the design and the implementation of the environment program. The project has relied heavily on central government institutions, on parastatal organizations and on the deconcentrated services of the central administration. This has meant that the project has lacked a territorial anchoring and exchange with local authorities. Preparation of the Sustainable Agriculture Landscape Project should take into account the role of mayors and region chiefs from the outset, build their capacities and involve them in project implementation.

151. Implementing agencies noted that conservation and development should not be mixed together but kept separate and be treated with separate interventions, given the different skill sets required to tackle the issues in each. Conservation/development mega projects, in their opinion, should be avoided. A counter-argument to this comment, which goes against one of the lessons learned identified above, is that when conservation and development intervention are dealt with separately, coordination may be a challenge, as experienced in the early phases of the EP3 Support project. Implementing agencies also noted that conservation efforts should look at the whole system of natural resources to be conserved (i.e. PA and forests outside PA). Weaknesses in the management of one side will necessarily impact the other side.

152. The financing gap left by the closing of the EP3 project has been noted. The international community has a role to play, following its support to the Durban declaration in 2003 and the ensuing financial support. Inaction by the international community carries the risk of losing an important portion of the world's biodiversity. PA will be exposed to pillage just week after the payment of salaries of park rangers are suspended.

153. Implementing agencies noted the rushed preparation of the AF (preparation started in February 2011 and Board approval took place in June 2011. The borrower, affected in its capacity to interact with the Bank by OP 7.30, was unable to contribute and had to accept the design of a project that it considered nevertheless vital for the country's environmental management. More in general, the application of OP 7.30 seem to have missed an opportunity by putting administration and politics on the same side. It was noted that there cannot exist a strong project with a weak administration.

154. Purchases of equipment by the project are often sub-utilized or damaged. A case in point is the purchase of the four speed boats in 2015. These have not been utilized since the delivery, owing to the lack of budget for their operation, and they risk being damaged by lack of use and maintenance.

155. The document, it was argued, has missed a reflection on the Bank's exit strategy. The exit strategy for the EP3 Support project should have been an issue for discussion between the Bank and the government during project preparation and should have been explicitly dealt with in the project documents.

Annex 1. Project Costs and Financing

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

Third Environment Program Support Project - P074235			
Components	**Appraisal Estimate (USD millions)**	**Actual/Latest Estimate (USD millions)**	**Percentage of Appraisal**
2004-2011			
1. Forest Ecosystems Management	18.00	9.44	52
2. Protected Areas Management	13.50	16.77	124
3. Environmental Mainstreaming	8.50	5.40	64
4. Governance Strengthening	..	8.40	..
2011-2015			
1. Protected Areas and Landscape Management	16.00	19.76	124
2. Local Community Support and Development	14.00	8.92	64
3. Sustainable Financing Mechanisms for PAs and Landscapes	8.90	8.90	100
4. Project Management, Implementation, Monitoring and Evaluation	3.10	3.95	127
Total Baseline Cost	**82.00**	**81.54**	99
Physical and Price Contingencies[14]	n.a.	0.00	0.00
Total Project Costs	**82.00**	**81.54**	
PPF	n.a.	0.00	0.00
Total Financing Required	**82.00**	**81.54**	
Madagascar Third Environment Program Support Project - P074236 and P113976			
Components	**Appraisal Estimate (USD millions)**	**Actual/Latest Estimate (USD millions)**	**Percentage of Appraisal**
2004-2011			
1. Protected Areas Management	9.00	8.83	98
2011-2015			
3. Sustainable Financing Mechanisms for PAs and Landscapes	10.00	10.00	100
Total Baseline Cost	**19.00**	**18.83**	**99**
Physical and Price Contingencies	0.00	0.00	0.00

[14] The team tried to reconstruct the value of Physical and Price Contingencies, but the information available and the tables in the PADs were contradictory and inconsistent. For this reason n.a. is used.

Total Project Costs	**19.00**	**18.83**	
PPF	0.00	0.00	0.00
Total Financing Required	**19.00**	**18.83**	

(b) Financing

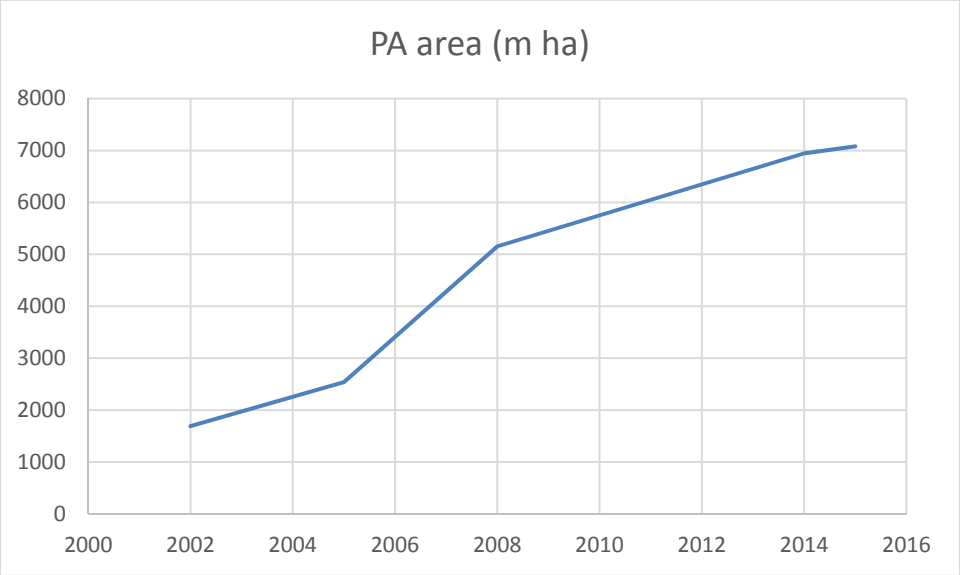
P074235 - Third Environment Program Support Project				
Source of Funds	**Type of Financing**	**Appraisal Estimate (USD millions)**	**Actual/Latest Estimate (USD millions)**	**Percentage of Appraisal**
US: Agency for International Development (USAID)		27.70	n.a.	n.a.
Borrower		29.20	n.a.	n.a.
FRANCE, Govt. of (Except for Min. of Foreign Affairs-MOFA)		8.10	n.a.	n.a.
SWITZERLAND, Govt. of (Except for FOFEA)		5.10	n.a.	n.a.
IDA GRANT FOR POOREST COUNTRY		40.00	81.54	203.85
GERMANY: KREDITANSTALT FUR WIEDERAUFBAU (KFW)		12.40	n.a.	n.a.
UN Development Programme		6.30	n.a.	n.a.
Non-Government Organization (NGO) of Borrowing Country		11.10	n.a.	n.a.
Japan Social Development Fund		0	1.87	n.a.
P074236 and P113976 - Madagascar Third Environment Program Support 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 Facility (GEF)		9.00	19.00	109.00

Annex 2. Outputs by Component

156. Overall, the project has focused on four key issues: (i) biodiversity protection and sustainable management; (ii) mainstreaming conservation into macroeconomic management and sector programs; (iii) sustainable financing for the environment; (iv) improving the quality of life of the population. Each issue is reviewed below. A more detailed review of outputs by components for each of the two key phases of EP3 is provided later on.

Key outcomes

157. **EP3 has contributed to the achievement of Durban Vision** to triple PA area in Madagascar. The graph below shows the evolution of PA area over the last 10 years.



158. **The impact of EP3 activities on ecosystem were substantial.** PAs represent different ecosystems that are unique and built the natural richess of Madagascar. At the beginning of EP3, the rate of ecosystem representativeness was 87 percent. It means 87 percent of Madagascar ecosystems were represented in PAs. This rate increased to 100 percent in 2015. The graph below shows the evolution of the rate of ecosystem representativeness.

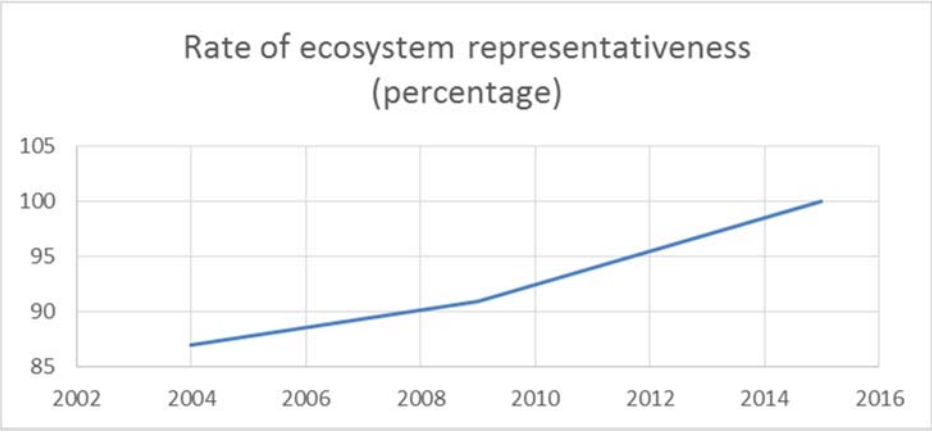


Table 7. PAs supported by AF

PA Name	Area (ha)	PA Type
Ambatovaky	78,139	National Park
Ambohitantely	5,600	National Park
Analamerana	34,700	National Park
Andohahela	76,020	National Park
Ankarana	18,225	National Park
Baie de Baly	79,160	National Park
Namoroka Bemaraha IUCN Category II	156,710	National Park
Bemaraha IUCN Category IV		National Park
Cap Sainte Marie	3,610	National Park
CAZ *	371,000	*Forestry corridor*
COFAV	290,281	Forestry corridor
Forêt de Mikea	184,630	National Park
Isalo	81,540	National Park
Lokobe	1,042	National Park
*Makira**	*372,470*	*Forestry corridor*
Mangerivola	11,900	National Park
Manongarivo	113,822	National Park
Tsaratanana		National Park
Mantadia	16,290	National Park
Analamazaotra National Park		
*Masoala**	*230,000*	*National Park*
*Nosy Manga Be**		*National Park*
Midongy du Sud	192,198	National Park
Montagne d'Ambre	30,812	National Park
Foret d'Ambre National Park		
Nosy Hara	125,471	National Park
Nosy Ve	92,080	National Park
Ranomafana	41,601	National Park
Sahamalaza - Iles Radama	26,035	National Park
Zahamena IUCN Category I	63,898	National Park
Zahamena IUCN Category II		National Park
Zombitse Vohibasia	36,803	National Park
Total	**2,735,037**	

(*Indicates a PAs that was not included in EP3 but is included in the additional financing)

159. **The number of tourists visiting national park system has increased by 5 percent on average.** The 2009 political crisis had a substantial negative impact as tourist visits dropped 50 percent.

160. **Infrastructure has been constructed or rehabilitated,** including offices, interpretation centers, schools, bridges, and water and sanitation infrastructu**re.** The table below shows the status of 16 infrastructure visited during the project evaluation.

Table 8. Status of infrastructure

	Operational	Operational but not sustainable	Not operational	Not completed
Out of 16 Infrastructures visited	11 (68.75%)	1 (6.25%)	1 (6.25%)	3 (18.75%)

Detailed review of outputs

161. The PDO level indicators use throughout the project are listed in Table 9. As can be seen in the table the project had overall a very large number of indicators many of which, as shown in the Data Sheet, were not monitored. PDO indicators were revised four times. The 2008 restructuring was quite substantial, as was the 2011 restructuring, which coincided with the AF. The other changes, in February and November 2014 were much less important.

