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Report No: ICR2508

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(GEF TF056925-CM)

ON A

GRANT FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF USD 6.0 MILLION

TO THE

REPUBLIC OF CAMEROON

FOR A

SUSTAINABLE AGRO-PASTORAL AND LAND MANAGEMENT PROMOTION PROJECT UNDER THE COMMUNITY DEVELOPMENT PROGRAM SUPPORT PROJECT (PAPNDP)

August 31, 2012

Agriculture and Rural Development Unit (AFTAR)
Sustainable Development Department
Country Department AFCC1
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective June 12, 2012)

Currency Unit = CFA Franc (CFAF)
CFAF 1.00 = US$0.0019
US$1.00 = CFAF 525

FISCAL YEAR
January 1-December 31

ABBREVIATIONS AND ACRONYMS

AFD	*Agence Française de Développement* (French Development Agency)
AfDB	African Development Bank
ANAFOR	*Agence National d'Appui au Développement Forestier* (National Agency for Support to Forestry Development)
APESS	*Association pour la Promotion de l'Elevage au Sahel et en Savane* (Association for the Promotion of Livestock in Sahel and Savanna)
ARTES	Africa Rainfall and Temperature Evaluation System
BEAC	*Banque des Etats de l'Afrique Centrale* (Bank of Central African States)
CAADP	Comprehensive Africa Agriculture Development Program
CAR	Central African Republic
CAS	Country Assistance Strategy
CASE	*Cadre chargé des Aspects Socio-Environnementaux (*Staff member responsible of the Socio-Environmental Aspects)
CBA	Cost Benefit Analysis
CBD	United Nations Convention on Biological Diversity
CBOs	Community-Based Organizations
CDC	Communal Decision Committee
CDD	Community Driven Development
CGIAR	Consultative Group of International Agriculture Research
CIE	*Comité Inter-Ministériel de l'Environnement* (Inter-Ministerial Committee for Environment)
CNCEDD	*Commission Nationale Consultative pour l'Environnement et le Développement Durable (*National Consultative Commission for the Environment and Sustainable Development)
CPAP/C	Joint Committee for Project Approval at the Regional and Communal levels
COMES	City Council Expanded to Sectoral ministries
CSO	Civil Society Organization
DO	Development Objective
DPGT	*Développement Paysannal et Gestion des Terroirs* (Smallholder Development and Land Management)
EFA	Economic and Financial Analysis
ERR	Economic Rate of Return
ESA	*Eau-Sol-Arbre* (Water-Soil-Tree)

ESMF	Environmental and Social Management Framework
EX - ACT	*Ex-ante Carbon Balance Tool*
FAO	Food and Agriculture Organization of the United Nations
FEDPG	Forest and Environment Development Program (i.e., new name for FESAC)
FESAC	Forestry and Environmental Sector Adjustment Credit
FMR	Financial Monitoring Reports
FRR	Financial Rate of Return
FSP	*Fonds de Solidarité Prioritaire* (Priority Solidarity Fund)
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEF OP#15	Global Environment Facility Operational Policy #15
GEO	Global Environmental Objective
GESEP	*Gestion Sécurisée des Espaces Pastoraux (*Secure Management of Pastoral Areas)
GESP	Growth and Employment Strategy Paper
GHG	Green House Gas
GIEWS	Global Information and Early Warning System (GIEWS)
GIS	Geographic Information System
GNP	Gross National Product
GPN	General Procurement Notice
GTZ	German Development Cooperation Agency
IAPSO	UNDP Inter-Agency Procurement Services Office
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
ICR	Implementation Completion Report
ICRAF	International Center for Research in Agriculture and Forestry
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IITA	International Institute of Tropical Agriculture
IP	Indigenous Peoples
IPDP	Indigenous Peoples Development Plan
IRAD	Institut de Recherche Agronomique pour le Développement
IRR	Internal Rate of Return
ISA	International Standards on Auditing
ITK	Indigenous Technical Knowledge
JSDF	Japan Social Development Fund
KFW	*Kreditanstalt für Wiederaufbau (*German Cooperation Bank)
LCS	Least-Cost Selection
LG	Local Government
M&E	Monitoring and Evaluation
MEADEN	*Mission d'Etudes pour l'Aménagement et le Développement de la région du Nord* (Mission Studies for Management and Development of the North)
MIS	Management Information System
MINADER	*Ministère de l'Agriculture et du Développement Rural* (Ministry of Agriculture and Rural Development)
MINATD	*Ministère de l'Administration Territoriale et de la Décentralisation* (Ministry of Territorial Administration and Decentralization)

MINEPAT	*Ministère de l'économie, de la planification et de l'Aménagement du Territoire* (Ministry of Economy, Planning, and Regional Development)
MINEPDED	*Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable* (Ministry of Environment, Nature Conservation and Sustainable Development)
MINEPIA	*Ministère de l'Elevage, des Pêches et des Industries Animales* (Ministry of Livestock, Fisheries, and Animal Industries)
MINFOF	*Ministère de Forêt et de la Faune* (Ministry of Forest and Wildlife)
NAP	National Action Plan (to combat land degradation)
NCU	National Coordination Unit
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
NRM	Natural Resource Management
PAD	Project Appraisal Document
PAPNDP	*Projet d'Appui au Programme National de Développement Participatif (*IDA-financed Community Development Program Support Project)
PCU	Project Coordination Unit
PDBB	*Projet de Développement du Bassin de la Bénoué* (Basin Development Project of the Benoue)
PDC	*Plan de Développement Communal* (Communal Development Plan)
PDO	Project Development Objective
PDOB	*Projet de Développement de l'Ouest Bénoué* (Development Project in Western Benoue)
PUGT	Plans d'Utilisation et de Gestion des Terres (Land Use and Management Plans)
PIM	Project Implementation Manual
PNDP	*Programme National de Développement Participatif* (Community Development Program Support Project)
PNVRA	*Programme National de Vulgarisation et de Recherche Agricole (*National program for Extension and agricultural Research)
PRSP	Poverty Reduction Strategy Paper
RSR	Rural Sector Review
SA	Special Account
SCAC	*Service de Coopération et d'Actions Culturelles* (Service for Cooperation and Cultural Action)
SFB	Selection under a Fixed Budget
SLM	Sustainable Land Management
SNV	The Netherlands Development Organization
SOEs	Statement of Expenditures
SSA	Sub-Saharan Africa
TORs	Terms Of Reference
UCCAO	*Union des Coopératives de Café Arabica de l'Ouest (*Cooperative Union of Arabica coffee from western Cameroon)
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDB	United Nations Development Business
UNDP	United Nations Development Program

UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WDR	World Development Report

Vice President:	Makhtar Diop
Country Director:	Gregor Binkert
Sector Manager:	Martien van Nieuwkoop
Project Team Leader:	Amadou Nchare
ICR Team Leader:	Amadou Nchare

SUSTAINABLE AGRO-PASTORAL AND LAND MANAGEMENT PROMOTION PROJECT UNDER THE PAPNDP

Table of Contents

A. Basic Information			
Country:	Cameroon	Project Name:	Sustainable Agro-Pastoral and Land Management Promotion under the PNDP
Project ID:	P089289	L/C/TF Number(s):	TF-56925
ICR Date:	08/29/2012	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVERNMENT OF CAMEROON
Original Total Commitment:	USD 6.00M	Disbursed Amount:	USD 5.99M
Revised Amount:	USD 6.00M		
Environmental Category: B		**Global Focal Area: L**	
Implementing Agencies: PNDP Central Coordination Unit			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	06/01/2005	Effectiveness:	12/01/2006	12/01/2006
Appraisal:	01/16/2006	Restructuring(s):		
Approval:	06/06/2006	Mid-Term Review:	03/13/2009	06/06/2009
		Closing:	03/01/2011	03/01/2012

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome	Low or Negligible
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry:	Satisfactory	Government:	Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Satisfactory	**Overall Borrower Performance:**	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
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		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Agricultural extension and research	60	60
Central government administration	10	10
Other social services	20	20
Sub-national government administration	10	10
Theme Code (as % of total Bank financing)		
Biodiversity	14	14
Climate change	14	14
Decentralization	14	14
Land administration and management	29	29
Participation and civic engagement	29	29

E. Bank Staff		
Positions	**At ICR**	**At Approval**
Vice President:	Makhtar Diop	Gobind T. Nankani
Country Director:	Gregor Binkert	Ali Mahmoud Khadr
Sector Manager:	Martien Van Nieuwkoop	Joseph Baah-Dwomoh
Project Team Leader:	Amadou Nchare	Ousmane Seck
ICR Team Leader:	Amadou Nchare	
ICR Primary Author:	Amadou Nchare	
	Jonas Mbwangue	
	Manievel Sene	

F. Results Framework Analysis

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

The Global Environmental Objective is to enhance the sustainable land and natural resource management components of the PAPNDP Project by complementing the local and national benefits of SLM with key global benefits such as: (i) Conservation of globally significant above and below ground biodiversity, (ii) Reduction of carbon emissions via improved land management activities, rehabilitated degraded lands and increased carbon sequestration; and (iii) Stabilization of riparian zones and reduction of sediment discharge into critical trans-boundary water bodies such as Lake Chad and the Gulf of Guinea.

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

(a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Increase of vegetative cover, as measured by Normalized Differential Vegetation Index (NDVI)			
Value (quantitative or Qualitative)	0	25,000		46,195
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. The Project use as proxy the area where trees were planted (achievement rate: 185%).			
Indicator 2 :	Visible increase in biodiversity in per unit plot in GEF sites vs. Control group through the reappearance of new tree crop species (particularly in dry lands and semi-arid sites)			
Value (quantitative or Qualitative)	N/A	N/A		Achieved
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. The SLM micro-projects are also behind the reappearance of new plant and animal species observed in almost all Project sites. In the West region, the rehabilitation of Lake Kouoptamo favored the reappearance of the kingfisher and several species of wild duck. In all four regions, particularly in the Center and West regions, medicinal plants (prunus), exotic fruits (Irvingia gabonesis) and spices are introduced into traditional agroforestry systems (Agro-forestry, windbreaks and groves). In the case of the Adamaoua region in particular, there are many farms of Brachiaria colonized by bees.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Finance and implement communal micro projects			
Value (quantitative or Qualitative)	0	60		15
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Partly achieved. In terms of communal micro-projects (MP) funded and implemented, 15 were completed and 18 are under implementation (achievement rate: 25%)			
Indicator 2 :	Finance and implement community micro projects			
Value (quantitative or Qualitative)	0	150		191
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. 191 community micro projects were completed, and 34 are under implementation (achievement rate 127%). These figures reflect the high demand of these micro projects by rural communities.			
Indicator 3 :	Improve land fertility by the end of Project			
Value (quantitative or Qualitative)				Not measured
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	This indicator was not measured, because of its complexity, which was also identified during the Mid-Term review of the Project.			
Indicator 4 :	Increase number of community forests protected			
Value (quantitative or Qualitative)	0	at least 3		7
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. Seven community forests were protected or put in place, against three originally planned (one communal forest at Yoko, one at Santchou, two at Bangangté, one at Magba, and two at Kouoptamo) (achievement rate: 233%).			
Indicator 5 :	Increase number of hectares of protected area boundaries, buffer zones, and riparian zones rehabilitated through SLM practices in the Project’s intervention area.			
Value (quantitative or Qualitative)	0	5,000		9,574
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. In total 9,574 ha (against 5,000 ha planned) of protected areas boundaries, buffer zones, and riparian zones were rehabilitated through SLM practices in the Project's intervention area (achievement rate: 191%).			

Indicator 6 :	Increased crop yield (mostly maize)			
Value (quantitative or Qualitative)	Less than 1.5 tons per hectare (t/ha) in the North/Adamaoua regions, and less than 2.5 t/ha in the Center/West regions	From less than 1.5 t/ha to 2.5 t/ha in the North/Adamaoua regions, and from less than 2.5 t/ha to 3.5 t/ha in the Center/West regions		In the North and Adamaoua regions, an average maize yield of between 3 to 5 tons per hectare (t/ha) was achieved, and in the Central and West regions, the average yield obtained varies from 2.4 to 4.8 t/ha
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. In terms of improvement of yield, particularly that of maize, an assessment by the consultants on the basis of results of crop control plots revealed that, in the North and Adamaoua regions an average maize yield of between 3 to 5 tons per hectare (t/ha) was achieved (against a target of 1.5 to 2.5 t/ha), and in the Center and West regions, the average yield obtained varies from 2.4 to 4.8 t/ha (against 2.5 to 3.5 t/ha originally planned).			
Indicator 7 :	Increased adoption of agro-pastoral systems in the Nord/Adamaoua regions			
Value (quantitative or Qualitative)	Less than 65%	Above 80%		80%
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. The rate of adoption of agro-pastoral systems increased from 65% to 80 % in the North/Adamaoua regions (achievement rate: 99%). This rate could improve when data from all the MP are collected.			
Indicator 8 :	ITK best practices are fully incorporated into disseminated SLM best practices			
Value (quantitative or Qualitative)	N/A	Yes		Yes
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. The indigenous knowledge of communities has been successfully integrated into the SLM practices. One can cite the example of Irvingia gabonesis (bush mango) and safou incorporated into reforestation areas in the Center region, and some herbs and spices integrated into systems as windbreaks and groves in the West region. The use of manure as foliar fertilizer in the West region has also been noted. In the North and Adamaoua regions, cowpea is increasingly used as a cover crop.			
Indicator 9 :	Land use rights policies have been reinforced through the adoption, revision, and/or implementation of legal texts or decrees on land tenure (and land-use rights) by the Project end.			
Value (quantitative or Qualitative)	N/A	Yes		No
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Not achieved. However, the Project has contributed to the preparation of a decree concerning a corridor for animals in the North region.			

Indicator 10 :	The *Commission Nationale Cosultative pour l'Environnement et le Developpement durable* (CNCEDD) and the *Comite Interministeriel de l'Environnement* (CIE) are functional in promoting sound SLM policies, decrees, and programs by the Project end			
Value (quantitative or Qualitative)	N/A	Yes		No
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Not achieved. Legal texts for the operation of the CNCEDD and CIE have been reviewed, up-dated and approved by the Prime Minister. The first workshop on launching of these important decision-making institutions is being planned.			
Indicator 11 :	Adoption and implementation of landscape use and management plans at the communal level.			
Value (quantitative or Qualitative)	0	5		5
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. Five (5) land use and management plans have been approved. They are currently under implementation (achievement rate: 100%)			
Indicator 12 :	Increased number of community-based organizations that have an improved knowledge of SLM and environmental issues and are able to properly implement biodiversity and environmentally-friendly SLM practices.			
Value (quantitative or Qualitative)	N.A.	At least 100 CBOs		402
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. A total of 402 community-based organizations (against 100 originally planned) have gained improved knowledge of SLM and environmental issues and are able to properly implement biodiversity and environmentally-friendly SLM practices (achievement rate: 402%).			
Indicator 13 :	Increased number of households that have adopted and are implementing SLM practices			
Value (quantitative or Qualitative)	0	At least 10,000		8,000
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	8,000 households have adopted the SLM practices out of 10,000 households initially planned (achievement rate: 85%).			
Indicator 14 :	Conflict Resolution Frameworks are effectively operational at the communal level, through land tenure and land-use conflict litigation commissions			
Value (quantitative or Qualitative)	0	10		21
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. 21 conflict resolution frameworks (against 10 planned) have been revitalized and are effectively operational at the communal level, through land tenure and land-use conflict litigation commissions (achievement rate: 210%)			

Indicator 15 :	Baseline or target values to be determined (see above), have been determined during the first year of Project implementation			
Value (quantitative or Qualitative)	N/A	Yes		Yes
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. A survey was conducted at the beginning of the Project (achievement rate 100 %).			
Indicator 16 :	M&E mechanisms under PAPNDP are adapted to the GEF Project and are being used			
Value (quantitative or Qualitative)	N/A	Yes		Yes
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. PAPNDP M&E mechanisms have been adapted and used within the GEF Project (achievement rate: 100%).			
Indicator 17 :	GIS database on land and natural resources is in place and is being used			
Value (quantitative or Qualitative)	N/A	Yes		Yes
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. The GIS database on land and natural resources has been updated and is being used (achievement rate: 100%).			
Indicator 18 :	Progress reports (financial/technical) are issued in a timely manner			
Value (quantitative or Qualitative)	N/A	Yes		Yes
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved. Progress reports are being issued in a timely manner (achievement rate: 100%).			
Indicator 19 :	At least 10 SLM best practices and lessons are identified in a participatory manner, and are regularly disseminated			
Value (quantitative or Qualitative)	0	10		14
Date achieved	05/18/2006	03/01/2011		03/01/2012
Comments (incl. % achievement)	Achieved and exceeded. 14 SLM best practices and lessons were identified in a participatory manner. A compendium of good practices has been published (achievement rate: 140%).			

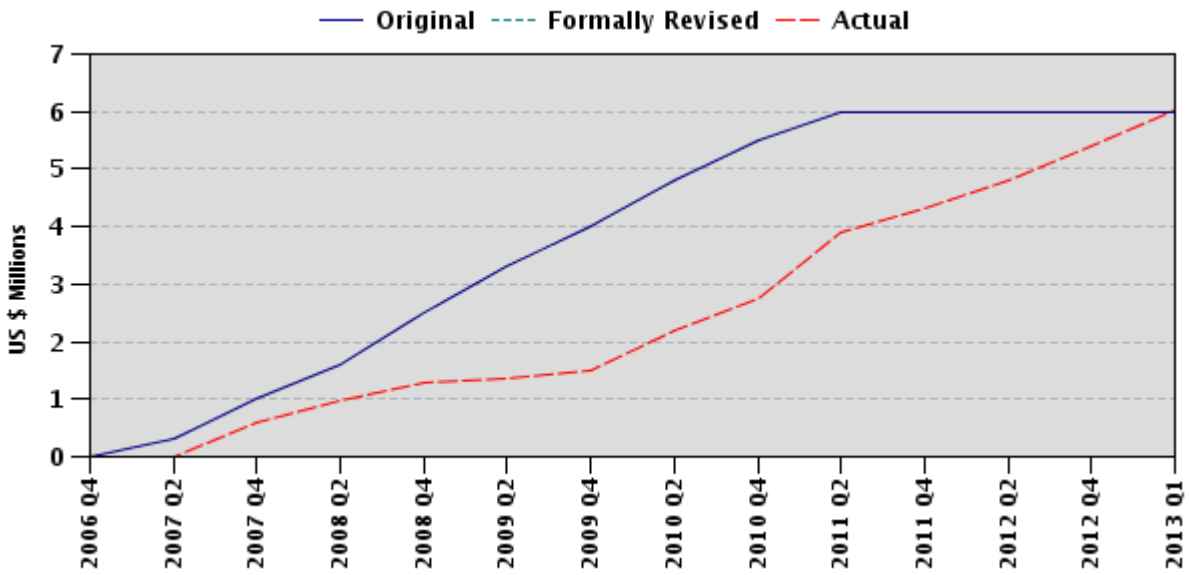
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
5	12/06/2006	Satisfactory	Satisfactory	0.00
6	06/29/2007	Satisfactory	Satisfactory	0.60
7	12/20/2007	Satisfactory	Satisfactory	0.97
8	06/01/2008	Satisfactory	Satisfactory	1.28
9	12/19/2008	Satisfactory	Satisfactory	1.34
10	05/29/2009	Moderately Unsatisfactory	Satisfactory	1.50
11	11/16/2009	Moderately Satisfactory	Satisfactory	2.18
12	06/24/2010	Satisfactory	Satisfactory	2.75
13	12/31/2010	Moderately Unsatisfactory	Moderately Satisfactory	3.89
14	04/01/2011	Moderately Unsatisfactory	Moderately Satisfactory	4.17
15	08/02/2011	Moderately Satisfactory	Satisfactory	4.43
16	08/16/2012	Satisfactory	Moderately Satisfactory	5.99

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at appraisal

(a) Country situation and sector issues

1. The agro-silvo-pastoral sector is the backbone of the Cameroon economy. Production of crops and animals and exploitation of forest resources account for slightly over one-half of Gross National Product (GNP) and occupy about two-thirds of the working population. However, the livelihoods earned through these activities are often modest. Poverty is pronounced in rural areas (86 percent of the rural population lives below the poverty line, compared to 55 percent of the overall population) and is particularly concentrated among smallholders who are highly dependent on the land. The incidence of poverty is highest among households headed by farmers (57 percent) and agricultural wage earners (50 percent). One of the main causes of rural poverty is land degradation, a key barrier to maintaining and increasing the productive capacity of the agro-silvo-pastoral sector and to increasing agricultural productivity.

2. Land degradation is occurring in many parts of Cameroon where people are highly dependent on agro-silvo-pastoral activities and has reached an advanced stage in many cases. Food insecurity, which is closely associated with unsustainable land use practices, is chronic in the Sudano-Sahelian zone, as well as in the West region. Between 1971 and 1998, cereal production per capita declined from 157 kg to 85 kg. Arable land covers about 15 percent of the country's total surface area (68,125 square km), yet the amount of arable land per capita has declined in the face of land degradation and population growth, falling precipitously from 0.86 ha in 1968 to 0.46 ha in 1996.

3. The main causes of land degradation in Cameroon include: (i) unsustainable agricultural practices; (ii) overgrazing and bush fires; (iii) deforestation; and (iv) desertification and soil erosion. These factors are compounded by irrational land-use planning, mounting population pressure, and an erroneous belief that the supply of land is infinite. The bio-physical causes of land degradation are exacerbated when local populations lack land tenure security and/or land and water use rights. They therefore have little or no incentive to invest in land management and soil and water conservation practices, tending instead to focus on meeting their short-term economic needs.

4. To address the critical issue of land degradation, which is both a cause and a consequence of the country's pervasive poverty, the Cameroon Sustainable Agro-Pastoral and Land Management Promotion Project (SLM) under the PAPNDP was designed to support Global Environment Facility (GEF) Operational Policy #15 (GEF OP #15), which aims at catalyzing partnerships with organizations, land users and stakeholders to provide coordinated support at various levels to combat land degradation in a manner that achieves lasting global environment benefits. The Government of Cameroon (GoC) and the World Bank agreed that the GEF SLM Project would intervene in selected vulnerable areas of the North, Adamaoua, West, and Center regions where land degradation is more acute. Moreover, the Project was part of the National Action Plan (NAP) to combat land degradation drafted by the GoC in June 2006. The preparation of the NAP led to the creation of a National Coordination Committee to address land degradation and promote the implementation of the United Nations Convention to Combat Desertification (UNCCD) in Cameroon. Investments in sustainable land management were planned to promote synergies between the three main environmental conventions, thereby addressing desertification, biodiversity conservation, and climate change mitigation and adaptation.

5. The Project design incorporated lessons learned from past SLM initiatives in Cameroon, including the AFD-financed project *Eau-Sol-Arbre (ESA)*, built on the initiatives of the *Developpement Paysannal et Gestion des Terroirs (DPGT)* project in the North and Far-North Regions. The SLM technologies promoted under the Project were developed and disseminated by the *Institut de Recherche Agronomique pour le Developpement (IRAD)*, the *Projet de Gestion Securisée des Espaces Pastoraux (GESEP)*, active in the Far-North, North and Adamaoua regions and funded by the French Cooperation, as well as other SLM practices developed and implemented by the *Projet de Developpement du Bassin de la Benoue (PDBB), Mission d'Etudes pour l'Aménagement et le Développement de la région du Nord (MEADEN), Association pour la promotion de l'Elevage au Sahel et en Savane (APESS)*, Netherlands Development Organization (SNV), International Center for Research in Agriculture and Forestry (ICRAF), *Union des Cooperatives de Café Arabica de l'Ouest (UCCAO), Projet de Développement de l'Ouest Bénoué (PDOB)* and the International Institute of Tropical Agriculture. At the end of the pilot phase, the Project intended to develop a replication plan of SLM best practices to be used by the Government during the subsequent phases of the PAPNDP.

6. The earlier SLM experiences generated a number of key findings that were incorporated into the Project design. (i) Adequate follow-up is needed following the establishment of community action plans to ensure proper implementation. Support is needed to reinforce participatory processes, train community leaders in financial management, and make administrative arrangements for support from local Non-Governmental Organizations (NGOs) with relevant expertise and/or from local implementing agencies and technical agents. The Project relied on PAPNDP's multi-sectoral team to provide this support. (ii) Cameroonians supported the use of a community-driven-development (CDD) approaches to natural resource management at the national, provincial, and local levels. Demand for community-driven projects was extremely high. (iii) At the community level, capacity-building must be addressed before resources can be transferred to communities. Transferring resources without adequate attention to capacity-building encourages rent-seeking behavior by local elites. Participatory approaches that empower vulnerable groups can mitigate this risk. The training of key stakeholders can be contracted to any operator with the required expertise (consultant firms, NGOs, research institutions, and/or government services). (iv) Local governments must not be assigned responsibilities that exceed their level of competence. Transferring resources to local governments without putting in place clear management procedures, mechanisms for transparency, and lines of accountability leads to rent-capturing by local leaders or bureaucrats. (v) Efficiency in disbursement is paramount for acquiring and maintaining local interest and ensuring the dynamism of community groups.