Table 9. The PDO level indicators throughout the project's life.

	Years											
Project Development Objective PDO	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**	**13**	**14**	**15**
Rate of degradation of forest and wetland resources less than half of the 1990-2000 rate of 0.9% per year (Percentage, Custom)												
Rate of degradation of the forest and wetland cover declining from 0.88% a year to 0.44% a year (Percentage, Custom)												
PAs management efficiency index increases from 41% (baseline) to 55% (mid-term) to 70% by EOP (Percentage, Custom)												
PAs management efficiency index increases from 45% (baseline to 70% by EOP (Percentage, Custom)												
Mangrove cover maintained at 2004 area of 2,209 km2												
Maintenance of coral reef target indicator species (e.g. Ludjanidea family) in all established no-take zones												
Threat Index in the ANGAP PA Network reduced from 107 to 20 (Number, Custom)												
Level of threat in project PAs, threat index (Percentage, Custom)												
Level of threat in project PAs, (number of fires declared)												
Sustainable financing mechanisms including government contribution cover 70% of core staff and operational costs												

of the PA system (baseline: 8%; mid-term: 30%)												
Capital mobilized by Foundation for Protected Areas and Biodiversity - from US$3.7 to US$33.0 million												
Surface of PA network with recurrent costs supported with revenues from the combined project endowment and previous EP3 endowment to the Foundation (ha)												
National park visitor numbers increase 5% annually from the 2003 baseline (1 00,000 visitors)												
Increase of park entrance fees by US$ 670,047 (2003 baseline: US$500,000; mid-term: US$579,000)												
Sustainable NRM (natural resources management) investments generate US$12 million over 5 years (baseline: 0; mid-term: US$ 4 million)												
Number of tourists visiting PAs increasing from 88,000 to 134,000												
Improved voice of communes in PAs management as reflected in representation on ANGAP's Board of Directors (by mid-term) and by the % of CROs complying with their rights and obligations as defined in PA management plans (baseline: 0; mid-term: 50%; EOP: 80%)												
Improved community empowerment in NRM through fully performing GELOSE/GCF arrangements as measured by the % of beneficiary communities who have successfully obtained long-term follow-up contracts after the initial 3 year trial period baseline: 0%, mid-term:70%; EOP: 80%)												
Percentage of revenues from PA entry fees redistributed to community projects surrounding the parks (from 22.5 to 50%)												
Reduction of burned areas to 50% of baseline (650,000 ha a year)												
80% renewal of natural resources management transfer contracts												
70% of public and private investments comply with MECIE legislation (percentage, custom)												
Number of regional development plans integrating environmental considerations (from 2 to 22)												
Rate of environmental claims settled (from 50% to 90%)												

Rate of integration of environment in school curricula (from 5% to 40%)												
Logging and species collection license fees in line with projected revenues (baseline: 80%; mid-term 87% and EOP: 95%)												
Volume of wood traded following a traceability system (in % of amount of nationally harvested timber) – from 0% to 30%												
Track record of satisfactory OSF goveerance audits (mid-term and EOP targets are satisfactory)												
Rate of efficiency of forestry control units (from 0% to 80%)												
70% of MinEnvEF's budget executed at field level (province or lower by EOP (baseline: 30%; mid-term 50%)												
Financial and administrative efficacy index (from 0 to 100%)												
Implementation of the new E-governance system within the Ministry (from 0% to 50%)												
Cost reduction strategy and action plan developed and implemented within ANGAP,												
Number of households adjacent to the PAs that benefitted from off park natural resource livelihood activities (number of households)												
Number of households adjacent to the PAs that benefitted from off park natural resource livelihood activities (social safeguards, local community organizations, and Mature PA micro projects and community ecotourism projects)												
Of which are female beneficiaries												
A precious woods stockpile use plan has been submitted to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Yes/No, Custom)												
All illegal precious woods stockpiles seized by Government have been audited and secured. (Yes/No, Custom)												
Government has validated and adopted a schedule for the reform of protected areas managed by Madagascar National Parks (MNP) (Yes/No, Custom)												
Global Environment Objectives GEO												
Surface of PAs under Permanent and Temporary Status (Hectare (Ha), Custom)												

PA surface under provisional or definite status increased to 5 milion ha												
Representation rate of habitats in sytem of PA increased from 87 to 96%												
Lemur species are maintained at baseline levels												
No loss of any known lemur or endemic bird species in the national PA system managed by ANGAP												
Level of threat in project supported PAs (number of fires declared) (Number, Custom)												

162. Overall, 27 percent of the project indicators exceeded target, 22% achieved target and 57% were not achieved. The table below summarizes the overall indicator achievement.

Table 10. Indicators achievement

	Total indicators	**Achieved**				**Not achieved**	
		On target		**Over target**			
PDO	15	6	40%	3	20%	9	60%
GEO	3	0	0%	2	67%	1	33%
Int. Result Indicators	33	5	15%	9	27%	19	58%
Total	51	11	22%	14	27%	29	57%

Mother Project (2004 – 2011)

163. **Component 1: Forest ecosystems management.** This component consisted in supporting the Department of Water and Forests to better conserve natural forests and streamline the use and management of national forest estate. Overall, IDA support primarily focused upon activities to address issues including: (i) governance; (ii) conservation sites, economic and management tools; (iii) management transfers; (iv) reforestation and (v) domestic energy. These activities were developed, implemented and monitored with all entities involved in development of sector.

164. **Component 2: PA Management.** The component addressed issues related to PA management, eco-development, eco-regional planning, ecotourism and endowment of a trust fund. Specifically, the activities planned under this component were organized as follow: (i) reducing pressures, capacity building, awareness and civil society involvement around selected PAs (ii) enhance complementarity value, alignment and eco-regional representativeness of the PA System (iii) conservation management programs to consolidate the national PA system (iv) sustainable use of PA System and improve governance within ANGAP (v) endowment of the Foundation for Protected Areas and Biodiversity of Madagascar (FAPBM) for long term funding.

165. **Component 3: Environmental Mainstreaming.** The objective of this component was to support selected elements of the environmental mainstreaming agenda including efforts aimed at: (i) strengthening in-house institutional capacity of ONE to generate environmental information for policy decision-making,

education and communication purposes; (ii) improving knowledge about the environment through selected environmental educational and communication activities, including those aimed at the Comités Communales de Développement covered by EP3; (iii) increasing DGE's institutional capacity as far as its environmental regulatory and policy-making functions are concerned, with a special emphasis on the development of sustainable financing mechanisms for the environment; (iv) ensuring adequate application of Madagascar's MECIE legislation; and (v) putting in place the necessary conditions for the effective management of the MEEF as well as the functioning of environmental units in all sector ministries.

166. **The program implementation was slower than expected due to:** (i) delays in fund flow and weak understanding of the results-based reported which would trigger funding advances. This has primarily affected components 1 and 2 which depended on results-based contract with field offices, (ii) The Management of Forest Systems component funding remained problematic, due to delays in transfer of funds to DGEF, weak capacity, and continuing governance issues, and (iii) critical institutional reforms that have slowed down the pace of field activities. The table below shows the degree of achievement of EP3 initially identified indicators.

Table 11. Table 01: Degree of achievement of indicators [15]

Ref. RF table	**Indicators**	**Baseline 13-Sep-04**	**End Target**	**Reportedly achieved**	**Degree of achievement 31-Dec-09**
	Project Development Objective Indicators				
11	Rate of reduction of burned area to 50% of baseline (650,000ha a year) (Percentage, Custom)	0	50	46	92%
12	70% of public and private investments comply with MECIE legislation (Percentage, Custom)	30	50	69	138%
2	Protected areas management efficiency index increases from 41% (baseline) to 55% (mid-term) to 70% EOP (Percentage, Custom)	45	70	68	97%
	Global Environmental Objective Indicators				
22	Surface of Protected Areas under Permanent and Temporary Status (Hectare(Ha), Custom)	1,700,000	5,000,000	5,155,632	103%
	Intermediate Results Indicators				
25	Surface reforested (ha) (Hectare(Ha), Custom)	0	7,968	10,167	128%
27	Households adopting alternative energy (Number, Custom)	0	5,000	0	0%
28	Number of Environmental Tableaux de Bords operational (Number, Custom)	5	20	24	120%

[15] In order to facilitate reading, the indicator number in the first column of the table corresponds to the numbering used in the Data Sheet (Section F).

167. **One PDO indicator, one GEO and two intermediate results indicators were achieved**: (i) 70% of public and private investments comply with MECIE legislation, (ii) Surface of Protected Areas under Permanent and Temporary Status, (iii) Surface reforested, and (iv) Number of Environmental Tableaux de Bords operational.

168. **Three indicators were not achieved:** (i) Rate of reduction of burned area to 50% of baseline (650,000ha a year), (ii) Protected areas management efficiency index increases from 41% (baseline) to 55% (mid-term) to 70% EOP. The monitoring of these indicators has stopped when the project was given an exception to OP 7.30 and 3 out of 4 components were dropped in 2009 and (iii) Households adopting alternative energy: this activity has never really started.

169. **The program indicators have been revised** by all EP3 partners to be consistent with the Ministry of Environment's own program indicators. In 2007, the program has become Marginally Unsatisfactory, due to a confluence of initial design issues, internal weaknesses, and external risks which required significant restructuring to allow the project to achieve its original development objectives.

170. **The project was therefore restructured** to scale down results indicators, group activities around main deliverables for which the executing agencies have clear responsibilities or sound experience, and add a new component to strengthen the Ministry's core functions and renovate its staff. Moreover, from the start, the project's physical targets were over-ambitious relative to the institutional and policy reforms that it was seeking to implement. The March 2008 restructuring addressed this by scaling down physical indicators while emphasizing the program's governance and institutional focus. However, forestry activity targets (those mostly dependent on Ministerial staff) suffered from critical delays in institutional reform and successive changes in managerial positions which followed the appointment of three Ministers in the space of 3 years. The table below shows the degree of achievement of indicators following the restructuring in 2008.