(b) Government strategy and rationale for World Bank and GEF interventions

(i) Government strategy

7. The Project was well aligned with the objectives and activities of the Strategy Document for the Development of the Rural Sector, adopted in February 2002. The main goals of the national rural development strategy include: (a) reducing rural poverty; (b) promoting food security; (c) increasing agricultural production; (d) improving the quality of produce; and (e) ensuring agricultural and environmental sustainability. By co-financing SLM micro-projects at the community and communal levels, the Project sought to contribute to the achievement of these goals at selected intervention sites. More specifically, the Project was aligned with the fourth axis of the rural development strategy, which was related to the promotion of sustainable management of natural resources by (i) ensuring mechanisms of coordination among all

stakeholders (including the administration and key line Ministries); (ii) involving communes and local communities in this effort; (iii) raising awareness about the value of resources and innovative management methods; (iv) adopting communal landscape use and management plans; and (v) enhancing conflict resolution frameworks. The Project was designed to address the first three pillars of the national rural development strategy: (1) modernizing agricultural production by improving access to land, water, labor, capital and innovative technologies; (2) restructuring the institutional framework by improving capacity and effectiveness of the public sector and key stakeholders, promoting the responsibility and dynamism of local communities, and seeking contractual relationships with local NGOs; and (3) creating a legal environment conducive to rural development by promoting access to information and markets, and the development of rural infrastructure.

(ii) Rationale for World Bank assistance and contribution to the Country Assistance Strategy (CAS)

8. The rationale for World Bank assistance stems from the World Bank's active role and strong multi-sector experience in local development in Cameroon and elsewhere. First, through its earlier agricultural research and extension program as well as through the ongoing CDD Project (PAPNDP), the World Bank is seen as having a comparative advantage in supporting community participation, raising awareness about the value of natural resources, scaling up operations to achieve national coverage, improving governance at the national and local levels, and promoting local development. Second, through its support to the forestry, infrastructure, education, health and agriculture sectors, the World Bank has been instrumental in helping the Government develop and implement operations that enable local communities to gain control over service delivery and resource allocation. Furthermore, the World Bank has acquired broad experience with CDD Projects not only in Cameroon, but also elsewhere in Africa (e.g., Benin, Burkina Faso, Chad, Ethiopia, Guinea, Madagascar, Niger, Senegal).

(iii) Rationale for GEF intervention

9. The goal of the PAPNDP is to reduce poverty and promote sustainable rural development in Cameroon, which includes assisting local communes and communities in enhancing natural resource and agricultural productivity by preventing and reversing land degradation. The GEF Project was designed to enhance the sustainable land and natural resource management components of the PAPNDP by complementing the local and national benefits of SLM with key global benefits, such as: (i) improved conservation of above- and below-ground biodiversity; (ii) improved conservation of wetlands and riparian zones that are essential for local and regional biodiversity conservation; (iii) enhanced watershed management and eco-hydrology; and (iv) reduced greenhouse gas emissions from land management activities and enhanced resilience of improved land management practices to climate change (adaptation). The GEF Project set out to achieve its objectives by integrating innovative SLM practices into local development investments, strengthening the decentralization process on land management, and building capacity at the local and national levels for more rational landscape level planning and management. The GEF incremental activities were also designed to support the development and implementation of national priorities and strategies under the UNCCD, and specifically, Cameroon's priorities outlined in the NAP. Less significantly, the Project was designed to support program priorities on SLM outlined in the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC), particularly as they related to increasing vegetative cover, conserving biodiversity, accelerating carbon storage in above- and below-ground biomass, and maintaining soil organic carbon and nutrient levels essential for maintaining effective carbon sequestration and agro-biodiversity.

10. At appraisal, the first pillar of the World Bank's CAS for Cameroon was the strengthening of the institutional framework for improved pro-poor economic management and service delivery. Consistent with the CAS, the Project, by improving the productivity of agro-silvo-pastoral land, was intended to support growth and diversification of Cameroon's primary sector.

11. The World Bank and the GoC believed that this Project, by improving and maintaining the productive capacity of land, would contribute to a reduction of rural poverty by increasing the incomes of smallholders and improving food security. The core Project interventions therefore included: (i) dissemination of best SLM technologies through co-funding of innovative demand-driven micro-projects; (ii) enhancing biodiversity conservation and promoting the reappearance of rare and endangered species; (iii) reducing soil erosion and increasing vegetation cover; (iv) building capacity at the communal level on integrated land use planning and management; and (v) mainstreaming land resource management and conflict resolution mechanisms under a cross-sectoral approach.

1.2 Original Project Development Objectives (PDO) and Key Indicators

12. The PDO is to enable communities to contribute to combating land degradation in critical areas. This will be achieved through the adoption of SLM best practices and the development of adequate capacity, tools and mechanisms by communities, thereby strengthening the overall impact of the PAPNDP. The Project will build on national sustainable land management programs to ensure that the short and medium-term objectives of increased land productivity and agricultural growth are reconciled with the long-term local, national, provincial, and global environmental objectives.

13. The **Global Environmental Objective (GEO)** is to enhance the sustainable land and natural resource management components of the PAPNDP Project by complementing the local and national benefits of SLM with key global benefits such as: (i) conservation of globally significant above and below ground biodiversity; (ii) reduction of carbon emissions via improved land management activities, rehabilitated degraded lands and increased carbon sequestration; and (iii) stabilization of riparian zones and reduction of sediment discharge into critical trans-boundary water bodies such as Lake Chad and the Gulf of Guinea.

14. The original PDO outcome indicators were: (a) rural communities have developed participatory integrated land and water management plans that have positive impacts on native biodiversity and carbon sequestration, and (b) enhanced uptake of adopted SLM best practices as determined by the baseline survey and results from the GF-funded work on alternatives to "slash and burn."

15. The key GEO outcome indicators were: (a) increase of vegetative cover, and (b) visible increase in biodiversity through the reappearance of new tree crop species.

16. The target values of the PDO and GEO outcome indicators were described in the Project Appraisal Document as follows:

Table1: Outcome Indicators at Appraisal

Outcome indicators	Target values at the end of the Project
PDO	
Rural communities have developed participatory integrated land and water management plans that have positive impacts on native biodiversity and carbon sequestration	50,000 hectares are under SLM practices
Enhanced uptake of adopted SLM best practices as determined by the baseline survey and results from the GF-funded work on alternatives to slash and burn	20% more area under SLM
GEO	
Increase of vegetative cover, as measured by Normalized Differential Vegetation Index (NDVI)	Increase by at least 25,000 hectares
Visible increase in biodiversity in per unit plot in GEF sites vs. control group through the reappearance of new tree crop species (particularly in dry lands and semi arid sites)	To be determined

Key performance indicators

17. The main indicators for Project outputs (for details, see Outputs by Component in Annex 2) that were to be used to evaluate Project achievements included:

- at least 60 communal and 150 community micro-projects financed and implemented;
- at least 5,000 ha of protected area boundaries, or buffer zones, or riparian zones are rehabilitated through SLM practices in Project areas by Project end;
- increased crop yield (mostly maize) from 1.5 ton/ha to 2.5 ton/ha;
- legal texts on land-use rights reviewed, constraints to sustainable land management identified, modifications proposed and submitted for adoption;
- at least 5 landscape use and management plans are being effectively implemented by Project end;
- at least 10 land-use conflict resolution frameworks are being effectively implemented in communes within targeted areas;
- participatory identification and dissemination of at least 10 SLM “Best Practices” which enhance agro-silvo-pastoral productivity and conserve native biodiversity, or enhance carbon sequestration and reduce greenhouse gas emissions;
- at least 100 local community-based organizations have improved knowledge of SLM and environmental issues and are implementing biodiversity and environmentally-friendly SLM practices;
- effective operation of the Land Tenure Commissions and Land-Use Conflict Litigation Commissions on the modalities for resolving agro-silvo-pastoral conflicts;
- at least 10 communal Conflict Resolution Frameworks are being implemented;
- effective monitoring and evaluation (M&E) mechanisms under PAPNDP are adapted to the Project and are being used; and
- accessible baseline GIS databases on land and natural resources in the targeted locations developed.

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

18. The PDO and the Key Outcome Indicators were not revised. Some Intermediate Outcome Indicators were refined during the Mid-Term Review carried out from October 13-23, 2009, in recognition of the relatively short implementation period of the Project (discussed on page 15 of the Aide Memoire). In addition, several indicators (such as the improvement of land fertility by the end of Project) were deemed too difficult to measure within the Project implementation time frame, and it was recommended that they be dropped. However, none of the changes proposed at the time of the Mid-Term Review was officially implemented, due to the lack of proactive approach of the World Bank team, and consequently the Project Results Framework was never formally revised. For this reason, during the supervision mission carried out in December 2010, the supervision team decided to continue to assess Project performance against the indicators contained in the original Results Framework.

1.4 Main beneficiaries

19. **Component 1. Enhancing the integration of SLM into local development** targeted two main groups of beneficiaries: (i) rural communes and rural community-based organizations (CBOs with legal status), particularly resource-poor farmers (subsistence and small-sized farmers) living in critical areas for land management and biodiversity conservation and women, who for example in the North and Adamaoua regions lack access to water and fuel-wood and may need some support in developing water facilities and community and/or communal forests; and (ii) vulnerable groups such as the Mbororos.

20. **Component 2. Institutional support for SLM** targeted two broad groups of beneficiaries. **Sub-component 2.1. Institutional support to the land reform process** targeted communities and communes (for the elaboration of local development plans), interministerial committees of coordination on SLM, such as the *Commission Nationale pour l'Environnement et de le Développement Durable* (CNCEDD) and the *Comité Inter-Ministériel de l'Environnement* (CIE), while **Sub-component 2.2. Enhancing capacity building at the local level** targeted communes, communities, local implementing agencies and local service providers (including NGOs), vulnerable groups (the Mbororos), Land Tenure Commissions and Commissions on the modalities for resolving agro-pastoral conflicts.

21. **Component 3. Project management, coordination, monitoring and evaluation, and communication** provided funding to support the operations of the NCU, mainly its implementing agencies and its monitoring and evaluation unit.

1.5 Original components

22. The three main components of the Project were described as follows at appraisal:

A. Component 1 – Enhancing the integration of SLM into local development (Total US$70.90 million consisting of GEF US$3.60 million; co-financing from Beneficiaries US$0.36 million; co-financing from other sources US$66.94 million). The main objective of this component is to co-finance at least 60 communal and 150 community SLM micro-projects, at the request of beneficiaries (communities and communes), within the Project's intervention zone, for a total of US$2.4 million (i.e., approximately 1,322,400,000 CFA Francs) and US$1.2 million (i.e., approximately 661,200,000 CFA Francs) respectively. The total amounts allocated to micro-projects (US$3.6 million – i.e., 1,983,600,000 CFA Francs) did not include the estimated total of beneficiaries contribution (US$0.36 million – i.e., 198,360,000 CFA Francs). The latter's

contribution will be the same for both communal and community micro-project; at least 10 percent of the cost of the micro-project, of which at least 2 percent will be in cash.

B. Component 2 – Institutional support for SLM (Total US$11.55 million consisting of GEF US$1.71 million; co-financing from other sources US$9.84 million). Through this component, the Project aims to reinforce the institutional framework at the national level and to strengthen the capacities of beneficiaries to better integrate SLM best practices in their local development plans. It also seeks to improve the mechanism of land conflict resolution among farmers, foresters, herders, other natural resource users and traditional chiefs. This component is divided into two sub-components:

(a) **Institutional support to the land reform process** (Total US$4.14 million consisting of GEF US$0.71 million and co-financing from other sources US$3.43 million); and

(b) **Enhancing capacity building at the local level:** (Total US$7.41 million consisting of GEF US$1.0 million and co-financing from other sources US$6.41 million).

C. Component 3 – Project management, coordination, monitoring and evaluation, and communication (Total US$15.91 million consisting of GEF US$0.69 million and co-financing from other sources US$15.22 million). The main objective of this component is to ensure proper Project management, coordination, monitoring and evaluation, and communication.

1.6 Revised components

23. The Project components were not revised.

1.7 Other significant changes

24. No changes were made to the Project design. However, in November 30, 2010, the implementation period was extended for one year, and the credit proceeds were reallocated accordingly. The closing date moved from March 1, 2011 to March 1, 2012, and the structure of the budget was revised to reflect the new implementation time line. In addition, the Project underwent two changes of Task Team Leader (TTL). The first change took place on September 2, 2010, and the second change took place on March 12, 2012.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project preparation, design, and quality at entry

25. The GEF SLM Project was designed to help reverse the trend toward increased land degradation and to improve land productivity in fragile areas of the country. The Project design successfully incorporated the results from numerous studies that had been carried out during the preparation phase (e.g., feasibility for SLM planning, site diagnosis and advanced soil analysis, capacity enhancement needs assessment for NGOs and local implementation agencies, assessment of the existing legal and institutional framework). Furthermore, lessons learned from past SLM experiences supported under previous development projects were documented and integrated in the Project design. Appropriate measures to mitigate the risks that were identified (such as conflicts related to land use, drought, access to effective technologies in SLM, existing legal framework, and poor capacity of implementing agencies) were integrated into the implementation of the Project. Some of these risk mitigation measures included: (a) organizing stakeholders' workshops to reach consensus building among different land users; (b) promoting

"early warning systems;" (c) documenting and disseminating best SLM practices; and (d) training local service providers on SLM related issues.

26. During the preparation phase, a series of stakeholders' meetings were held in the four beneficiary regions. First, participatory consultations were organized with (a) farmer organizations that could potentially be targeted by the Project; (b) the federation of grazer associations; (c) women's groups; (d) local chieftaincies; (e) minority groups such the Mboroboro; (f) local and regional government authorities; (g) relevant sector ministries; (h) research institutions including IRAD, ICRAF, IITA and CIFOR, ORSTOM; (i) training institutions (Agricultural University of Dschang, State Universities of Yaoundé 1 and Ngaoundere); (j) state owned enterprises (SODECOTON, SODECAO, ONAREF); and (k) NGOs and donor representatives. The results of these stakeholder consultations were conveyed to a participatory diagnosis workshop, which enabled the definition of the PDO and GEO, the design of the Project main components, the identification of key activities, and the definition of key outcomes and performance indicators. The process was completed by another workshop organized to validate the final Project Appraisal Document (PAD) compiled by a small team made up of international and local consultants and approved by the government.

2.2 Implementation

27. Designed to be implemented on a pilot basis in 17 municipalities, the GEF SLM Project was eventually implemented in 23 municipalities, the coverage having been expanded in response to the strong demand for SLM micro-projects expressed by communes and communities. Implementation was preceded by the preparation of methodological tools, the training of a pool of experts on technical issues related to SLM, and the integration of SLM into existing Community Development Plans.

28. The Mid-Term Review carried out from October 13-23, 2009 identified three main issues that were seen as negatively influencing Project implementation. These included: (a) the poor quality of services provided by local contractors, (b) the weak involvement of relevant sector ministries, and (c) long delays in micro-project implementation. To address these risks, the Mid-Term Review recommended that the Project should: (i) improve the quality of the training of local service providers; (ii) strengthen partnerships with the relevant sector ministries to more actively involve their representatives in the design, implementation, monitoring and evaluation of SLM micro-projects; and (iii) improve the quality of Project planning and management.

29. Following the Mid-Term Review, the Project monitoring and evaluation system was strengthened. SLM advisors were recruited, trained, and posted to beneficiary municipalities to provide technical assistance in managing SLM micro-projects. Also following the Mid-Term Review, the Project team placed greater emphasis on encouraging the participation of all resource users in the process of consensus building, promoted a learning-by-doing approach by introducing SLM farmers' field schools, incorporated indigenous knowledge in the SLM technology package, established a system of advisory support, and encouraged the strong involvement of sector ministries, research institutions, municipalities and communities in all phases of SLM micro-projects.

30. During the December 2010 supervision mission, the World Bank team determined that the Project Coordination Unit was experiencing difficulties in collecting the data needed to inform the indicators in the result framework. To address this issue, a recommendation was made to prepare and implement a plan to collect all the data needed to populate the result framework. For this purpose, in 2011 new data collection procedures were developed jointly by the Project team and the World Bank team, and a consultant was hired to assist the Project team in data collection

and monitoring of activities on ground. Furthermore economic analysis of SLM practices was carried out. All these factors contributed to the success of the Project implementation.

31. The Project was restructured on November 30, 2010. The main reasons for the restructuring were: (a) the low disbursement level (only 46 percent of the grant had been disbursed by June 24, 2010), mainly because of the slow rate of micro-project implementation, representing up to 60 percent of the total budget; (b) the poor supervision of the Project in the field due to the lack of technical staff responsible for the activities at the regional levels; and (c) the poor monitoring of activities. The objective of the restructuring was to accelerate the implementation of the Project components in order to achieve the Project development outcome in timely fashion, to improve the quality and increase the number of completed SLM micro-projects, and to improve the performance of the procurement and M&E systems. This restructuring led to an increase in the Project disbursement and acceleration in the rate of SLM micro-project implementation.

32. Synergies between the GEF and IDA Projects. The GEF funds were partially blended with PAPNDP IDA funds. The GEF incremental funding financed activities that have served to increase awareness of the role of improved land management in maintaining not only the productive capacity of the agricultural sector, but also the associated ecosystem services and global environmental benefits. The GEF incremental funding furthermore contributed to long-term IDA initiatives related to land degradation and sustainable land management in local development planning. In return, the GEF SLM Project has benefited from IDA-financed activities and structures, including: (a) capacity building that has benefited technical and administrative staff; (b) shared implementation arrangements; (c) expertise maintained within PAPNDP's National Coordination Unit (NCU); and (d) support provided to manage longer-term local, provincial, and national environmental issues that contribute to the perpetuation of land degradation and rural poverty within Cameroon.

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

33. The Project monitoring and evaluation system improved considerably throughout the life of the Project. Starting in February 2011, new procedures were introduced for collecting data from beneficiary communities. Thanks to these new procedures, it is now possible to document the area under SLM practices on the farms of both beneficiaries and non-beneficiaries. The area under SLM practices in turn can be disaggregated by type of SLM technology, including: (a) improved pastures; (b) reforested areas; (c) communal/community forest areas; (d) land under organic manure; and (e) other technologies, such as water harvesting. The records maintained by the Project coordination Unit show the target values for key indicators, current achievements, and projected achievements at Project term. A custom method was developed to assess trends in yields, especially of maize. As part of every farmer's field school, a 10m x 10m plot was planted to monocropped maize and used to measure yield performance. This method was also used to measure yields achieved by Project beneficiaries on their own farms.

34. Sixty SLM consultants were recruited and trained in these data collection methods, prior to being assigned to the four Project intervention sites. In addition to collecting data on key indicators, the SLM consultants provided technical assistance to the communities and municipalities in the implementation of their micro-projects. They played a dual role, serving both as technical advisors and retaining responsibility for monitoring and evaluation. The information they collected from communities/municipalities was sent to the Region's Environmental Services (CASE) for compilation. Data from the four regions were consolidated by the Project Coordination Unit and shared with relevant ministries during the Project

supervision meetings, which were held on a quarterly basis.

35. Most of the major outcomes targeted at the time of appraisal were achieved by Project completion: (i) up to 8,000 households (85 percent of the target indicator) had adopted SLM practices; (ii) land/landscape-use planning and SLM principles had been integrated into landscape use planning processes, with the use of Geographic Information System (GIS) databases and maps and landscape use and management plans having been adopted and implemented at the communal level (within the targeted regions); (iii) through the ad hoc committee on SLM established by the MINEPAT, the capacity and coordination among key ministries had been strengthened to promote sound SLM policies, programs and guidelines at both national and regional levels; (iv) by establishing a system of SLM advisors, the capacity of NGOs had been strengthened to provide support to micro-projects in SLM good practices; and (vi) Project economic, social and environmental impacts and results had been monitored through a household survey carried out in 2010 by the Project team with the support of World Bank Institute (WBI), and SLM best practices had been documented and were being disseminated.

36. The Project M&E system helped to classify the types of SLM technologies being promoted and to produce a compendium of best SLM practices being disseminated. Results of the M&E effort were also used by the AFD (*Agence Française de Développement*) to include SLM micro-projects as eligible activities under their support to the PAPNDP.

37. The M&E system will be used beyond the Project implementation period. First, since the SLM operations are also PAPNDP-eligible activities, the SLM M&E has been mainstreamed into the larger PAPNDP M&E framework. The human resources (consultants and SLM staff) hired to implement the SLM M&E system will be an integral component of the PAPNDP staff and will strengthen the management of the new SLM micro-project portfolio that will be funded through an AFD grant.

2.4 Safeguard and Fiduciary Compliance

38. **Safeguards**. The Environmental and Social Management Framework of PAPNDP, which is used to identify and manage socio-environmental aspects of Project-supported interventions, was updated in 2009 to include the GEF SLM Project. The framework mandates that socio-environmental reviews be carried out for specific types of SLM micro-projects. Consistent with the framework, all communal and communities SLM micro-projects have been subject to systematic socio-environmental screening, leading when appropriate to the identification of environmental and social management measures that have been incorporated into the technical and financial documents of the concerned micro-projects. Socio-environmental screening and evaluation forms were systematically appended to all requests for funding, and all local service providers and SLM consultants were trained in the use of the forms.

39. No involuntary resettlement occurred during the implementation of SLM micro-projects funded by the Project. All resources used by the SLM micro-projects, including land, were voluntarily donated, with the terms of the donations explicitly recorded in documents annexed to the application for funding.

40. The 23 communities in which SLM micro-projects were implemented do not contain members of the Baka ethnic group or other indigenous groups. However, in some communes, nomadic herders known locally as Mbororo have benefited directly from Project-supported interventions, including construction of infrastructure, distribution of pastoral equipment, and establishment of frameworks for resolving conflicts between farmers and grazers. According to an economic impact study conducted by the WBI at the end of 2010, many farmers in the

commune of Ngaoundal, where the Mbororo are the dominant group, became producers of forage, which not only improved pasture lands, but also contributed to limit transhumance in the region. The sedentarization of the Mbororo has led to an increase in the number of children enrolled in primary school, in an increase in the number of children that have been immunized, and in improved nutritional status resulting from the availability of milk in all households throughout the year.

41. **Fiduciary management.** Special tools were developed to enable the effective implementation of procurement policies and procedures under the Project. Annual procurement plans were prepared regularly and submitted to the World Bank for approval. Community SLM micro-projects, which were subject to strict funding limits, were implemented mainly in-house, while communal SLM micro-projects, which involved considerably more resources, were systematically put out for competitive bidding. Key stakeholders, including grassroots communities, municipal committees, and Project procurement staff received training in the approved procurement policies and procedures. Procurement documents were retained by the regional Project implementation units, as well as at the central Project Coordination Unit.

42. With regard to financial management, each Regional Coordination Unit (RCU) set up a system that allowed the financing of micro-projects through joint accounts co-managed with beneficiaries.

43. The financial situation at the time of Project closing is summarized in Table 2 below. Table 2 shows that at the time of Project closing, disbursement stood at 99.83 percent. Throughout implementation, the Project was subject to annual technical and financial audits. No major irregularities were noted.

Table 2: Initial allocation and actual expenditures

Type	Categories of Expenditures	Amount allocated (USD) (a)	Actual Expenses (USD) (b)	Balance (USD) (a-b)	Disbursement rate (%) ((b/a)*100)
Totals		6,000,000.00	5,989,734.62	10,265.38	99.83
1	Goods, equipment, and vehicles	210,000.00	167,672.32	42,327.68	
2	Consultants services and audits	850,000.00	971,471.26	-121,471.26	
3	Micro-projects PTA	3,880,000.00	3,923,508.35	-43,508.35	
4	Operating costs	410,000.00	384,920.19	25,079.81	
5	Training and workshops	650,000.00	540,990.06	109,009.94	
6	UNALLOCATED	0.00	0.00	0.00	
DA-C	Designated account	0.00	1,172.44	-1,172.44	

Sources: Client Connection, August 9, 2012

2.5 Post-completion Operation/Next Phase

44. Overall, the Project achieved encouraging results and generated increased demand for communal SLM micro-projects. Some initiatives with high potential impact will require supplementary resources to be fully realized, while others should be followed by stand-alone scaling-up projects. Because the amount of the GEF grant was limited and the time frame for

Project implementation was restrictive, a small number of interventions were not fully realized, such as the establishment of a corridor in the North region to facilitate the movement of cattle from the Central African Republic to Nigeria, and the legislative changes designed to improve the effectiveness of the National Consultative Commission for the Environment and Sustainable Development (CNCEDD) and the Inter-Ministerial Committee for Environment (CIE) in promoting sound SLM policies and programs. Measures needed to complete these two initiatives were considered under the project and are briefly described below.

45. Establishment of a corridor through the North region. A feasibility study carried out with Project financing showed that such an investment would have attractive returns. However, before the investment is undertaken, a series of technical, socio-environmental, and financial issues would need to be addressed. These include: (i) carrying out an environmental impact assessment and protecting environmentally important areas that might be adversely affected, (ii) carrying out a social impact assessment and putting in place measures to protect or compensate people who would be displaced, and (iii) preparing the legal and institutional framework to ensure good governance of the corridor. Additional resources beyond the amount available through the Project would be needed to carry out these activities. According to the feasibility study, additional funds in the amount of approximately one billion FCFA would be needed to ensure successful implementation of this trans-boundary cattle corridor project. Because of its potential impact in terms of job opportunities, fiscal revenues for beneficiary municipalities and reduction in land related conflicts between grazers and farmers, the Government is currently drafting a decree on the establishment and functioning of this corridor.