Table 12. Degree of achievement of indicators

	Indicators	Baseline 13-Sep-04	End Target	Reportedly achieved	Degree of achievement 31-Dec-09
	Project Development Objective Indicators				
1	Rate of degradation of forest and wetland resources less than half of the 1993-2000 rate (Percentage, Custom)	0.83	0.44	0.53	83%
6	National park visitor numbers increase 5% annually from the 2003 baseline (1 00,000 visitors)	100,000	134,000	na	na
6.1	Number of tourists visiting National Park System (ANGAP) (Number, Custom)	88,000	134,000	68,755	51%
7	Increase of park entrance fees by US$ 670,047 (2003 baseline: US$500,000; mid-term: US$579,000)	500,000	670,047	na	na
8	Sustainable NRM investments generate US$12 million over 5 years (baseline: 0; mid-term: US$ 4 million)	0	12,000,000	na	na

5	Sustainable financing mechanisms including government contribution cover 70% of core staff and operational costs of the PA system (baseline: 8%; mid-term: 30%)	8	70	na	na
5.1	Capital mobilized for Protected Areas Foundation (Amount(USD), Custom)	3,700,000	33,000,000	34,000,000	103%
3	Mangrove cover maintained at 2004 area of 2,209 km2	2,209	2,209	na	na
4	Maintenance of coral reef target indicator species (e.g. Ludjanidea family) in all established no-take zones	na	na	na	na
3.1	Threat Index in the ANGAP Protected Area Network (Number, Custom)	107	20	31	65%
9	Improved voice of communes in PAs management as reflected in representation on ANGAP's Board of Directors (by mid-term) and by the % of CROs complying with their rights and obligations as defined in PA management plans (baseline: 0; mid-term: 50%; EOP: 80%)	0	80	na	na
10	Improved community empowerment in NRM through fully performing GELOSE/GCF arrangements as measured by the % of beneficiary communities who have successfully obtained long-term follow-up contracts after the initial 3 year trial period baseline: 0%, mid-term:70%; EOP: 80%)	0	80	na	na
9.1	Percentage of Revenues from Protected Area Fees Redistributed to Community Projects Surrounding the Parks (Percentage, Custom)	22.50	50.00	22.00	44%
10.1	80% renewal of Natural Resource Management Contracts (Percentage, Custom)	0	80	18	23%
13	Logging and species collection license fees in line with projected revenues (baseline: 80%; mid-term 87% and EOP: 95%)	80	95	na	na
13.1	Volume of wood traded following a traceability system (in % of amount of nationally harvested timber) – from 0% to 30% (Percentage, Custom)	0	30	70	233%
	Global Environmental Objective Indicators				
23.1	Rate of representation of the 46 habitats in the system of protected areas (SAPM) (Percentage, Custom)	87	96	91	56%
	Intermediate Results Indicators				
26	Number of Dinas (traditional agreements) operational for fire control (Number, Custom)	0	500	361	72%

29	Number of Sectors with Environmental Units in place and operational (Number, Custom)	4	15	22	147%
30	Number of EIA permits delivered through a unified system (Number, Custom)	35	61	65	107%
31	Number of Autonomous Control Units in place and operational (Number, Custom)	0	22	11	50%
32	New staff recruited, integrated and trained by the Ministry (Number, Custom)	0	435	139	32%
33	Quarterly Planning carried out with the involvement of regional stakeholders and disbursements implemented according to the agreed norms (Percentage, Custom)	0	75	31	41%
34	Number of COSAP Operational (Number, Custom)	0	22	21	95%

171. **Nine indicators were revised following the 2008 restructuring** in addition to the original indicators.

172. **Two PDO indicators and two intermediate results indicators were achieved**: (i) Capital mobilized for Protected Areas Foundation, (ii) Volume of wood traded following a traceability system (in % of amount of nationally harvested timber) – from 0% to 30% . However, the figure provided by the PCU (degree of achievement 233%) seemed to be unlikely in a context of collapse of forest governance, (iii) Number of Sectors with Environmental Units in place and operational, and (iv) Number of EIA permits delivered through a unified system.

173. **Five PDO indicators, one GEO indicator and five intermediate results indicators were not achieved.** There are two main reasons explaining this poor performance (i) Forest Management activities were under the responsibility of the Ministry and its deconcentrated offices. The Minister changed three times since 2005, with concurrent changes in Directors and DREFTs heads. With such institutional instability, there was no clear direction on how to execute project activities; (ii) The second limiting factor was the relationship between the Coordinating Agency (CELCO) and the Executing Agencies. From the start, CELCO emphasized procedures and control over results. This was necessary at times where the Ministry was known for its lax fiduciary oversight, but it also led Executing Agencies to feel disempowered and unaccountable for results, particularly when the Ministry was undertaking reforms and their posts were less than certain. Moreover, as a result of the political and economic crisis, population pressures over the System of PA increased significantly. All the indicators linked to governance performed weakly. Concerning the number of tourists visiting the National Park System (degree of achievement 51%), the indicators were not achieved mainly due to the political crisis that was beyond the project's control.

174. **Limited range of activities under a single project component** related to PA management was authorized following the political crisis in Madagascar in 2009. The three other project components of EPIII were terminated, and monitoring of their indicators stopped. The extension of project closing to June 2011 was agreed.

AF (2012 – 2014)

175. **The AF was signed** at the Madagascar World Bank Country Office on October 12, 2011 and was scheduled to begin in January 2012. The new closing date was December 31, 2014. The additional financing was structured into four components: Component A: Protected area and landscape management; Component B: Local community support and development; Component C: Sustainable financing mechanisms for protected areas and landscapes; and Component D: Project management, monitoring and evaluation.

176. **Component A: PA and landscape management.** This component was structured around five sub-components: (i) PA surveillance that involved updating of surveillance plans, and ranger patrols and aerial surveillance of 33 PA (30 MNP national parks and 3 corridors); (ii) conservation infrastructure including firebreaks, guard stations, park boundary markers and other essential conservation infrastructure in 33 PA; (iii) provision and renewal of essential equipment for park management in 30 MNP national parks, including vehicles and office equipment; (iv) strategic landscape management in one pilot landscape - the Mamabay landscape in the northeast - including natural resource baseline creation, support to stakeholder platforms, land use and natural resource planning, and increased regional civil society involvement in natural resource monitoring; (v) Madagascar National Parks institutional reform to improve the organization's structure and thus its operational efficiency.

177. **The delays in effectiveness**, which took place on March 23, 2012, were largely due to difficulties related to the political situation led to delays of activities. Further delays were incurred in early 2012 as mounting pressure led to the dismissal of the minister of Environment in relation to a decree that was seen to facilitate the export of illegally logged precious wood.

178. Moreover, several components suffered considerable delays during the project's initial months, due in particular to: (i) the delayed recruitment of technical assistants by UCPE, resulting in significant delays in the preparation of key documents; (ii) delays in the establishment of contracts with NGOs, and (iii) the difficulties associated with the engagement of beneficiaries that are new to IDA financing, including the NGOs and FAPBM.

179. **A new restructuring was done in June 2014** to allow the financing of law enforcement operations in the fight against illegal precious woods exports. To support the government in managing rosewood stockpiles, new activities were added to the components. In particular, Component D included the following additional activities: three studies on the legal status of rosewood stocks, inventory and disposal options; an action plan for the securing of stockpiles already seized by government; execution of the action plan for the securing of stockpiles already seized by government; organization of a process for the sale of stockpiles already seized by government. Component A included the procurement of radar satellite information to support coast and forest surveillance activities; operating costs of coast surveillance operations. The table below shows the achievement of indicators for component A.

Table 13. Degree of achievement of indicators for component A of the AF

	↓Indicators	Baseline		End Target	Reportedly achieved	Degree of achievement	
		Date	Value			Percentage	Date
	Project Development Objective Indicators						
21	Government has validated and adopted a schedule for the reform of protected areas managed by Madagascar National Parks (MNP) (Yes/No, Custom)	25-Nov-14	N	Y	Y	100%	31-Dec-15
19	A precious woods stockpile use plan has been submitted to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Yes/No, Custom)	25-Nov-14	N	Y	Y	100%	31-Dec-15
20	All illegal precious woods stockpiles seized by Government have been audited and secured. (Yes/No, Custom)	25-Nov-14	N	N	Y	0%	31-Dec-15
	Global Environmental Objective Indicators						
24	Level of threat in project supported PAs (number of fires declared) (Number, Custom)		1,395	980	989	101%	31-Dec-15
	Intermediate Results Indicators						
39	Conservation infrastructures built or renovated (Number, Custom)	11-Jan-12	0	34	21	62%	31-Dec-14
40	Study on the reform of the PA network management is approved (Yes/No, Custom)	11-Jan-12	N	Y	Y	100%	31-Dec-14
48	Number of validated studies on the strategy of illicit rosewood stockpile management (Number, Custom)	11-Jan-12	0	3	3	100%	31-Dec-14
42	Weighted management effectiveness tracking tool score for targeted protected areas (Percentage, Custom)	11-Jan-12	60	71	72	101%	31-Dec-15
43	Number of surveillance grids monitored in 30 national parks and 3 corridors (Number, Custom)	11-Jan-12	0	489,291	424,540	87%	31-Dec-15
44	Number of paid patrolling days of local surveillance committees (Number, Custom)	11-Jan-12	0	126,861	160,382	126%	31-Dec-15
45	Km of Protected Area boundaries materialized and maintained (Kilometers, Custom)	11-Jan-12	0	7,224	6,552	91%	31-Dec-15

180. **Seven indicators were achieved.** Overall, the project has ensured that targeted protected areas were adequately protected, even during periods of political crisis. These covered 1.9 million ha during the initial project, expanded to 2.7 million ha during the additional financing – more than a third of the country's System of Protected Areas (SAPM). An important project contribution has been the support lent to the precious woods stockpile management and law enforcement activities. During project implementation Madagascar piloted a system of coastal surveillance. The pilot has shown that there are weaknesses in the system, particularly with respect to the response capacity and the confidentiality in the transmission of information (allowing traffickers to have early warning of a potential law enforcement operation). But the system has also allowed to transmit key information on vessels carrying illegal shipments to international authorities later leading to the seizure of important amounts of illegally exported wood in Singapore and Hong Kong SAR, China.

181. **Despite these successes, 4 key indicators for the success of the project were not achieved**: (i) The audit and securing of all illegal precious woods stockpiles seized by Government was not finalized (degree of achievement 60%). While Government prepared and submitted the precious wood use plan and audit to CITES by the November 12, 2015 deadline, the CITES Standing Committee deemed the report inadequate; (ii) Conservation infrastructures built or renovated (degree of target achievement was 62%). The construction or rehabilitation of several conservation and management infrastructures has been dropped given procedural delays, difficulties of access and the imminent project closure, (iii) Number of surveillance grids monitored in 30 national parks and 3 corridors (degree of target achievement was 87%); and (iv) Km of PA boundaries materialized and maintained (degree of target achievement was 91%). Delays have been experienced in particular for the realization of PA boundaries, which have proven technically problematic for marine parks.

182. **Component B: Local community support and development:** This component was structured around two sub-components: (i) social safeguard implementation and monitoring that involved auditing of the eleven safeguards plans implemented under EPIII, preparation of safeguards plans and implementation of compensation sub-projects for two corridors (Ankeniheny – Zahamena corridor and Makira), evaluation of outstanding conflicts between established national parks and local communities and implementation of resolution /mitigation measures in 19 locations, and development of technical standards for safeguard implementation in PA creation; and (ii) support to or creation of 900 local park surveillance committees, support to 400 community development subprojects, support to 30 Park Support Committees in the vicinity of 30 PAs, as well as for 175 Community Forest Management Groups (75 new and 100 existing groups) around the 33 PAs, including establishment of new management contracts and capacity building for newly established groups, involvement in restoration activities in protected areas, trialing of methods for increased involvement in PA surveillance and management, development of income generation projects, and strengthened capacity for management of natural resources.

183. **Implementation delays have been experienced throughout the project lifetime.** Prior to the 2009 extension, delays affected in particular for the implementation of safeguards plans in new or expanded PAs, forest management transfers, the provision of energy alternatives and land certification. During the AF, delays affected in particular components related to community compensation and development, the fight against illegal logging, infrastructure development and rehabilitation, the MNP reform and concessions. Such delays have partly been the result of institutional weakness and instability: in addition to the political crisis and temporary suspension, there have been 6 Environment Ministers and a Prime

Minister as acting Minister during the entire project duration, as well as multiples changes at the General Directorate level. In addition, project planning, management and procurement capacity have been low. The table below shows the achievement of indicators for component B.