46. Legislative changes needed to improve the effectiveness of the CNCEDD and CIE. Efforts have been initiated to ensure the effective operationalization of these two committees. These include the recent release of various texts amending or supplementing the existing texts, namely: (i) Decree No. 18 of 2011/2492/PM August 2011 amending and supplementing certain provisions of Decree No. 94/259/PM of May 31, 1994 establishing a National Consultative Commission for the Environment and Sustainable Development; (ii) Order No. 09 of 004/MINEP November 2011 establishing the composition, and operating procedures for appointing members of the specialized committees of the National Consultative Commission for the Environment and Sustainable Development; and (iii) Order No. 005/MINEP of November 9, 2011 establishing the role, composition and operating procedures of the Regional Commission of the National Consultative Commission for the Environment and Sustainable Development. All these documents were produced with the support of the GEF grant. To date, the members of the Commission are yet to be appointed or designated by the relevant stakeholder organizations. The first workshop for the launching of the CNCEDD is planned for the end of 2012. Upon the request from MINEPDED, MINEPAT has agreed to provide technical and financial support in organizing this important workshop.

47. Some of the more successful SLM initiatives supported under the Project, if scaled up, could make significant contributions to the government's rural development strategy by creating employment for rural youth, generating income for rural households through value addition, improving food security in rural areas, and conserving the biodiversity on which rural livelihoods depend. Examples of these successful initiatives include: (a) cocoa-led agro-forestry systems in the savanna zone of the Center region, (b) rain-fed water harvesting for small-scale irrigated farming in the North region, (c) improvement of pasture land through fodder farming in the Adamaoua region, and (d) small scale livestock-farming integrated systems in the West or Highland regions. The World Bank and GEF could tap into these innovative activities, working in partnership with other donors and local financial institutions such as the *Credit Foncier* and the *Fonds Spécial d'Equipement et d'Intervention Intercommunale (FEICOM)*. The funding

package could include investing in supply chains (improved seed and inputs, small scale modern farms, value-added enterprises, markets), institution building (cooperatives, rural credit, insurance and agricultural extension), and rural infrastructure (social and affordable housing for young farmers, rural roads, electricity, water and sanitation, schools and community health care).

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

48. According to Cameroon's Growth and Employment Strategy Paper (GESP), agriculture is the lead sector of the national economy by virtue of its contribution to GDP (about 30 percent), its share of total exports (27 percent without considering wood), and its importance as a source of employment (an estimated 60-65 percent of the workforce is employed in agriculture). Because of its impact on the national economy, the agricultural sector is identified as a priority in the global development agenda, as well as in the World Bank CAS. Given that: (a) approximately 23 percent of soils in Cameroon are degraded, to the point that productivity is affected, (b) the country's forest cover decreases by about 1 percent per year, and (c) there is a shortage of water during the dry season, especially in the northern part of the country, and hundreds of plant species are threatened, both PDO and GEO are relevant. Direct observations made in the field and findings from focus group meetings with different groups of beneficiaries (communes, communities, and sector ministries) confirmed that the Project's objectives remain highly relevant, appropriate, realistic and consistent with the priorities and needs expressed by different land users.

49. The Project design maintained the demand driven approach of the PAPNDP, which is considered fair and transparent for almost all the recipient communities and communes. The design included SLM activities that address simultaneously the improvement of land productivity, the increase in crop yield, the diversification of agricultural production, the maintenance and conservation of the natural resource base, and the social acceptability of the technology. Down payments required of beneficiaries (communities and communes) were kept at an acceptable level. Although the Project did not specify the share of micro-projects that would be awarded to vulnerable groups, it was agreed that the demands of these groups would be classified as top priority. Eligible micro-projects were those with potential to add value to agriculture and livestock production activities. These included, for example, micro-projects designed to promote rainwater harvesting with the potential of generating small local irrigation schemes for vegetable and staple food production, especially during the dry season where food insecurity is severe; micro-projects designed to promote fodder farming to reduce animal mortality, improve the production of meat and increase the supply of fresh milk; and micro-projects designed to promote the introduction of fruit trees and local spice species in the agro-forestry system in order to fulfill at the same time the objectives of crop diversification, water infiltration and reduction of soil erosion. The Project design also included capacity enhancement and participatory monitoring and evaluation.

50. One minor weakness identified in the Project design is that there was a disconnect between the PDO and two intermediate outcome indicators, namely, (i) the indicator that called for the establishment of a functional CNCEDD and a functional CIE, and (ii) the indicator relating to the reinforcement of land use rights policies through the adoption, revision, and/or implementation of legal texts or decree on land tenure and land-use rights.

51. Following the launching of the Project on a pilot basis in critical ecosystems of the Center, West, Adamaoua and North regions, several SLM technologies were tested successfully. For

example, reforestation associated with cocoa trees in Batchenga (Center region) shows that it is possible to introduce sustainable savannah agro-forestry systems that can generate significant amounts of income for rural people. Fodder farming in the Adamoua region is generating benefits for both farmers and herders and thereby helping to reduce competition for resources between these two groups. Introduction of water harvesting practices in the North region not only has allowed the establishment of significant reserves of water for use by livestock during the dry season, but it has made possible the development of irrigation for production of vegetable crops. Promotion of improved composting systems and introduction of crop contour practices has helped to rehabilitate leached land in some villages of the West region. In most areas where SLM practices have been introduced, crop yields (of maize in particular) have increased from less than 1 ton/ha to 3 tons/ha on average.

52. With regard to the Project implementation and outputs, the following achievements were recorded:

Component 1: **Enhancing the integration of SLM into local development**

53. The Project started with the sensitization of communities and communes in the four beneficiary regions, with the aim of concentrating interventions in areas where land degradation was most pronounced. After the Project sites had been selected, a toolkit was produced to serve as a guide for the preparation of SLM micro-projects. This document was the base of the technical support provided to communities and communes by the SLM consultants. In order to generate high quality micro-projects, the consultants participated in a workshop where SLM indicators and technologies were defined. The workshop was followed by the training of communities and communes on SLM best practices.

Component 2: **Institutional support for SLM**

54. To ensure that Component 2 would be implemented properly, a research-action workshop was organized during which a methodology was developed to update community and communal development plans. This methodology allowed the Project to incorporate SLM priorities into 19 communal development plans and 120 community development plans. Another workshop was organized to develop a methodological guide for the preparation of the land use and management plans. Consultants working for local service providers and representatives from sector ministries were trained in the use of these tools.

55. The Project successfully advocated in favor of the operationalization of the CNCEED. As a result of the Project's advocacy campaign, an ad-hoc committee that included representatives of all the line ministries dealing with SLM-related issues, as well as representatives from civil society, was established by the MINEPAT to address the issue of land reform policy. The work of the committee started with the identification of common measures to facilitate the implementation of the cattle corridor project in the North region. To ensure better coordination and avoid duplication of activities, the Project designed a template that was sent to all line ministries for use in identifying sector-specific land reform initiatives. Finally, the Project carried out field studies to identify different types of land-related conflicts. The findings of these studies were incorporated into the various conflict resolution frameworks, as well as into the different land use and management plans developed by the Project. The Project worked in close collaboration with the CIE, the commission established to approve environmental impact studies. Members of the CIE were associated in the designing of all SLM micro-projects.

Component 3: Project management, coordination, monitoring and evaluation and communication

56. The main activities supported under Component 3 included procurement, supervision, data collection, and documentation of best practices. Procurement plans were prepared and reviewed annually. All works, studies and trainings were systematically subject to invitations for tender. The results framework of the Project was regularly up-dated, and data collected as part of the M&E effort were used to feed the GIS. SLM best practices for each region were documented in the form of a compendium and a video.

57. The impact of the Project on household income was studied with the support of the World Bank Institute (WBI). A case study on the impact of SLM investments on producer net income carried out in 2010 by the Project team with the support of WBI showed that the net present value (NPV) of the farming activities carried out by Project beneficiaries was 4 to 5 times greater than the NPV of farming activities carried out by non-beneficiaries. This difference was also observed in the case of livestock production, as the NPV of the livestock production activities carried out by Project beneficiaries who cultivated fodder crops was about twice more than that of the NPV of the livestock production activities carried out by non-beneficiaries. The same study also concluded that farmers and herders who invested in SLM increased their income in the presence of agro-climatic shocks (for example, an unexpected decrease in rainfall).

58. The government has committed to sustain the Project benefits. Under the PAPNDP phase II, the government negotiated with the AFD to include a sub-component on SLM technologies as eligible micro-projects. In addition to the AFD support, the government is also encouraging the communes to fund SLM activities. In this light, the PAPNDP has incorporated SLM into all communal development plans.

3.2 Achievement of Project Development Objectives

59. According to the result framework datasheet, the economic analysis study, and the stakeholders report, almost all outcome and intermediate outcome indicators were substantially achieved. The only exceptions were the operationalization of the CNCEDD and the adoption of legal texts relating to land reform. In the areas targeted by the Project, an estimated total of 88,448 ha are under SLM, including 31,544 ha in the Center region, 2,837 ha in the West region, 10,824 ha in the Adamaoua region and 43,243 ha in the North region. This area is 77 percent larger than the 50,000 ha targeted at appraisal. The total area under SLM includes 46,195 ha of communal forest / agro-forestry, 29,500 ha of Yoko in the Center region, 30,000 ha of planted forests (reforestation), 10,000 ha of smoked land (composting), 8,000 ha of fodder crops, 3,433 ha of conservation agriculture (bunds), and 1,000 ha of rainwater harvesting. The farmers' SLM field schools have reduced the use of slash-and-burn practices for agriculture and livestock production in the Center and Adamaoua regions, respectively. In the Center region, shifting cultivation and seasonal grazing based on slash-and-burn methods is being replaced by the introduction of cocoa-led agro-forestry systems featuring soil fertilization with animal and green manures (maize-soybean intercropping). In the Adamaoua region, the practice of slash and burn grazing is progressively disappearing in favor of fodder cropping, especially using Brachiaria and Stylosanthes. Fodder farms, which are increasing in number and size, represent important food banks whose stocks can be used to feed livestock during the dry season. These alternatives to slash and burn farming and grazing have been adopted on about 32 percent of the land in the Center region and about 29 percent of the land in the Adamaoua region, far exceeding the 20 percent targeted by the Project.

60. SLM micro-projects have been responsible for the appearance of new plant and animal

species in almost all Project sites. The new plant species which have been introduced are Leucaena, Calliandra, Brachiaria, Stylosanthes, gmelina, Balanites and mucuna, all of which are used as green manure. Reforestation, use of fodder crops, and rainwater harvesting have led to the reappearance of wildlife species in a number of Project sites. In the North region and in the Adamaoua region, animal species that have reappeared include rabbits, antelope, Nile crocodile, lizard, python, African birds and picnic. In the West region, the rehabilitation of Lake Kouoptamo has favored the reappearance of the kingfisher and several species of wild duck. In all four regions, particularly in Center and West regions, medicinal plants (prunus), exotic fruits (Irvingia gabonesis) and spices have been introduced into traditional agroforestry systems (agro-forestry, windbreaks and groves). In case of Adamaoua region in particular, many farms of Brachiaria established under the Project have been colonized by bees.

61. The numbers of communal and community micro-projects (MPs) funded and implemented under the Project were met and exceeded. Fifteen (15) communal MPs were completed, and 18 are under implementation. One hundred ninety one (191) community MPs were completed, and 34 are under implementation. The total number of MPs is thus well above the target value of 150.

62. The area under improved soil fertility management practices is about 10,000 ha (improved soil fertility management practices include the introduction of legumes, the incorporation of compost, or the construction of stone barriers and erosion control strips). The North region has the largest area under improved soil fertility management practices (5,746 ha), followed by the Adamaoua region (3,500 ha), the West region (1,100 ha), and the Center region (400 ha). Adoption of zero tillage and increased use of animal traction partly explain the rise in rehabilitated degraded land in the North region. Indeed, the average farm size of beneficiary households in this region is about 3 ha (WBI, 2010).

63. Seven (7) MPs are supporting community/communal forests, whose potential is estimated at 30,000 ha. This result is also above the target value of 3 community / communal forests to be supported by the Project. In addition to community/communal forests, the total protected areas is estimated at 9,574 ha, which is also beyond the target value (5,000 ha).

64. SLM practices promoted under many MPs have had a marked impact on crop yields. An assessment of maize yields carried out by the SLM consultants based on the results of crop control plots revealed yields ranging between 2.45 t/ha and 7 t/ha depending on the region. Maize yields average 2.7 t/ha in Adamaoua region, vary between 2.45 t/ha and 4.8 t/ha in the Center region, and range from 3.5 t/ha to 7 t/ha in the North region. Overall, maize plants grow better on land under SLM compared to plants grown on conventional farms.

65. In the predominantly pastoral regions, the rate of adoption of agro-pastoral systems such as fodder crops and compost from manure and agricultural residues varies from 72 percent (North region) to 80 percent (Adamaoua region). This rate could reach 90 percent when data from all the MP are collected. The indigenous knowledge of communities has been successfully integrated into the SLM practices. One can cite the example of Irvingia gabonesis (bush mango) and safou incorporated into reforestation areas in the Center region, some herbs and spices integrated into systems as windbreaks and groves in the West region. Also noted is the increased use of manure as foliar fertilizer in the West region. In the North region and in the Adamaoua region, cowpea is increasingly used as a cover crop. After dissemination of SLM practices, beneficiaries are increasingly adopting more fodder crops, with women being particularly involved in harvesting and packaging of seeds. The number of households having adopted SLM practices is increasing rapidly. It rose from about 5,000 households having adopted in July 2011 to 8,456 having adopted in October 2011 (the latter figure represents 85 percent of the target value of 10,000).

66. In terms of strengthening policies for land use and legislative tenure, the process of preparing the decree on the corridor of livestock in the North Region is underway. MINEPAT has established a technical committee which includes representatives from all relevant ministries and from Civil Society Organizations (CSO). Legal texts for the operation of the CNCEDD have been reviewed, up-dated and approved by the Prime Minister. The first workshop on launching of this important decision making institution is being planned. Five land use and management plans (*Plan d'Utilisation et Gestion des Terres* - PUGT) have been approved and implemented. Four hundred and two (402) local communities have been exposed to SLM practices, and 21 frameworks for conflict resolution have been implemented. These typically involve the management of common resources (forest, cattle parks, and grazing lands).

3.3 Efficiency

67. To assess the efficiency with which the Project achieved the Project Development Objective (PDO) and the Global Environmental Objective (GEO), an economic and financial analysis (EFA) was prepared (see Annex 3). The EFA computed the Financial Rate of Return (FRR), the Economic Rate of Return (ERR), and the corresponding Net Present Values (NPVs) of MPs falling into two main categories: "Land under Agroforestry Farming Systems" and "Pasture Lands for Cattle Production under Fodder Cropping Systems." These two categories represented about 75 percent of all MPs supported under the Project and absorbed 50 percent of Component 1 costs. The EFA used farm models and FAO's *Ex-ante Carbon Balance tool* (EX-ACT) to estimate both "on-site" and "off-site" incremental benefits. Data used in the analysis were collected during field visits and taken from the household survey carried out by WBI.

68. The analysis showed that, on average, MPs supported by the Project were financially and economically attractive. Under a set of conservative assumptions (e.g., 25 year Project life cycle, 10 percent discount rate), the NPVs are positive, and the FRRs and ERRs are in the order of 17.6 to 19.6 percent and 18.1 to 21.2 percent, respectively. The financial and economic returns are sensitive to several scenarios (e.g., lower-than-expected adoption rates, smaller-than-expected increases in crop yields, decreased output prices), but they remain robust overall and above the opportunity cost of capital. These results provide strong evidence that the Project was efficient.

69. The results of the EFA conducted for the ICR could not be compared with the results of the EFA prepared at appraisal and presented in the PAD because the *ex-ante* EFA did not compute IRRs or NPVs. IRRs and NPVs could not be calculated at appraisal due to the difficulty of specifying in advance the returns from CDD investments and the complexity of quantifying environmental benefits.

70. In addition to improving crop yields, land husbandry activities supported with GEF funds contributed to reduce negative externalities occurring downstream from erosion points, for example, sedimentation, flood damage, and eutrophication of rivers and watersheds. Specific sub-projects (such as the communal project in Kouoptamo in the West region) were implemented to foster flood control and protect downstream farming plots. These off-site benefits were not quantified in the analysis due to the difficulty of quantifying the relation between watershed management activities (such as adoption of SLM practices) and their physical effects (for example stabilization of top soil, reduced flooding). Nevertheless, it is clear that the Project has generated one very large global public benefit, namely, the reduction of carbon emissions. It has done this by increasing below- and above-ground sequestration of carbon. The activities supported under MPs in the two main categories "Land under Agroforestry Farming Systems" and "Pasture Lands for Cattle Production under Fodder Cropping Systems" are estimated to fix

an average of 2.1 tons and 3.4 tons of equivalent CO_2 per ha and per year.

3.4 Justification of Overall Outcome Rating

Rating: Satisfactory

71. Direct observations and findings from focus group meetings with beneficiaries (communes, communities, and sector ministries) confirmed that the Project objectives remain highly relevant and that they are consistent with the priorities and needs expressed by different groups of land users. The PDO and GEO were substantially achieved, as evidenced by the Project's result framework. The financial and economic performance measures generated through the EFA show that the Project was efficient in achieving its development objectives.

72. Based on the relevance of the Project's objectives, the substantial achievement of the PDO and GEO (efficacy), and the efficiency of Project-supported interventions, the overall outcome rating for the Project is Satisfactory.

73. The overall Satisfactory rating of the Project is further supported by a number of impacts documented through the WBI impacts assessment but not directly captured in the Project results framework:

A gradual expansion of SLM practices

74. In areas targeted by the Project where agriculture is a predominant activity (Kouoptamo, Bangang-Fokam), 91 percent of interviewed households are practicing at least one SLM technology on at least one of their farms, and 77 percent of the beneficiary plots are under SLM. The rate of replication of SLM technology among households that were not directly targeted by the Project is quite encouraging. About 25 percent of non-beneficiary households are practicing SLM in at least 28 percent of farms. Significant progress is also evident among farmers. In this category, out of 39 percent of beneficiary households having at least one pasture, 23 percent have adopted the SLM practices. Among the SLM technologies promoted under the Project, use of forage crops is predominant in areas oriented primarily toward livestock production (85 percent in Fada and 65 percent in Njounde in Adamaoua region). Agro-forestry, for example, use of tree-crop-livestock associations, is the predominant SLM practice in areas oriented primarily toward crop production. Nevertheless, SLM practices vary by location and by cropping system: reforestation is more pronounced in the cotton-growing zones of northern Cameroon; contour planting, composting, and improved fallows are more popular in the mountainous areas of western Cameroon; and stone bunds and grass strips that limit soil erosion are increasingly being introduced into groundnut basins in semi-arid areas of the north. Evidence that use of agro-forestry practices is reflected in the fact that the average number of trees maintained per hectare on farms is clearly increasing. Among Project beneficiaries, the number of trees increased from 37 before the start of the Project to 56 at present, and among Project non-beneficiaries it increased from 36 at the start of the Project to 41 at present, indicating an appreciation of the usefulness of the tree by households in areas of study. Overall, 92 percent of beneficiary farmers and 81 percent of non-beneficiaries interviewed expressed their intention to continue using SLM practices after the Project ends.

A positive incentive to reinvest a portion of net income in the maintenance of land productivity

75. Overall, 82 percent of farmers and 97 percent of herders reported that soil fertility (among farmers) and improved pasture (among herders) are respectively the factors explaining the increase in their production. Both groups expressed their willingness to reinvest a portion of their net income to maintain the productivity of land (farmers indicated a willingness to invest up to

6.2 percent of their net income, and grazers expressed a willingness to invest up to 20 percent of their net income). Even non-beneficiaries indicated their willingness to reinvest in the conservation of the resource (up to 4.7 percent among farmers and up to 8 percent among ranchers), probably because of their exposure to the positive experiences of Project beneficiaries.

A perception of increased production significantly higher among beneficiary recipients

76. Among households growing staple crops (legumes, cereals, roots and tubers), beneficiary farmers who adopted SLM practices reported increases in production the economic value of which substantially exceeded the added costs of implementing the practices. Meanwhile, non-beneficiary farmers who did not adopt SLM practices reported continuing decreases in production due to accelerating land degradation and declining soil fertility. In the case of cotton, most respondents (beneficiaries as well as non-beneficiaries) reported declines in production, which can possibly be explained because of the lack of secure land tenure, which discourages long-term investments in SLM. In the livestock sector, beneficiary herders who adopted SLM practices similarly reported increases in beef and dairy production, as compared to non-beneficiary herders who did not adopt SLM practices and who reported much smaller increases. The main factors explaining the much larger increases in production recorded by beneficiaries were the improvements in soil fertility (81 percent) and the improved quality of grazing (97 percent) respectively for agriculture and livestock.

A significant increase in average farm income among beneficiaries

77. Mixed farming and forestry are the main source of income for households in areas of study. Overall, the average income of beneficiary farmers is higher than the average farm income of non-beneficiaries. In both cases, beneficiaries earned more than non-non-beneficiaries. Among beneficiaries' farmers, per hectare average gross income is around CFA 405,000 against 300,000 for non-beneficiaries, while the average net farm income is FCFA 300,000 for beneficiaries against 220,000 for non-beneficiaries. Whatever the changes in income, expenditure on education occupies a significant proportion of investment priorities among beneficiaries and non-beneficiaries. According to interviewees, the adoption of SLM practices (57 percent among farmers and ranchers in 45 percent) is the main source of the rising income.

3.5 Overarching Themes, Other Outcomes and Impacts

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

78. The Project has documented the best SLM practices for countrywide dissemination. This section of the ICR highlights some representative examples of poverty impacts, gender aspects, and social development achieved under the Project.

79. **Poverty Impacts**: (1) In the Center region, herds of cattle passing through the region are kept in an enclosure built by the local community to prevent trampling of fields and destruction of crops. While in the enclosure, the cattle are fed on Brachiaria produced locally on improved pastures. The manure collected in the stockyard is distributed to about 60 farmers and used to fertilize about 60 ha of vegetable plots. A group of 10 farmers including three women received training on fodder cropping, irrigation management, and soil improvement through application of manure. Vegetable production schemes now provide job opportunities for rural youth. (2) In the Adamaoua region, one cattle breeder selected 26 cattle from his herd and purchased another 14 animals, making a total of 40 cattle that fed for two months on hay produced from his 4 ha field of Brachiaria. After two months of fattening, the animals were sold for a price of 375,000 FCFA each, considerably more than the CFA 220,000 they would have generated after having been

grazed for three months on unimproved pasture (the traditional practice). The farmer recorded a 50 percent reduction in the cost of purchased feed, as he is now able to produce himself many key feed ingredients. He is now also able to produce maize for home consumption, allowing him to realize further savings of about 720,000 FCFA that he formerly spent for the purchase of wheat. (3) In all of the regions targeted by the Project, the introduction of fodder crops has generated new agricultural activities. For example, some farmers who have specialized in the production of seeds of Brachiaria and Stylosanthes are reported to have harvested an average of 200 kg/ha of seeds, generating additional gross earnings of about FCFA 200,000 to 300,000. This new profession of "Local SLM Advisors" is one of the great innovations promoted by the GEF-SLM Project. Many beneficiary households have similarly diversified their sources of income and improved their food security.

80. **Gender Aspects**: In the Adamaoua region, fodder cultivation practices introduced under the Project have limited transhumance and decreased cattle mortality, resulting in increased milk production, a lucrative activity for Mbororo women. In addition, manure from cattle kept in areas reserved for food cultivation has substantially improved soil fertility. A group of women who planted maize on a collectively farmed area of 5 ha reported yields of about 2.5 t/ha, with 30 percent of production distributed to group members and 70 percent sold. The money received from this sale was saved in an account and then used to buy seeds for the following season, as well as to pay agricultural laborers. Also in the Adamaoua region, over 100 ha belonging to nearly 200 rural women now benefit from regular applications of manure collected from the cattle park. Similar gender impacts have been recorded in other regions. The yield of the major staple crops grown predominantly by women, such as maize, cowpeas and beans, are almost double in areas under SLM.

81. **Social Development Aspects**: Local tax revenues in communes where grazing activities are dominant rose by 20 percent in 2011. The introduction of fodder farms in the area helped settle many nomadic herders, thereby significantly improving the monitoring of cattle present in the commune. The stabilization of livestock facilitated the registration animals by the local authorities and increased the efficiency (cost reduction) and effectiveness of the system used to collect the municipal tax on livestock. Municipal authorities believe that thanks to their communal SLM projects, which have financed the installation of cattle parks and fences, tax revenues will increase by 30 to 40 percent by 2015. The revenues collected will fund increased public investment in socio-economic infrastructure such as schools, rural markets, mother and child health care centers, and water supply and sanitation systems. The immunization coverage of pregnant women and children under one year old has increased by 70 percent in first quarter 2010, compared to 50 percent in the same period in 2009, as estimated by the health districts in the SLM areas. This increase is due to the combined effect of the construction of a community health centers by PAPNPD and the stabilization of pastoralists following the introduction of fodder farms by the SLM Project. The number of pregnant women using the services of reproductive health also increased significantly, as did the primary school enrollment rates of Mbororo children.