Table 14. Degree of achievement of indicators for component B of the AF

	↓Indicators	Baseline		End Target	Reportedly achieved	Degree of achievement	
		Date	Value			Percentage	Date
	Project Development Objective Indicators						
18	Number of households adjacent to the PAs that benefitted from off park natural resource livelihood activities (number of households)	0	90 000				
18.1	Number of households adjacent to the Protected Areas that have benefitted from park, natural resource and livelihood activities (Number, Custom)	11-Jan-12	0	86,000	36,310	42%	31-Dec-15
	Intermediate Results Indicators						
32	Direct project beneficiaries (Number, Core)	13-Sep-04	0	26,000	9,261	36%	30-Jun-11
33	Female beneficiaries (Number, Core Supplement)	13-Sep-04	0	12,000	4,000	33%	
34	Number of Safeguards plans validated (9 UG) (Amount(USD), Custom)	13-Sep-04	0	11	10	91%	31-Dec-11
35	Rate of implementation of safeguards measures (Percentage, Custom)	13-Sep-04	0	100	-	0%	31-Dec-11
41	Number of affected households (PAP) that benefitted from social safeguards sub-projects (Number, Custom)	11-Jan-12	0	12,414	9,245	74%	31-Dec-14
42	Number of PAs with a restructured Park Support Committee and strengthened technical capacity (Number, Custom)	11-Jan-12	0	30	28	93%	31-Dec-14
43	Number of management transfer contracts established or renewed (Number, Custom)	11-Jan-12	0	173	101	58%	31-Dec-14

184. **None of the component B indicators were achieved.** Particularly, (i) the rate of implementation of safeguards measures as for 2011 (degree of achievement were 0%). This component has been difficult to implement due to the many micro-projects it entailed and the low capacity of executing agencies; (ii) Number of households adjacent to the Protected Areas that have benefitted from park, natural resource and livelihood activities (degree of achievement 42 %); (iii) Direct project beneficiaries (degree of achievement 36%). There have been weaknesses and delays in the technical implementation of ecotourism infrastructure works and support to local communities. These can be linked to an unclear division of labor between implementing agencies. Moreover, community development sub-projects have not kept up with

communities' expectations. Most, but not all, communities visited during the field mission reported being responsible for the selection of the subprojects they benefitted from.

185. **Component C: Sustainable financing mechanisms for protected areas and landscapes:** This component comprised three sub-components: (i) technical support to a national conservation trust fund to generate and manage revenues to co-fund the recurrent costs of ten national parks; (ii) support to ecotourism development including upgrading of park access roads and visitor interpretation centers, and construction of tourist circuits and signage in 18 national parks, mechanisms to facilitate Public Private Partnership investments in 8 national parks, and development of 15 community based eco-tourism sub-projects in selected protected areas, including infrastructure and capacity building; and (iii) development of baseline of carbon stocks for three forestry corridors in preparation for avoided deforestation activities together with an evaluation of the legal and institutional framework for carbon finance activities, and technical studies on causes of deforestation and degradation and carbon governance, and pilot projects for the valuation of hydrological services provided by one forestry corridor most likely the Ankeniheny-Zahamena forest corridor. The table below shows the achievement of indicators for component C.

Table 15. Degree of achievement of indicators for component C of the AF

	↓Indicators	Baseline		End Target	Reportedly achieved	Degree of achievement	
		Date	Value			Percentage	Date
	Project Development Objective Indicators						
5.2	Surface of Protected Area network with recurrent costs co-funded from revenues from the combined project endowment and previous EPIII(IDA) endowment to the Foundation (Hectare(Ha), Custom)	11-Jan-12	130,000	1,050,000	1,050,000	100%	31-Dec-14
	Intermediate Results Indicators						
36	Number of squares surveyed and controlled (Number, Custom)	13-Sep-04	15,426	559,090	589,586	105%	31-Dec-11
37	Circuits managed and maintained (Kilometers, Custom)	13-Sep-04	0	1,312	2,367	180%	30-Jun-11
38	Additional Surface of PA (ANGAP and outside ANGAP) created (Hectare(Ha), Custom)	13-Sep-04	0	491,500	336,136	68%	30-Jun-11
44	Ratio of the operational costs of FAPBM to the amount of financing delivered to PAs (Percentage, Custom)	11-Jan-12	21	20	20	100%	31-Dec-14
45	Km of tourism circuits equipped to operational standards (Kilometers, Custom)	11-Jan-12	0	60	98	163%	31-Dec-14
46	Km of access roads delivered (Kilometers, Custom)	11-Jan-12	0	94	31	33%	31-Dec-14

47	Number of reference scenarios for emissions linked to deforestation defined for the Eastern Humid Forest ecoregion (Number, Custom)	11-Jan-12	0	3	3	100%	31-Dec-14
53	Number of concessions signed with the private sector (Number, Custom)	11-Jan-12	0	1	1	100%	31-Dec-15
54	Number of established community ecotourism projects (Number, Custom)	11-Jan-12	0	13	6	46%	31-Dec-15

186. **7 indicators were achieved.** FAPBM has shown a great capacity to establish a working relationship with MNP and an MOU has been signed to define the process for earmarking and financing selected protected areas. Infrastructure delivery management has been outsourced to FID (Fonds d'Intervention pour le Developpement).

187. **3 indicators were not achieved:** (i) Additional Surface of PA (ANGAP and outside ANGAP) created (degree of achievement 68%). The figure was low because the political situation has prevented the status of protected areas to be turned from temporary to definitive; (ii) Km of access roads delivered (degree of achievement 33%) and (iii) Number of established community ecotourism projects (degree of achievement 46%). There have been weaknesses and delays in the technical implementation of ecotourism infrastructure works and support to local communities. These can be linked to an unclear division of labor between implementing agencies. Moreover, there was recurrent delays in the delivery of services or materials by service providers and recurrent poor quality of goods and services delivered.

188. **Component D: Project management, monitoring and evaluation:** This component financed project management, and monitoring and evaluation of the additional financing activities. It also supported the implementation of measures to strengthen the Project Coordination Unit (PCU) to ensure it had adequate institutional capacity to collect, analyze and report on project results and towards a future supervisory role as Secretariat of the Project Steering Committee. It financed the introduction of technical functions at the national coordinator level and will support strengthening of the internal audit and monitoring and evaluation roles of the PCU. This involved technical assistance, expertise, consultant services, salaries and operating costs, logistical support, supervision mission expenses and equipment.

189. **The component D indicator was not achieved.** The degree of achievement of the indicator, index of management efficiency of PCU in implementation and monitoring of project, was 94%. The 2014 EPIII financial statements audit pointed at anomalies with respect to financial management and procurement procedures as part of the implementation of component B, especially the income-generating activities around the PAs managed by the MNP. An independent external "value for money" audit carried out during the October 2013 - July 2014 period identified US 2 million potential ineligible or questionable expenditures and the subsequent review by the fiduciary team between June 2014 and November 2015 confirmed that a total of 885,054,310 Ariary (USD 307,000 equivalent) were not disbursed in accordance with the IDA rules and procedures. These expenditures were declared ineligible.

Annex 3. Economic and Financial Analysis

190. This annex presents the results of the economic and financial analysis both in ex-ante terms, as envisaged at appraisal of the EP3 original project, and in ex-post terms, by modifying key parameters in line with the actual evolution in the context and in the project activities.

191. The results for the ex-ante analysis below have been reconstituted based on the assumptions described in the project documents. For this reason, slight discrepancies are to be found in the ex-ante results compared to those that appear in the original project's PAD. The analysis does however remain close in terms of order of magnitude.

Economic Analysis

192. Broadly speaking, the project benefits that most easily lend themselves to economic analysis consisted in: (i) the increase from 1.5 million to 6 million hectares in the surface area of natural forests under conservation; and (ii) the development of economically viable alternatives to deforestation caused by farmers practicing slash and burn agriculture and unsustainable charcoal production. The ex-ante economic analysis clearly distinguished three management modalities for natural forests conservation: PAs; conservation sites; and management transfers.

Initial assumptions

193. Key assumptions for the economic analysis refer to: (i) projected deforestation (rate, areas, yields, revenue losses); (ii) natural forest management costs; (iii) natural forest management benefits; (iv) natural forests management benefits distribution; and (v) alternatives to deforestation.

194. Background deforestation was assumed to be 1 percent per year which was roughly the deforestation rate observed through comparison of satellite images Landsat 5 and 7 over the 10 years before project appraisal (0.86 percent). Yields under slash and burn agriculture was assumed to be approximately 1.5 ton of paddy per hectare per year. It was also assumed that slash and burn agriculture follows an 8 years cycle: rain fed rice cultivation during the initial three years and fallow for the following five years, before undertaking new slash and burn in the area. Fuelwood collection is assumed to generate 10 tons per hectare on the first year of the cycle[16].

195. Based on the appraisal economic analysis, recurring management costs for PAs was assumed to be US$ 5 per year per hectare of area under conservation. For conservation sites, a set up costs of US$ 5 per hectare on the year of establishment and a recurring management cost of US$ 1 per year per hectare were assumed. For management transfer sites, a set up costs of US$ 10 per hectare on the year of establishment and a recurring management cost of US$ 1 per year per hectare were assumed.

[16] The original project's PAD actually states 25 tons per hectare but the actual numbers in the relevant annex seem to suggest 10 tons/ha, which is the number used in the reconstituted economic analysis.

196. Benefits from conservation were of two types: global benefits and national benefits. Global benefits were estimated at US$ 3 per hectare per year and these were assumed to decline over time at an annual rate of 5 percent. National benefits include eco-tourism and watershed protection. Benefits from carbon sales of emission reductions from avoided deforestation, forest degradation and sustainable forest management were not included in the analysis. Eco-tourism benefits were assumed to be equal to US$ 60 per tourist times an estimated number of visitors (100,000 visitors in 2004) what was expected to grow at a rate of 5 percent each year. Watershed protection benefits were estimated at US$ 3 per hectare per year, and expected to grow at an annual rate of 5 percent.

197. Alternatives to deforestation capable of producing economic benefits were assumed to be the sustainable collection of fuelwood and the sustainable collection of non-timber forest products. Sustainable fuelwood collection was expected to generate US$ 2.6 per hectare per year in benefits, whereas non timber forest products collection was estimated to generate US$ 4 per hectare per year.

Ex-ante results

198. The reconstituted ex-ante economic analysis shows that the project was, a priori, economically beneficial for the country, with a Net Present Value of benefits equal to about US$ 10 million (using a discount rate of 10 percent) and an Internal Rate of Return of 27 percent (Table 16). As mentioned in the original project's economic analysis, the costs and benefits are to be treated as conservative.

Table 16. Ex-ante cost/benefit of natural forests conservation

Present value (10%, 15 years)	**Protected Areas**	**Conservation Sites**	**Management Transfer sites**	**Total**
Management costs	-78.7	-26.7	-13.3	-118.7
Tavy foregone revenues	-42.1	-44.0	-14.1	-100.2
Fuelwood foregone revenues	-11.8	-13.2	-4.3	-29.3
NTFP foregone revenues	-10.4	-15.7	-5.2	-31.3
Total costs	**-143.0**	**-99.6**	**-36.9**	**-279.5**
Biodiversity conservation	33.1	30.8		63.9
Eco-tourism	60.3			60.3
Watershed protection	57.4	70.5		128.0
REDD+		-		-
Sustainable fuelwood collection			14.8	14.8
Sustainable NTFP collection			22.8	22.8
Total benefits	**150.9**	**101.3**	**37.7**	**289.9**
NPV	*7.8*	*1.8*	*0.8*	*10.4*
IRR	*34%*	*21%*	*16%*	*27%*

Revised assumptions

199. For the purposes of the ex-post analysis, a number of initial assumptions were revised to reflect changes in the country's economic and sector context and in project activities. Key changes included: (i) the actual rate of deforestation outside and inside conservation sites; (ii) the actual evolution of tourism visits into PAs; (iii) the observed cost of PAs management; and (iv) the initial REDD+ carbon sales.

200. Deforestation in Madagascar first decreased in the years following project appraisal and then sharply increased. The political crisis of 2009 was accompanied with a strong deterioration in the rule of law, which in rural areas manifested itself in a rapid increase in wild fires and land clearing. EP3 financed a study to establish a reference level for carbon stocks and emissions for the entire eastern humid ecoregion. The study shows that, over the whole region, deforestation averaged 0.5 percent per year between 2005 and 2010 and 0.94 percent between 2010 and 2013. These rates are likely conservative if applied to the country as a whole. There is anecdotal evidence that deforestation rates were much higher in the dense dry forest areas (to the West) and in the spiny forest areas (to the South). Table 17 shows the change in assumptions made in the economic analysis.

Table 17. Change in deforestation assumptions between ex-ante and ex-post analysis

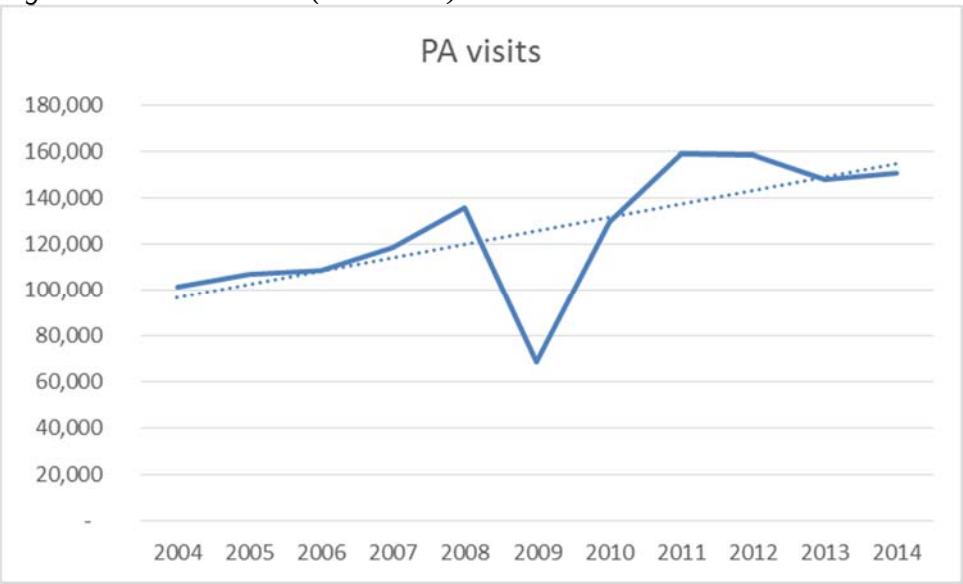
	Ex-ante assumptions		**Ex-post assumptions**	
	2005-2010	**2010-2013**	**2005-2010**	**2010-2013**
Deforestation PA	0.00%	0.00%	0.08%	0.22%
Deforestation CS	0.00%	0.00%	0.32%	0.53%
Average	*0.00%*	*0.00%*	*0.23%*	*0.42%*
Deforestation outside conservation sites	1.00%	1.00%	1.30%	2.39%

201. A further assumption was that areas under management transfer (i.e. areas whose management was delegated to local communities through contracts with the forest administration) would have no deforestation, similar to areas under protection. A World Bank study[17] showed however that management transfer has not performed better than comparable sites that were not subject to management transfer. For this reason, the ex-post economic analysis assumes that deforestation in management transfer sites is equivalent to deforestation outside conservation sites.

202. Tourism visitation had been assumed to grow at an annual rate of 5 percent per year, and the actual growth rate was actually of the same order of magnitude (4.6 percent, Figure 2). The trend shows a massive slump in 2009, the year of the political crisis, which however recovered quite well. The ex-post analysis uses the actual numbers and assumes a linear trend following 2014. In 2015, MNP increased individual park entry fees by about 50 percent, but this change is not recorded in the analysis as it occurred at the very end of the analysis period.

[17] World Bank, 2015. Analysis of Community Forest Management (CFM) in Madagascar. World Bank: Washington DC.

Figure 2. PA tourist visits (2004-2014)



203. PA management costs. The project completion report provided by the project's PCU shows that the management costs and average investment costs of Madagascar National Parks between 2010 and 2014 have been hovering around US$ 3 per hectare. This is lower than the cost of US$ 5 per hectare assumed at project appraisal, and the lower value has been used for the ex-post analysis.

204. In spite of the political crisis, Madagascar has made important advances in terms of positioning itself globally in terms of REDD+. The EP3 project has been instrumental in keeping the momentum, particularly by financing the development of an ecoregional emissions reference scenario for the eastern humid forest. This work has allowed the country, once allowed to actively participate in Forest Carbon Partnership Facility meetings following the end of the political crisis, to prepare an Emission Reductions Program Idea Note which in 2015 allowed the country to enter the Carbon Fund pipeline for a potential Emission Reduction Purchase Agreement of US$ 50 million. Without the project, much of today's institutional capacity would be much weaker. Today the strategic and operational direction for the REDD+ is guided by the Ministry of Environment, Ecology and Forests (MEEF), which will maintain the key role of validating and implementing REDD+ policies. The Secretary General (SG) of the MEEF provides operational oversight for the REDD+ program and the operational body for delivering REDD+ Readiness, the National Coordination Office (BNC-REDD+).

205. Against this backdrop, and thanks to the work done over the year, a number of carbon projects have made their way into actual carbon deals. The Makira carbon project, the most advanced of the REDD+ projects in Madagascar, is located in the Eastern humid forests in the northeast of the country. The Project is managed by the WCS, and has a 30-year life span with an estimated 38,000 tons of avoided carbon emissions during this period. A REDD+ sale of about US$ 400,000 was concluded in 2014 with Microsoft. The Ankeniheny Zahamena Corridor (CAZ) carbon project is also located in the country's Eastern humid forest and is being managed by CI. The CAZ project has certified over 3 million Emission Reductions (ER), of which the BioCarbon Fund (BioCF) has agreed to purchase 430,000, for an equivalent of US$ 1.5 million (expected to be finalized in 2016). The Holistic Forest Conservation Program (PHCF) REDD+ initiative is

being managed by the non-governmental organizations (NGO) EtcTerra and WWF and is distributed over five sites from the northeast to the southeast of Madagascar.

Ex-post results

206. As shown in Table 18, the Net Present Value of the project's net benefits were, according to the ex-post analysis, negative, with a value US$ -4.6 million. Total project costs increased 9 percent (from US$ 279 million to US$ 305 million). This was in large part due to the increase in foregone revenues for farmers, since PAs saw much lower deforestation rates than non-PAs. Foregone revenues from unsustainable timber production also contributed to this difference. Total project benefits increased 4 percent (from US$ 290 million to US$ 300 million). This was mostly the result of increased watershed management services provided by the higher than initially envisaged area under protection. REDD+ carbon revenues, which came towards the end of the period of analysis, contributed relatively little to this increase. The slightly lower performance of the tourism sector had a negative impact on the project benefits, but the impact is relatively small (i.e. the present value of benefits went from US$ 60 million to US$ 59 million).

207. Table 18. Ex-post cost/benefit of natural forests conservation

Present value (10%, 15 years)	**Protected Areas**	**Conservation Sites**	**Management Transfer sites**	**Total**
Management costs	-48.3	-33.3	-8.5	-90.0
Tavy foregone revenues	-64.9	-74.7	-	-139.6
Fuelwood foregone revenues	-20.2	-23.9	-	-44.1
NTFP foregone revenues	-10.4	-15.7	-5.2	-31.3
Total costs	**-143.8**	**-147.6**	**-13.7**	**-305.0**
Biodiversity conservation	32.5	39.4		71.9
Eco-tourism	58.7			58.7
Watershed protection	60.7	87.0		147.7
REDD+		0.6		0.6
Sustainable fuelwood collection			8.5	8.5
Sustainable NTFP collection			13.1	13.1
Total benefits	**151.9**	**127.0**	**21.6**	**300.4**
NPV	*8.1*	*-20.6*	*7.9*	*-4.6*
IRR	--	--	--	--

208. It is important to note that the economic analysis might be using a very conservative estimate of global biodiversity values, i.e. US$ 3 per hectare. This is the assumed value that foreigners would be willing to pay to protect biodiversity in Madagascar (thus not including the value of ecosystem services, which are captured by residents of the country). A switching value, i.e. the value necessary to bring the NPV of the overall project to nil, was estimated. The analysis suggests that a modest increase of 14 percent in the global value of biodiversity (from US$ 3 to US$ 3.425 per hectare) would provide such switching value.

209. Pearce and Moran (1994), which is still a key reference to estimating global biodiversity's total economic value, suggest that Debt-for-nature swaps may constitute one possible way of uncovering the size of global existence values. Debt-for-nature swaps (DFNs) involve the purchase, usually by an international conservation organization, but also by governments and even individuals, of developing countries' secondary debt in the secondary debt market. Such secondary debt is sold by existing holders at a discount,

reflecting the market's judgement on the probability of repayment. In a DFN, the holder then offers to give up the debt holding in exchange for an undertaking by the debtor country government or an acting conservation organization to protect a given area, train conservationists, etc. The idea of valuing the biodiversity so conserved through DFNs is that the payment made reflects some kind of willingness to pay on the part of the conservation body purchasing the debt. Finding a benchmark from such an analysis, Pearce and Moran (1994) conclude, "is hazardous but something of the order of $5/ha seems appropriate". This value is considerably higher than the one use in the analysis.

Financial Analysis

210. Key project stakeholders include MNP, which manages the majority of the PAs subject to strict conservation, and the farmers that live in and around PAs. The financial analysis focuses on these two groups of stakeholders.

MNP

211. The ultimate goal for financing the PAs network was a reduced reliance on external financing sources to ensure that in the future, a large proportion of MNP and the new forestry corridor's running costs were covered by: (i) the net revenue of the Foundation; (ii) park entrance fees and other direct and indirect fiscal revenues from tourism; and (iii) carbon finance (through the voluntary carbon market and in the longer term avoided deforestation performance payments through Reducing Emissions from Degradation and Deforestation Initiatives – REDD+).

212. The original EP3 project and the additional financing were meant to facilitate a shift from the current approach of providing direct financing, to an approach that provides more proactive support for the creation of sustainable financing mechanisms. It was envisaged that such a shift would, in the medium to long term, create a sustainable revenue stream for the PA network to cover a sizeable proportion of total costs.

213. Results are mixed. While the Foundation has overcome its capitalization target of US$ 50 million, a slump in the financial markets has meant that the revenues it generates are less than originally expected. Moreover, the political crisis has held back much of the tourism development potential of the country, which means in turn that this source of endogenous financing has not grown as much as it should have. As a result, MNP today still depends on international partners for the financing of around 80 percent of its recurrent costs. With the closing of the Additional Financing, MNP is facing a financing gap estimated in Euro 10 million over the next 5 years. Moreover, Madagascar National Parks continues to capture only a fraction of the fiscal revenues generated by its Parks. The most visited national parks of Madagascar are currently generating significant tax and fee revenues for the country, whereas the Government's contribution to pay for PAs costs remain very limited.