(b) Institutional Change/Strengthening

82. Although the project has not addressed the issue of land reform, some significant institutional changes have been recorded at the national, regional and communal levels.

83. At the national level, under the technical assistance of the PCU, the MINEPAT has established a SLM Committee to advise the government in decision making regarding land use occupation and planning. The Committee is composed of representatives of relevant ministries, including agriculture, livestock, homeland, land affairs, water resources and mining, forest and

environment. Representatives of civil society organizations are also members of the Committee. The first land issue which is under review is the Corridor Project for free movement of cattle in the North Region. This Project plans to implement an SLM micro-project in a transhumance corridor stretching from the borders with the Central Africa Republic (CAR), Chad and Nigeria to facilitate the movement of livestock and minimize conflicts between farmers and grazers. The main issues to be solved in this Project are: reclassification of protected areas, displacement of affected people, and environmental impact assessment. The Committee held two meetings in 2011 and has addressed its reports to the MINEPAT.

84. The Project established Joint Committees for Project Approvals (CPAP), which among other functions is tasked with approving communal and community MPs.

85. In addition to establishing these committees, the Project supported the preparation and review of the legislative texts establishing the National Environment and Sustainable Development Committee (CNCEDD), working through an ad hoc committee established by the Minister for the Environment. A workshop involving all the parties involved is planned, and it is expected that the CNCEDD will play a leading role in framing the process of improving the legislative framework for land tenure in Cameroon.

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

86. **Beneficiary farmers have improved their land management practices.** The capacity building program implemented by the GEF-SLM Project has soil quality management as one of the cornerstones of its sensitization campaign. Soil quality is thus actively managed by beneficiaries of the Project through direct and indirect measures. For example, the households that had an average of 35 trees on their farm prior the Project intervention now have an average of 55 trees on their farm. This represents an increase of 25 trees that were planted with support from the Project. These trees range from fruit trees to leguminous tree plants.

87. In addition to representing a source of fertilizer (green manure), the trees allow farmers to reduce damage from windstorms, provide shade to improve soil health, and produce livestock feed and other economically valuable by-products. Trees contribute to sustainable land management practices in the communities studied by preserving and enhancing the productive capabilities of lands in both cropped and grazed areas, whether in upland areas, down-slope areas, and flat and bottom lands. They enhance soil viability by providing shade and other actions that stop and reverse degradation or at least mitigate the adverse effects of earlier soil misuse, which is increasingly important in farmlands near homesteads and closer to areas where pressure from the resident populations is severe.

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

88. To capitalize on the experience of this Project, a study was conducted on a sample of 480 households, including 240 beneficiary households and 240 non-beneficiary households in six areas. A field survey was conducted under the PAPNDP which contacted beneficiary households that received information and training on environment and ecosystem management. Beneficiary households and non-beneficiary households were both included in the sample, to compare their knowledge of SLM principles and their adoption of SLM practices. The objective of the survey was to generate information on the choices farmers make to insure the resilience of the farmland and to establish whether these choices are influenced by socioeconomic parameters (e.g. income, age, gender, education, climate, soil type, etc.).

89. The findings of the study show that the performance of the SLM Project has been impressive. In the study areas, almost all targets have been substantially achieved. A variety of

SLM technologies have been popularized. These include use of agro-forestry methods; reforestation of degraded lands; forage production; contour cropping; and planting of hedges, grass strips and stone bunds to control soil erosion. Over 70 percent of the Project beneficiary farms are under SLM. Of the multiple activities undertaken, crop agriculture contributes the largest proportion to household income (71 percent) followed by livestock production (14.9 percent). Remittance and transfers are also important accounting for 5 percent and 6.5 percent for beneficiary and non-beneficiaries, respectively, of the SLM Project. A breakdown of farm income after employing the techniques of sustainable soil and crop production reveal that farms of beneficiaries of the SLM Project make the highest profits. The income gains from increases in production substantially exceed the added costs of implementing the SLM practices. Average net farm income among beneficiaries has increased compared to non-beneficiaries. This performance may fall in the long run if limiting factors such as access to markets, improving land tenure, selection of gender sensitive appropriate SLM technologies, and adaptation to climate change are not taken into account. Greater synergy between the Community Driven Development Program (PNDP), which promotes socio-economic investments and land use management plans, would therefore need to be strengthened.

4. Assessment of Risk to Development and GEO Outcome

Rating: Negligible

90. The risk to development and GEO outcome is negligible. Indeed, the main risk factors which were identified in the design of the Project are as follows: (i) conflicts related to land use; (ii) drought; (iii) access to efficient SLM technologies; (iv) the incomplete legal framework; and (v) the capacity of implementing agencies. For all of these risks which might have a negative impact on the implementation of the Project, corresponding mitigation measures were identified, incorporated into the Project design and then implemented satisfactorily under the supervision of the World Bank. These include (a) organizing stakeholders consensus workshop on land use and planning; (b) incorporating lessons learned from past SLM projects and indigenous knowledge into the SLM capacity building and micro-project package; (c) documenting and disseminating best SLM technologies; (d) producing a toolkit for the SLM community of practice; (e) training of local service providers in SLM related issues; (f) establishing a network of SLM advisors at the communal level; (g) involving sector ministries in the design, implementation, monitoring and evaluation of both communal and communities micro-projects.

91. Other risk factors were identified during the implementation phase of the Project by the Mid-Term Review team and included (i) the difficulty in mobilizing counterpart beneficiary funds and (ii) the non-effective functioning of the CNCEDD. Regarding the risk related to the mobilization of down payments by beneficiaries, this difficulty can be explained by the poverty of most beneficiaries. This problem was addressed through an awareness and outreach campaign targeting elites in recipient communes and communities and stressing the importance of local fund raising. The campaign was extremely successful, as it led to spontaneously local mobilization of cash in almost all of the targeted communes and communities, sometimes well before approval of the micro-projects. Concerning CNCEDD, although it is not yet functional, MINEPAT committed by signing a letter addressed to MINEPDED to contribute to its effective functioning, as soon as the members of that CNCEDD have been designated.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Satisfactory

92. The Project was designed following a participatory, community-driven model, with the objective of encouraging relevance of Project interventions and strong ownership by beneficiaries. The relevance of Project-supported interventions is reflected in the extensive uptake of SLM practices promoted under the Project, and the fact that beneficiaries assumed ownership is reflected in the strong demand for SLM micro-projects, which far exceeded the supply. Findings from the pre-appraisal missions (conducted in July-August 2005 and in January 2006), as well as from a number of ex ante studies (e.g., review of institutional, legislative and policy frameworks, stakeholder analysis and capacity building assessment, inventory and assessment of the cultural and technical feasibility of soil protection and restoration, baseline study) were successfully integrated in the PAD. The Project implementation manual (PIM) was completed and adopted prior to effectiveness, while the existing PANPDP monitoring and evaluation manual, as well as the PANPDP accounting, financial and administrative procedure manuals were up-dated to address the particular needs of the SLM Project. Best practices to be promoted included lessons learned from past SLM initiatives and indigenous technical knowledge (ITK) in the design and implementation of the SLM practices and technical training on SLM was the backbone for the Project implementation.

(b) Quality of Supervision

Rating: Satisfactory

93. During implementation, the SLM Project benefited from the attention of several joint supervision missions. These missions reviewed various components and aspects of the Project, including those relating to technical issues, social and environmental safeguards, procurement, financial management, and administration. Following each mission, detailed recommendations were made to improve implementation effectiveness. For example, during the supervision mission of December 2010, the World Bank team found that the Project Coordination Unit was having difficulty collecting the data needed to inform the indicators in the result framework. To address this issue, a recommendation was made to prepare and implement a plan to collect all the missing data. For this purpose, a new method for collecting data was developed jointly by the Project and the World Bank team in 2011, and a consultant was hired to assist the Project team in data collection and monitoring of activities on ground. Regular semi-monthly follow-up meetings were held subsequently to discuss and agree on the points to focus on. These meetings helped to correct the deficiencies that had been noted, and they allowed the World Bank and the Project team to agree on new strategic orientations for improving the institutional framework for SLM Project.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

94. Once the Project was declared effective, the technical and financial partners, including the World Bank, provided strong implementation support. The World Bank team provided

considerable assistance throughout Project implementation, assistance made stronger by the fact that the TTLs responsible for supervising the Project were based in country, so they could maintain continuous and near daily contact with the Project Coordination Unit. The team instituted regular supervision meetings to take stock of developments in the Project and if necessary resolve potential bottlenecks. During these sessions, adjustments were frequently agreed to improve all aspects of Project implementation. For example, the Mid-Term Review helped to (a) improve the design and sustainability of MPs; (b) involve sector ministries in the design and implementation of MPs; (c) improve the fiduciary and procurement system from the NCU to the communal levels; (d) enhance the monitoring and evaluation framework; and (e) build capacity of local service providers in filing the socio-environmental screening.

5.2 Borrower Performance

(a) Government Performance

Rating: Satisfactory

95. The Government fulfilled most of its obligations, as recorded in the Grant Agreement. The necessary technical and administrative staff were appointed to the Project management team, both at central and regional levels, and the necessary resources were made available to support their activities. Throughout the Project cycle, government political support was important in achieving the Project results. Moreover, the Government now stands ready to contribute to the completion of ongoing activities, reflecting the importance it accords to the issue of land degradation and its willingness to commit resources to tackling the problem. The only area in which the Government has failed to deliver completely on its obligations relates to the area of land reform: despite the best efforts of the Project team, strong advocacy is needed at the highest level of decision making (Prime Minister and the Presidency of the Republic) to ensure the effective operationalization of the CNCEDD and address the larger issue of land reform.

(b) Implementing Agency or Agencies Performance

Rating: Satisfactory

96. The Project Coordination Unit has performed well. The core PDO and GEO have been substantially achieved, as evidenced by the progress recorded against the key performance indicators. The Project staff systematically implemented all the recommendations emerging from the supervision missions and significantly improved the monitoring and evaluation system of the Project. The disbursement rate is approximately 98 percent (not taking into account pending transactions), and the various annual financial audits were conducted in timely fashion and to a satisfactory standard of quality.

97. The Project has been very prolific in producing informative documentation. The most important productions of the Project include: (a) a toolkit on developing land use and management plans; (b) a report on impacts of SLM investments on household income; (c) a compendium of SLM best practices; (d) a report entitled *Land Capital Management and Agricultural Enterprise Income Strategies under Climatic Stress in Cameroon*; (e) a report entitled *Vision 2035 of Agricultural and Pasture Land Development in Cameroon*; and (f) a documentary video about the SLM Project. All these outputs have been made publicly available through the PAPNDP website.

(c) Justification of Rating for Overall Borrower Performance

Rating: Satisfactory

98. Based on the performance of the Government and the performance of the Implementing Agency, Overall Borrower Performance is rated *Satisfactory*. Only two outcomes relating to the institutional component of the Project were not achieved: the support to the land policy reform, and the operationalization of the CNCEDD. The lack of progress in these two areas can be attributed to factors beyond the control of the Project, namely, the heavy bureaucracy of Government decision making processes. Despite these minor disappointments, collaboration with the Borrower has been satisfactory. The sector ministries were involved in the design, implementation, monitoring and evaluation of the SLM interventions supported by the Project, playing an especially important role in the validation of Communal Development Plans (PCD) and MPs, as well as in monitoring the performance of public services. In many cases, contracts were signed with sectoral ministries to support the implementation of MPs. Similarly, the Institute of Agricultural Research for Development (IRAD) and the National Agency for Support to Forestry Development (ANAFOR) were actively involved in technical validation of MPs. Finally, at the local level, administrative and municipal authorities demonstrated strong interest in SLM and provided significant support in mobilizing down-payments of the beneficiaries requested by the Project.

6. Lessons Learned

99. The Project generated a number of lessons that can help to inform the design of subsequent operations, in Cameroon and elsewhere:

i. Land use and management planning need to be incorporated into the PCD. The initial five land use and management plans prepared under this Project have demonstrated that land use and management planning is a very powerful tool that can be used to produce consensus and limit conflicts among land users. It seems important to further institutionalize this tool to all municipalities in the country.

ii. If SLM activities are integrated in the PCD, it is preferable to request beneficiaries' contributions in cash. Experience shows that when beneficiaries' contributions are requested in kind, delays may result until quality requirements are satisfied. If necessary cash contributions can be funded through municipal budgets.

iii. Local communities will benefit most from SLM practices when they have reliable access to markets for their products. A rapid market appraisal revealed that a significant proportion (60 percent) of the crops and livestock products produced by beneficiaries is sold to a group of intermediaries who act in concert to manipulate product prices.

iv. The mere availability of improved technology cannot sufficiently induce farmers to adopt sustainable production systems. Additional economic incentives are necessary to foster technological change. The introduction of SLM technologies therefore needs to be accompanied by investments in complementary infrastructure, such as storage facilities for cereals, physical market places, and access roads.

v. Measures to ensure the sustainability of SLM micro-projects need to be included in the Project design. Institutional capacity needs to be developed, for example through the creation of farmer organizations, marketing cooperatives, and trade associations.

vi. The funding cap for communal SLM projects needs to be large enough to allow investments to be made under the same micro-project in a range of complementary SLM

activities, for example, rainwater harvesting, land composting, tree planting, and fodder cropping.

vii. Gender considerations needs to be taken into account when selecting SLM technology. In the municipality of Bangang-Fokam, lack of knowledge of the division of labor between men and women led to unequal rates of participation. In this municipality, where women are predominantly involved in production of staple crops and poultry farming, the choice of raising pigs as a means of producing compost discouraged participation by women.

viii. When IDA and GEF operations are blended (partially or fully), it is important to devise a combined PDO / GEO to avoid disconnects between the two operations.