Farmers and local communities

214. From the local communities' standpoint, the ex-ante economic analysis predicted that the external benefits of the project (watershed protection services) would outweigh the external costs (opportunity cost). The ex-post analysis however shows that, in all likelihood, this was not the case (Table 19). In fact, the

calculations show that net benefit to farmers and local communities could have been in the order of US$40 million. Two important caveats apply. The first is that this financial cost is to be understood as being the cost relative to a counterfactual in which, in the absence of PAs, deforestation and unsustainable practices in the same areas would have taken place at the much higher pace observed elsewhere. The second caveat is that this estimate excludes the efforts made to compensate farmers both directly through EP3 financed community development support activities and indirectly through the support provided by companion projects such as the Social Protection and the Rural Development Support IDA projects. Table 19 shows that even if the additional financing project proceeds used for community development activities and safeguards are accounted for, this would not be enough to fully compensate the opportunity cost imposed by the project on communities.

215. Moreover, the winners and losers are not the same households. Even assuming that compensation activities did make up for the losses, there remains one of the classic problems in cost-benefit analysis of projects: how can beneficiaries directly compensate losers? A system of payments for environmental services in these watersheds is worth exploring, but the challenges linked to finding payment vehicles and creating institutions should not be dismissed.

Table 19. Costs and benefits to farmers and local communities

Costs and benefits (US$ million)	**Protected Areas**	**Conservation Sites**	**Management Transfer Sites**	**Total**
Ex-ante				
Costs (forgone slash and burn; unsustainable fuelwood; unsustainable NTFP)	(64.35)	(72.85)	(23.62)	(160.83)
Benefits (Watershed protection; sustainable fuelwood; sustainable NTFP)	57.43	70.52	37.66	165.61
Net	**(6.92)**	**(2.34)**	**14.04**	**4.78**
Ex-post				
Costs (forgone slash and burn; unsustainable fuelwood; unsustainable NTFP)	(95.48)	(114.30)	(5.22)	(214.99)
Benefits (Watershed protection; sustainable fuelwood; sustainable NTFP)	60.73	87.00	21.58	169.31
Net	**(34.75)**	**(27.29)**	**16.36**	**(45.68)**
Project proceeds utilized for community development activities and safeguards				*8.2*

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Martien Van Nieuwkoop	Practice Manager	GFA12	Team Leader
Christophe Crepin	Sector Leader	GEN02	Team Leader
Bienvenu Rajaonson	Senior Environmental Specialist	AFTN1 - HIS	Environment Specialist
Ziva Razafintsalama	Sr Agricultural Spec.	GFA07	Agricultural Specialist
Joseph Byamugisha	Sr Financial Management Specialist	GGODR	Financial Management
Lova Niaina Ravaoarimino	Senior Procurement Specialist	GGO07	Procurement
Paul-Jean Feno	Senior Environmental Specialist	GEN07	Environment Safeguards
Renganaden Soopramanien	Consultant	LEGAF-HIS	Counsel
Charles Di Leva	Cousel	LEGAF-HIS	Counsel
Rondro Malanto Rajaobelison	Program Assistant	AFMMG	Team Support
Supervision/ICR			
Adele Faure	Consultant	AFTN1 - HIS	Technical Support
Arbi Ben Achour	Consultant	GSU11	Technical Support
Bienvenu Rajaonson	Senior Environmental Specialist	AFTN1 - HIS	Environment Specialist
Ellena Rabeson	Operations Officer	AFMMG	Operations
Francois Marie Maurice Rakotoarimanana	Sr Financial Management Specialist	AFTME - HIS	Financial Management
Giovanni Ruta	Sr Environmental Economist	GEN07	Team Leader
Gordon Appleby	Consultant	AFRDE	Technical Support
Jean Charles Amon Kra	Sr Financial Management Specialist	GGO13	Financial Management
Jean-Christophe Carret	Country Manager	AFMCF	Team Leader
Juerg Brand	Consultant	AFTN1 - HIS	Protected Areas Management Specialist
Klas Sander	Senior Environmental Economist	GEN04	Sustainable Forest Management Specialist
Liliane Randrianarivelo	Consultant	AFTME - HIS	Technical Support
Lova Niaina Ravaoarimino	Senior Procurement Specialist	GGO07	Procurement
Mahefasoa Philippe Randriamamonjy	Consultant	AFTPR-HIS	Technical Support
Martien Van Nieuwkoop	Practice Manager	GFA12	Team Leader
Michael Carroll	Consultant	GEN07	Co-Author of ICR
Mohammed A. Bekhechi	Consultant	GEN05	M&E Specialist

Olivia Rakotomalala	Operation Analyst	AFTN1	Environmental Specialist
Paul-Jean Feno	Senior Environmental Specialist	GEN07	Environment Safeguards
Rondro Malanto Rajaobelison	Program Assistant	AFMMG	Team Support
Sofia Bettencourt	Lead Operations Officer	GFDRR	Team Leader
Sylvain Auguste Rambeloson	Senior Procurement Specialist	GGO07	Procurement
Vohangitiana Josiane Rarivoson	Team Assistant	AFCS2	Team Support
Ziva Razafintsalama	Sr Agricultural Spec.	GFA07	Agricultural Specialist
.Hélène Bertaud	Senior Counsel	LEGSG	Counsel
.Nathalie Munzberg	Senior Counsel	LEGAF	Counsel
Olga Gavryliuk	Consultant	GENDR	Technical Support
Mynah Nassila	Consultant	GENDR	Technical Support
Jana Plananska	Consultant	GENDR	Technical Support
Giovanni Ruta	Senior Environmental Economist	GEN07	Team Leader

(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 and Supervision		1,931.50
Total:		1,931.50
ICR		
		60.00
Total:		60.00

Annex 5. Summary of Borrower's ICR and/or Comments on Draft ICR

The borrower has not sent a Completion Report. Comments on Draft ICR were provided verbally and are summarized in the main text.

Annex 6. Comments of Cofinanciers and Other Partners/Stakeholders

Beneficiary Survey Results

216. A beneficiary survey was conducted from October to December 2015. The survey covered 32 PAs and 766 beneficiaries participated in the survey.

217. The survey concluded that beneficiaries were satisfied about the results of the project intervention in terms of (i) biodiversity valuation, (ii) environmental education, (iii) spinning effect for population around PAs and (iv) ownership of local stakeholders.

218. The survey also concluded that beneficiaries were partly satisfied about the activities related to the extension of PA system, forest management and reduction of degradation of natural resources. 63 percent of the beneficiaries were satisfied about the project methodology. Beneficiaries confirmed that the Project met their expectation. However, the majority of PAPs were not satisfied about the project.

219. The majority of the beneficiaries are not satisfied about the choice of service providers.

220. The co-management was satisfactory but the participatory approach during the identification of subproject were not fully effective. Beneficiaries were satisfied about the capacity building activities.

221. The main recommendations based on the beneficiary survey findings are:

a. Reinforce the communication on environmental issues/benefit to strengthen beneficiaries ownership;

b. Improve the beneficiaries request procedure for subproject to allow sufficient time for application;

c. Increase beneficiaries involvement during the project identification;

d. Improve the monitoring of service providers to ensure the quality of services;

e. Strengthen the support to PAPs regarding compensation and training;

f. Prioritize infrastructures targeting community but not individual;

g. Ensure that support activities are adequate to the local context;

h. Strengthen the sustainable development actions by involving more government entities;

i. Strengthen the PAs control, particularly to fight against bush fire;

j. Strengthen the management transfer aiming at involving local community and improve sustainability.

Stakeholder Workshop Report and Results (if any)

222. A stakeholder workshop was held on December 22nd, 2015. Over 200 people participated in the workshop, including Government, technical and financial partners, international and national NGOs, civil society and private sector representatives.

223. Stakeholders' comments were based on 12 statements related to the project components/activities and their results. The participants were divided into small groups to discuss about each of the statement. The table below summarizes the participants' feedback.

	Percentage of participant			
Statements	Strongly Agree	Agree	Disagree	Strongly disagree
Component 1: PAs management				
S1: PA creation was a good idea	81%	19%	0%	0%
S2: PAs were not well-managed	0%	81%	19%	0%
S3: People were mistaken to think that PAs creation would attract tourists.	31%	31%	25%	13%
S4: The relationship between populations living in the PA peripheral area would be harmonized when boundaries are clear and recognized.	44%	31%	25%	0%
Component 2: Forest ecosystem management				
S5: I did not benefit from forest management transfer.	38%	50%	13%	0%
S6: If any improvements are done for the forest management contract, the manager will likely to conduct activities that are not specified in the management plan.	63%	25%	13%	0%
S7: Malagasy consumers do not worry about the wood traceability and it will remain the case for the 5 coming years.	31%	25%	25%	13%
Component 3: Environmental mainstreaming				
S8: In case of environmental issues, people are generally not equipped to mitigate.	31%	38%	25%	0%
S9: I have responsibility in the lack of environmental-friendly behavior.	38%	31%	25%	0%
Component 4: Forest and environmental governance				
S10: It was planned to create a National association for forest management. There was good reason for not doing that.	25%	50%	19%	0%
S11: I would have contributed in avoiding illegal rosewood and turtle exploitation.	19%	44%	31%	0%
S12: Subproject activities (irrigations, schools, seeds, …) did not meet expected impact on lowering the pressure on natural resources.	63%	31%	0%	0%

Annex 7. Overview of EP1 and EP2

Environment Program 1 (EP1)

224. EP1 represented Phase I of the first environmental program (EP) of its kind, magnitude and complexity implemented in Africa. It was a groundbreaking effort supported by the GOM and a number of international donors as an initial step in what was recognized as a long term process for which local expertise and capacity would need to be developed in order to achieve program objectives. In response, a cautious two staged approach was adopted in project design divided into institutional building (2 years) and pilot implementation (3 years). The experience derived from the EP initial phase was expected to be consolidated in the program's second phase before its further expansion and diversification into other sectors in the program's final phase (EP3).

225. The first phase program (EP1) was meant to be the initial five year slice of a fifteen year National Environmental Action Program (NEAP) prepared in 1987/88 and was implemented between 1991 and 1996 at the cost of US$ 110 million, largely focusing on biodiversity conservation in PAs. Project objectives were the: (a) conservation and management of Madagascar's biodiversity, (b) promotion of the sustainable development and management of the country's natural resources, (c) improvement of the population's living conditions, and (d) development of the country's human resources and institutional capacity.

226. EP1 consisted of seven components: (a) protection and management of biodiversity; (b) soil conservation, agro-forestry, reforestation and other rural development activities in priority areas; (c) mapping in priority areas and the progressive establishment of a geographic information system (GIS); (d) boundary delimitation and improved land security through land titling in priority areas; (e) environmental training, education, and awareness; (f) environmental research; and (g) a range of activities supporting institution building, the establishment of environmental assessment (EA) procedures and data base, studies, and monitoring and evaluation (M&E). In addition to the above, selected components from the Bank-supported Forest Management and Protection Project (Cr. 1878 MAG) were transferred to EP1 at its closure in 1994.

227. EP1 was cofinanced by IDA (US$ 26 million), the Norwegian Government (NKr 25 million, equivalent to about US$ 3.8 million), and other cofinanciers represented by Switzerland, France (FAC), Germany (KfW), USA (USAID) and UNDP (US$ 38.1 million). The contribution of the GOM was estimated at US$ 17.1 million, including US$ 13.2 million in duties and taxes.

Implementation Experience and Results

228. The outcome of the various program components and their respective activities was mixed. EP1 established three new institutions charged with specific environmental tasks in conformity with program objectives (ANGAP, ANAE, and ONE). In addition, EP1 also achieved or sometimes even exceeded many of its physical objectives (i.e., classification and definition of boundaries of 44 PAs, implementation of about 1,000 demand-driven sub-projects, and a vast study program). Finally, despite the difficulty of monitoring biodiversity and the corresponding lack of hard data, there was a general feeling amongst donors as well as environmental experts that Madagascar's biodiversity was at less risk at project closure than at the advent of EP1.

229. Nevertheless, although one of EP1's main objectives - to establish the required institutional framework for a sustainable environment program- was achieved by the establishment of three new agencies, their long term future was assessed as uncertain. Moreover, at the end of EPI there was still no government-adopted policy framework in place, no comprehensive policy-related action plan had been designed, and inter- and intra-coordination between and within government agencies, the executing agencies, the donors, and NGO's remained weak.

230. Moreover, the approach to environmental protection and management was largely based on isolated, self-standing activities, rather than integrated interventions. Coupled with EP1's overly broad objectives, the geographically widely dispersed activities have tended to overstretch the capacity of the implementing agencies, especially in the new institutions. Finally, the absence of an objective-oriented M&E system prevented an adequate assessment of program impact.

231. In spite of these shortfalls, EP1 considerably advanced both international and national consciousness of the importance of conserving Madagascar's environment. Of particular importance, it instilled a much greater awareness in government about the need for environmental protection and management, established common grounds for donor participation and its lessons were taken into account when designing EP2. At the level of local communities in and around the PAs, the ICR reported evidence of increased sensitization and readiness to assume ownership than at the onset of the program. For these reasons the outcome of the first phase of the EP was rated as satisfactory.

Summary of Findings, Future Operations and Key Lessons Learned

232. Perhaps the most important finding of the ICR was that environmental protection and management requires much more than the establishment of mandate-specific institutions and the execution of a physical action program. In contrast, under EP1 agencies were established without clearly defined common goals and objectives. As reflected in the lack of both vertical and horizontal coordination between agencies/institutions concerned, the holistic (program) approach was never achieved. Furthermore the proliferation of agencies led to a fragmentation of responsibilities, overlaps and gaps, both at the executive and field level, and the differentiation in institutional status contributed to rivalries and to an uncertain future which, if not properly addressed during EP2, were considered to potentially undermine the sustainability of the NEAP.

233. The key next steps and lessons learned from EP1, were: (i) developing an end-strategy and "roadmap" leading to the resolution of existing conflicts associated with parallel public and the newly created semi-private institutions involved in environmental planning and management; (ii) evaluating the different Integrated Conservation and Development Project (ICDP) approaches supported under EP1 as a basis for the design of EP2 activities particularly under the newly adopted regional (AGERAS) approach; (iii) program objectives and implementation responsibilities should be realistic and as specific as possible reflecting the local environment in which it will be implemented; (iv) allocating financing on a component-by-component basis to different executing agencies can undermine program synergy and objective achievement; (v) community participation in management and maintenance of the rural environment can be facilitated through demonstrated financial attractiveness (e.g. ANAE's mini-projects); (vi) changing human behavior and developing community-based approaches to managing PAs will likely require a long-

term commitment (ICDP experience); and (vii) a communication strategy is essential to the development of successful management strategies for PAs;

Environment Program 2 (EP2)

234. The Environment Program Phase 2 Project (EP2) was the second phase of the fifteen year, three-phase, US$ 410 million program, implementing the 1998 Malagasy National Environment Action Plan (NEAP). The second phase was implemented between 1997 and 2003 at the cost of 150 million. EP2 focused on integrating biodiversity conservation with development, and was envisaged to generate the enabling conditions for the final third phase (EP3) to mainstream conservation into macroeconomic management and sectors programs and establish sustainable conservation financing mechanisms.

235. The original development objectives of EP2 were to (i) reverse current environmental degradation trends and to promote sustainable use of natural resources, including soil, water, forest cover, and biodiversity; and (ii) to create conditions for environmental considerations to become an integral part of macroeconomic and sectoral management of the country.

236. The EP2 objectives were highly responsive to Madagascar circumstances of continued environmental degradation and the need to preserve economically valuable and globally unique biodiversity and other natural resources. They were supported by the 1994 Country Assistance Strategy (CAS) and the subsequent 1996 revision. They were also reflected in the 2000 Madagascar Interim Poverty Reduction Strategy Paper (IPRSP). In addition, EP2 objectives were consistent with the priorities of a large number of donors – including multilateral agencies such as EU, GEF, IFAD and UNDP; bilateral donors such as USA, France, Germany, Japan, Norway, Switzerland and the Netherlands; and international NGOs such as WWF, CI, WCS, and Care International – who contributed substantial resources – US$ 65.05 million toward project implementation.

237. The design of EP2 was assessed as conceptually strong – in fact, the Quality at Entry Assessment (QEA) considered some elements of the design as best practice – but it lacked realistic work program and practical implementation arrangements. The strong features of EP2 were long-term approach, donor coordination, and linking biodiversity conservation with the development agenda.

238. The long-term, programmatic approach which EP1 launched, and EP2 sustained, was key in addressing long-term, complex issues of environmental degradation. While the NEAP implementation programs in other countries commonly started as long-term multi-phased undertakings, they seldom lasted beyond the first (usually five-year) phase and left most of their agenda unresolved. EP2 was a rare exception of a NEAP-inspired project that continued to pursue the original long-term agenda and brought it to the final phase under EP3. Appropriately for a long-term approach, EP2 was designed flexibly, with annual programming and budgeting reviews allowing the project to adjust its focus and operations as necessary.

239. The focus on systematic donor collaboration – especially through the active Multi-Donor Secretariat and joint preparation and supervision missions – helped to ensure continued and coordinated donor support during EP2. The multi-sector, comprehensive approach that EP2 adopted went beyond the narrow biodiversity conservation focus of EP1 and focused on links between biodiversity conservation and natural resource management on one side and rural development and economic development in natural

resource based sectors – e.g., tourism and forestry – on the other. Such an approach was viewed as important in the effort to sustainably capture the economic potential of Madagascar's unique natural resource endowment for the country's development.

240. However, while the project was conceptually and technically progressive and well-timed, it had significant weaknesses that hampered its implementation. In particular, the inaccurate and inconsistent presentation of project objectives created unnecessary confusion among the implementing agencies; its complex and impractical design lead to serious implementation difficulties. EP2 design also had a number of negative aspects, especially regarding realism of work programming and practicality of implementation. As Quality Enhancement Review (QER) in February 2001 noted, EP2 – with fourteen components and seven implementing agencies – was too complex to understand easily or implement efficiently. The strain from design complexity on implementation was made worse by a lack of an adequate monitoring and evaluation system that would have allowed to determine progress, identify problems and guide adjustments. In addition, missing links between the ambitious objectives and targets of the program and the specific outputs of annual work programs made it difficult for the implementing agencies to understand how the short-term actions relate to long-term objectives. Finally, an inadequate reporting regime under EP2 failed to provide the management information needed for steering and supervising such a complex operation.

241. Although some of shortcomings of EP2 quality at entry were not avoidable (e.g., there are few effective alternatives to establishment of semi-autonomous implementing agencies to ensure effective program implementation), many of the key shortcomings, e.g. unclear objectives, ineffective monitoring and evaluation system and complex should have been addressed before project's entry into implementation. In retrospect, these shortcomings outweighed the progressive design features and earned an Unsatisfactory rating for Quality at Entry.

Achievement of Objective and Outputs

242. The achievement of EP2 objectives was satisfactory. Measured against the key performance indicators, EP2 largely met or exceeded the planned targets and brought significant accomplishments in both (i) increasing the sustainable use of natural resources in target areas; and (ii) establishing conditions for mainstreaming sustainable environmental and natural resources management at the national level. There were several areas, however, particularly in regard to the second objective, where EP2 achievements fell short of targets.

243. In respect to the first objective – increasing the sustainable use of natural resources (e.g., soil, forests, biodiversity) in the target areas – EP2 achievements were satisfactory. Concerning **forest and land management**, EP2 substantially contributed to reducing the deforestation. The NASA satellite imagery and the decadal deforestation map constructed by Conservation International showed that deforestation rate in PAs was four times lower than outside the parks. Importantly – both for confirming the positive impact of EP2 and guiding the future interventions under EP2 – an ongoing multivariate analysis of the data by UC Berkeley, Conservation International and the World Bank suggested that the relationship between the parks effect and decreased deforestation was causal, and could not be explained only by the placement of parks in less accessible or agriculturally less attractive areas. EP2 interventions also contributed to controlling the incidence of unsustainable slash-and-burn (*tavy*) agriculture in the target areas. Tavy incidence decreased by 72% during the first 4 years of the project.

244. Following EP2 mix of interventions promoting **conservation agriculture and soil management**, soil erosion was reported to diminish from the prevailing 8 tons per hectare to 1.6 ton per hectare annually, a substantial 80% decrease while the agricultural productivity remained stable or increased. This reduction was particularly valuable given that the target areas were areas selected because of their high population, high soil vulnerability and sizeable agricultural sector.

245. The improved use of forest resources in the target areas reduced degradation of sensitive ecosystems and decelerated the loss of **biodiversity**. Measured through a biodiversity index, the loss of biodiversity diminished from a level of 1.66% to a level of 0.62% during EP2. The expansion of the PAs based tourism that EP2 catalyzed strengthened the sustainable, non-consumptive uses of biodiversity resources and demonstrated potential to generate new revenues while meeting global conservation objectives.

246. **Policy reform** to mainstream environmental considerations into economic sectors with greatest impacts on the environment have advanced substantially in mining, fisheries, aquaculture and industry sectors. The policy reform, however, progressed less than planned. Several policies – tourism development policy, intellectual property protection policy, urban development policy and pesticide use policy were drafted, however not adopted or implemented by the government. The forestry policy, which was developed and adopted during EP2 preparation as a condition of EP2 effectiveness, was not adequately implemented. Incomplete progress of the policy reform was a significant shortcoming of EP2.

Sustainability

247. EP2 sustainability was rated as likely. EP2 introduced key elements of sustainable financing of biodiversity conservation and environmental management, including (i) improved system of logging fees for financing of the forestry department (DGEF); (ii) adjusted park entrance fees to increase revenues for the national park service (ANGAP); (iii) transfer of natural resource management to the communities, thus lowering the exploitation pressure on PAs and forests and reducing the enforcement and operating costs of the management agencies; and (iv) preparatory work for establishing conservation endowment trust to generate revenue for conservation activities in perpetuity.

248. Other EP2 accomplishments also enhance its sustainability. At the national level, these include, forexample, effective long-term mobilization of donor resources, permanent integration of environmental education into national curricula, institutional integration of ministries responsible for environment and natural resources management, sectoral policy reform and strengthening of the EIA system, continued presentation of environmental issues in the mass media, and high profile of natural resources utilization in the public policy debate on Madagascar development. These EP2 outcomes were seen as likely to ensure that environment will actively remain in the forefront of general awareness, government action and donor support in the medium and long term. At an agency level, successful conversion of some of the EP2 implementing agencies into independent service providers after project restructuring demonstrated that these were able to sustain themselves in a competitive environment from the revenues earned for their services. It is important to note that the EP2 sustainability was evaluated in the context of the entire Madagascar environment program, and was therefore largely dependent on the successful implementation of EP3.

Bank and Borrower Performance

Bank

249. The Bank’s lending performance was rated as unsatisfactory. Overall, the Bank's performance during identification, design and appraisal of EP2 was mixed, with many positive and negative aspects. In retrospect, the consequences of the negative aspects during implementation were significant enough to consider the lending performance unsatisfactory. Conversely, the supervision performance was rated as satisfactory, based on the assessment that the Bank's overall handling of the project, particularly during the post-restructuring period, overcame the shortcoming of project design and brought strong results. The overall Bank performance was rated as satisfactory. Despite the weak quality at entry, the Bank's exceptionally strong supervision effort succeeded in turning around a problem project. The excellent supervision during the second half of the project is a best practice example of focusing on development impact during implementation and responding to core problems with relevance, timeliness and effectiveness.

Borrower

250. The borrower preparation performance was rated unsatisfactory. The government fully and adequately participated in EP2 preparation, made the necessary policy and financing commitments, and timely met the conditions for project effectiveness by carrying out the necessary studies and creating the new implementing agencies. At the same time, the government promoted the project with its unclearly stated objectives, overly complex design, poor monitoring and evaluation system and other shortcomings. The unsatisfactory rating reflects the responsibility of the government for its role in launching EP2 with serious shortcomings of design and implementation arrangements.

251. The government implementation performance was uneven but is rated satisfactory overall. The weak aspects of government implementation performance included high turnover in the leadership positions; high turnover of technical staff in the environment sector; weakened commitment at the highest levels of the government during the first half of EP2; poor governance in the natural resource sectors, particularly forestry; and weak support of the policy reform in some sectors. During the second half of EP2, the main weakness of government performance was its inability to promulgate several of the new sectoral policies required to improve environmental and natural resource management in the country.

252. The strong aspects of government implementation performance were the efforts to improve governance in the forestry sector by tightening controls on logging and biodiversity permits, canceling illegal or non-paying contracts, establishing a transparent oversight mechanism through the Forest Sector Observatory, and imposing a moratorium on the transportation and export of species listed under CITES.

253. Performance of implementing agencies was also assessed as satisfactory, although with some gaps. The agencies management was effective. Management personnel was recruited competitively. The agencies generally met or exceeded their performance targets, operating in a decentralized manner and providing strong field support, which was crucial for successful implementation of community level activities.

254. The weak aspects of implementing agencies performance were procurement and financial management which caused implementation delays before the financial management systems were

harmonized; poor coordination of their activities in the field, especially between ANGAP and ANAE, uncoordinated performance reporting which made it difficult to provide a consolidated picture of EP2 progress as well as high staff turnover and overstaffing.

Lessons Learned

255. The design and implementation of EP1 and EP2 generated a number of important lessons. The main lessons which were specifically oriented towards improving the design of EP3 were:

256. **Prepare robust economic analysis.** Robust and credible economic analysis of environmental projects is important, particularly as the ample availability of concessionary funding, enthusiasm for preserving unique natural resources for future generations and sense of urgency tend to detract from rigorous selection, design and implementation of interventions. A lack of good economic analysis makes it difficult to integrate environmental and natural resources management considerations into the mainstream of the country's economic development. A lack of good economic analysis also makes it difficult to assess efficiency and effectiveness of various interventions and determine how to best allocate resources in the future.

257. **Define triggers for the next phase.** In multi-phase programs, it is important to define targets the achievement of which will trigger the launch of the next program phase. Otherwise, difficult but critical issues – such as implementation of key policies or fiscal sustainability of key agencies – may be carried over to the next phase without being properly addressed. In the case of EP2, the carryover of outstanding issues from EP1 – for example the failure to integrate conservation and development – handicapped the start of EP2. Similarly, EP2 insufficient progress on the policy and financial sustainability fronts was considered likely to handicap implementation of EP3.

258. **Avoid brain-draining line ministries through project implementing agencies.** Creation of overly strong implementing agencies drains qualified staff and lowers morale in the line ministries. To balance the short term interests of the project with long term interest of sector development, it is important to approach sector capacity building comprehensively, with a clear understanding of division of responsibilities among the line ministries and implementing agencies, especially those envisioned to stay in place permanently as service providers. A lack of comprehensive approach leads to staffing strain on line ministries and high staff turnover among implementing agencies as they compete for qualified staff.

259. **Coordinate environment with other programs.** To integrate environmental program into the mainstream development agenda, maximize development effectiveness and capture potential synergies, environmental projects should coordinate their focus and interventions with other development projects in the country. This is particularly important since environmental protection depends on improved natural resource management, better agricultural production and social development interventions. In Madagascar, EP3 should coordinate with projects such as the rural development, rural roads, rural infrastructure, micro-finances, energy and tourism. The coordination should focus on both policy level and implementation level, where different sector operations target the same area, such as buffer zones surrounding the PAs.

260. **Develop regional and local environmental management capabilities.** Strategically placed regional and local capacity for environmental management – in terms of trained staff and basic office

support – is essential for efficient implementation of field-level project activities in target zones. Such capacity forms an important link between central structures and local communities. In EP2, such capacity created in the regional environmental cells and ANGAP officers proved effective in successfully implementing community level activities.

261. **Use results-based implementation.** For complex projects with a large number of multiple implementing agencies (key implementing agencies, local governments, NGOs, independent service providers) use results-based or performance-based contracts as a main vehicle of project implementation instead of the traditional disbursement arrangements. Results-based contracts simplify the management of multiple implementers and enhance their independent functioning as service providers.

262. **Ensure financial sustainability of environmental agencies.** Fiscal sustainability of environmental agencies established under the project is crucial in ensuring overall sustainability of project achievements. The project should develop a fiscal sustainability strategy appropriate for the specific conditions in the country and in the sector, and a timeline for achieving fiscal independence overtime. A lack of such strategy in EP2 made transition of some implementing agencies to independent service providers risky and difficult.

263. **Address weak governance.** To contribute to sustainability of specific measures that improve natural resource management, the general governance in the key sectors must be addressed. Focusing on technical aspects of environmental degradation without giving adequate attention to governance issues will not generate satisfactory results – as demonstrated in the forestry sector during the first half of the implementation period before EP2 introduced an action plan to address key governance issues. For new operations, it is preferable to identify weak governance during preparation and address it systematically from the project beginning rather than reactively during project implementation.

264. **Support modern resources management technologies with adequate extension services.** Adoption of modern natural resource management technologies – e.g., various conservation agriculture technologies – introduced by environmental projects frequently requires intensive knowledge and efficient initial promotion. Their firm establishment within the target areas and their spontaneous adoption outside of the target areas requires availability of adequate extension services. The quality of extension service providers, as EP2 showed, is instrumental in the success of the project.

265. **Focus on rural livelihoods.** To ensure sustainability, environmental projects must complement the field-level conservation measures with a provision of alternative livelihood opportunities. Alternative livelihoods, based, e.g., on agricultural intensification or ecotourism, help to reduce the pressure on natural resource overexploitation and degradation, and enhance the effectiveness and sustainability of direct conservation measures.

266. Use monitoring and evaluation for project management. A clear and practical monitoring system is essential, not only for assessing final outcomes of the project, but also for periodic evaluation of interim progress, particularly in complex projects. Monitoring indicators should be simple, robust, easily measurable, and, most of all, continuously used as one of the basic project management tools. Quantitative monitoring indicators should be complemented by enough qualitative data.

Annex 8. List of Supporting Documents

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World Bank 2011. Madagascar Third Environment Program Support Project: Additional Financing Project Paper, Washington

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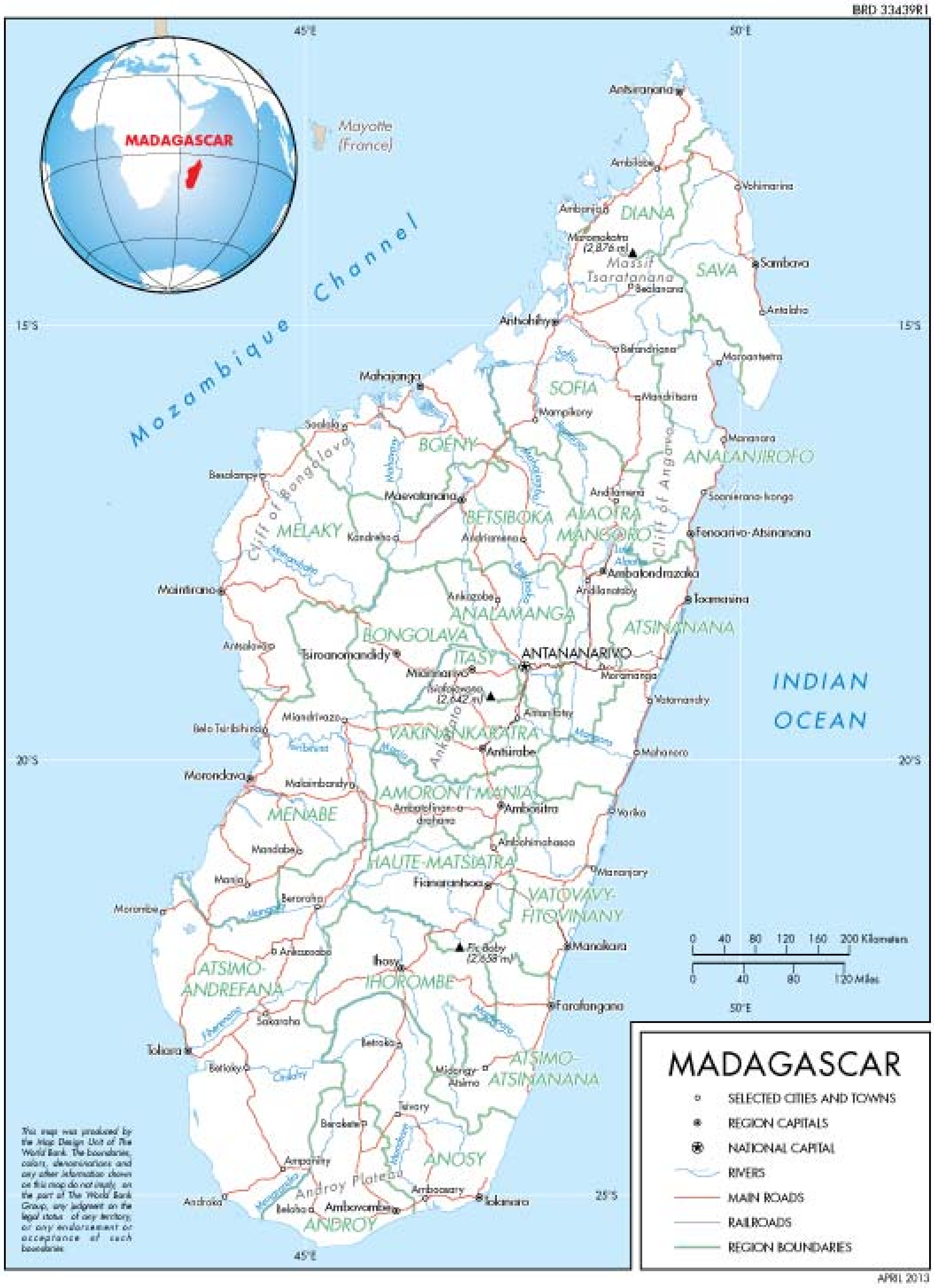
Map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MADAGASCAR
SELECTED CITIES AND TOWNS
REGION CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
REGION BOUNDARIES
INDIAN OCEAN
Mozambique Channel
Mayotte (France)
ANTANANARIVO
DIANA
SAVA
SOFIA
BOENY
ANALANJIROFO
MELAKY
BETSIBOKA
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MENABE
HAUTE-MATSIATRA
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ATSIMO-ATSINANANA
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