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

(a) Borrower/implementing agencies

100. The Project Coordination Unit (PCU) found that the implementation of the Project was successful, despite the fact that the land policy reform agenda was not entirely achieved. To maintain the momentum that has been created on the ground, the PAPNDP decided to include the SLM as eligible micro-projects under the large grant received from the AFD. The PAPNDP has also encouraged all municipalities to include land use and management planning in their Communal Development Plans.

(b) Cofinanciers

101. Following their field visit in the Project sites, the French Development Agency (AFD) noted the following positive outcomes: (a) better ownership of the Project by the beneficiaries; (b) good technical support service to the communes and communities by the SLM advisors; (c) general increase in yields of farms where SLM practices have been adopted; and (d) rural job creation through investing in fodder farms and rainwater harvesting for small schemes vegetable irrigation. AFD has agreed that SLM micro-projects should be eligible for funding under PAPNDP and has recommended that: (a) proposals for SLM micro-projects need to be integrated into the demand-driven approach, meaning that SLM micro-projects should be initiated by local communities, approved by the communes, and follow the logical framework of the PAPNDP; and (b) AFD funds can be used to recruit SLM specialists both at the national and regional levels to assist the communes in designing, implementing , monitoring and evaluating eligible SLM micro-projects.

(c) Other partners and stakeholders

102. Feedback was obtained from different categories beneficiaries through field visits made during the preparation of the ICR. The beneficiaries who were interviewed included representatives from communes and communities, local service providers, and sector ministries.

i. Communes and Communities: These direct beneficiaries expressed appreciation for: (i) the selection method for micro-projects that emphasizes the priorities expressed by them through the process of preparing the PCD; (ii) their position of implementing agencies involved in all procurement-related activities; (iii) capacity building associated with the systematic implementation of all micro-projects, which allowed the establishment of a network of leaders and experienced farmers; and (iv) the sustainability of interventions.

ii. Local service providers: This category of beneficiaries, consisting mainly of NGOs, indicated satisfaction for having been involved in the design and implementation of micro

projects. They indicated that he Project gave them the opportunity not only to strengthen their capacity in SLM, but also to refine their expertise. However many service providers criticized the complexity of the Project implementation procedures, as well as difficulties related to the registration of their contracts. They expressed the view that the funding envelopes allocated to individual micro-projects are very modest and are heavily burdened by various taxes. They strongly suggested an extension of the duration of support to ensure a full transfer of management responsibility, and implementation of more ambitious interventions to tackle the problem of degradation across a watershed.

iii. Sectoral ministries and research institutions: This group of beneficiaries played a leading role in Project implementation. In addition to participating actively in the various workshops for the development of methodological tools, they provided technical advice and ensured compliance with sectoral requirements. It should be noted that, given the scarcity consultants with technical expertise, the sectoral ministries and research institutes were regularly engaged to accompany the implementation of micro-projects, with generally very good results.

Annex 1. Project Costs and Financing

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

Components	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
I. Financial support for the integration of SLM into local development (Grant for Micro-Projects)	3.960	4.309	109%
II. Institutional support for SLM **(**Institutional support to the land reform process; Enhancing Capacity building at local level)	1.712	1.008	57%
III. Project Management, Coordination and Evaluation, and Communication (Management & Coordination, Monitoring and Evaluation, Communication, Operation & Maintenance, Support Staff)	0.688	1.315	167%
IV. PDF-B	0.350	0.294	84%
Total Project Costs	6.8736	6.926	101%

Sources: Project Coordination Unit

(b) Co-financing

Source of Funds	Type of Financing	Appraisal Estimate (US$ million)	Actual/Latest Estimate (US$ million)	Percentage of Appraisal
Government of Cameroon	Counterpart	9.66	8.82	91%
Beneficiaries	Counterpart	1.39	2.87	207%
GEF	Grant	6.00	5.99	100%
IDA (PAPNDP)	Credit	20.00	20.14	101%
HIPC-multilaterals	Debt Relief	27.20	8.87	33%
France (C2D)	C2D	25.00	23.14	93%
Germany (KfW)	Grant	8.75	2.64	30%
Total Co-financing		98.00	72.47	74%

Annex 2. Outputs by Component

Component 1: – Enhanced integration of SLM into local development

1. **Objective of Component 1:** The main objective of Component 1 is to co-finance SLM micro-projects, at the request of beneficiaries (communities and communes), within the Project intervention zone. The Project intends to finance at least 60 communal and 150 community micro-projects by project-end.

2. **Outputs of Component 1**: At the project closing date, 15 communal and 191 community micro-projects (MP) were funded and implemented. These MPs enable to reach an estimated 88,448 hectares of land under SLM on which 31,544 ha in the Center region, 2,837 ha in West region, 10,824 ha in Adamaoua region and 43,243 ha in the North region. This performance is 77 percent higher than the target value of the project of 50,000 ha. The area of land under fertilization is about 10,000 ha and this improvement is done either by the introduction of legumes, the incorporation of compost or the fight against erosion through the stone barriers and erosion control strips. The North region has a larger proportion of fertilized land (5,746 ha), followed by the Adamaoua region (3,500 ha), the West region (1,100 ha) and the Center region (400 ha). Of the total MP in progress, 7 are related to community/communal forests whose potential is estimated at 30,000 ha. This result is also above the target value of 3 community / communal forests set by the project. In addition to community forests, the total protected areas is estimated at 9,574 ha, which is also beyond the target value (5,000 ha). As for the improvement of yields, particularly that of maize, an assessment by the consultants on the basis of results of crop control plots revealed yields ranging between 2.45t and 7 t/ha depending on the region. They are of the order of 2.7 t/ha in the Adamaoua region, vary between 2.45t and 4.8 t/ha in the Center region and 3.5 -7 t/ha in the North region. Overall, maize plants from land under SLM grow better compared to those from conventional farms. In the predominantly pastoral regions, the rate of adoption of agro-pastoral systems such as fodder crops and compost from manure and agricultural residues varies from 72 percent (North region) to 80 percent (Adamaoua region). This rate could reach 90 percent when data from all the MP will be collected. The indigenous knowledge of communities has been successfully integrated into the SLM practices. One can cite the example of Irvingia gabonesis (bush mango) and safou incorporated into reforestation areas in the Center region, as some herbs and spices integrated into systems as windbreaks and groves in the West region. It was also noted the use of manure as foliar fertilizer in the West region. In the North and Adamaoua regions, cowpea is increasingly used as a cover crop. After dissemination of SLM practices, beneficiaries are increasingly adopting more fodder crops with women's involvement in the harvesting and packaging of seeds.

Results in achieving Component 1 performance indicators are summarized below:

Table 2.1: Results achieved for Component 1 Key Performance Indicators

Component 1 Indicators	PAD Target	Achievement	Achievement against PAD (%)	Remarks
Finance and implement communal micro-projects	60	15	25%	Not Achieved. 18 micro-projects are under implementation
Finance and implement community micro-projects	150	191	127%	Achieved and exceeded. These figures reflect the high demand for these micro projects by rural communities. 34 micro projects are under implementation

Improved land fertility	Available nutrients in the soil	Not measured		This indicator was not measured, because of its complexity, which was also identified during the Mid-Term review
Increased number of community forest protected	At least 3	7	233%	Achieved and exceeded
Increase number of hectares of protected area boundaries, buffer zones, and riparian zones rehabilitated through SLM practices in the project's intervention area	5,000 ha	9,574 ha	191%	Achieved and exceeded
Increase crop yield (mostly maize)	From less than 1.5 t/ha to 2.5 t/ha in the North/Adamaoua regions, and from less than 2.5 t/ha to 3.5 t/ha in the Center/West regions	In the North / Adamaoua regions, an average maize yield of 3 to 5 t/ha was achieved, and in the Central and West regions, an average maize yield of 2.4 to 4.8 t/ha was achieved	100%	Achieved
Increased adoption of agro-pastoral systems in the North/Adamaoua Regions	Above 80%	80%	99%	Substantially achieved
ITK best practices are fully incorporated into disseminated SLM Best Practices	100%	100%	100%	Achieved

Component 2: Institutional Support for SLM

Sub-Component 2.1: Institutional support to the land reform

3. **Objective of Sub-Component 2.1**: The main objective of this sub-component is to: (i) develop and reinforce policies, regulations and institutional frameworks at national and decentralized levels to address land degradation and to mainstream SLM issues into appropriate rural development policy frameworks; (ii) contribute, jointly with key concerned ministries, to the delineation of agro-silvopastoral lands within the project's intervention zones, and assist in the implementation of at least 5 landscape use and management plans at the communal level by the project end; and (iii) support existing commissions (i.e, the *Commission Nationale pour l'Environnement et le Développement Durable* (CNCEDD) and the *Comité Inter-ministériel de l'Environnement* (CIE)), and concerned ministries in the recognition of traditional land management rights and the promotion of their implication in the land-use and tenure process, as a means of mitigating conflicts of land which are often a major cause of the lack of adoption of SLM and land degradation.

Outputs of the Sub-Component 2.1: Regarding the institutional support to land reform process, two indicators have not been achieved, notably, the indicator relating to the reinforcement of land use rights policies through the adoption/revision, and/or implementation of legal texts or decrees on land tenure (and land use rights) and the indicator related to the functioning of CNCEDD ("Commission Nationale Consultative pour l'Environnement et le Développement Durable") and CIE ("Comité Interministériel de l'Environnement") in promoting sound SLM policies, decrees and programs. However, the project of land reform is under preparation at the MINEPAT and the Project has developed a matrix of land initiatives and their related issues to be documented by each relevant ministry. A technical committee which includes all relevant ministries and the CSO was established by MINEPAT and will compiled data from the matrix. The finding will help to improve the land reform project before its approval by the Prime Minister. Legal texts for the operation of the CNCEDD were reviewed, up-dated and approved by the Prime Minister and members of the CIE were associated in the designing of all SLM micro-projects. The first workshop on launching of this important decision making institution is being planning. Five PUGT have been approved and implemented.

Results in achieving sub-component 2.1 performance indicators are summarized below:

Table 2.2: Results achieved for Sub-Component 2.1 Key Performance Indicators

Sub-Component 2.1 indicators	PAD Target	Achievement	Achievement against PAD Target (%)	Remarks
Land use rights policies have been reinforced through the adoption, revision, and/or implementation of legal texts or decree on land tenure (and land-use rights) by the project end	Yes	Not achieved		Not achieved. However, the Project has participated in the preparation of a decree concerning a corridor for animals in the North region.
The *Commission Nationale Consultative pour l'Environnement et le Développement Durable (CNCEDD)* and the *Comité Interministeriel de l'Environnement (CIE)* are functional in promoting sound SLM policies, decrees, and programs by the project end.	Yes	Not achieved		Not achieved. But, Legal texts for the operation of the CNCEDD and CIE were reviewed, up-dated and approved by the Prime Minister. The first workshop on launching of these important decision making institutions is being planning.
Adoption and implementation of landscape use and management plans at the communal level.	5	5	100%	Achieved

Sub-Component 2.2: Enhancing capacity building at the local level

4. **Objective of Sub-Component 2.2:** The main objective of this sub-component is to: (i) build the capacity of beneficiaries in integrating SLM best practices in their local development plans; and (ii) contribute to an improvement of land-use conflict resolution mechanisms (between farmers, herders, foresters, traditional chiefs, and other natural resource users).

5. **Outputs of Sub-Component 2.2**: At the closing date, a total of 402 local communities were exposed to SLM practices, 21 conflict resolution frameworks have been implemented and more than 8,500 households have adopted the SLM practices. The conflict resolution frameworks typically involve the management of common resources (forest, Cattle Park and grazing,).

Results in achieving Sub-Component 2.2 performance indicators are summarized below:

Table 2.3: Results achieved for Sub-Component 2.2 Key Performance Indicators

Indicators	PAD Target	Achievement	Achievement against PAD Target (%)	Remarks
Increased number of community-based organizations that have an improved knowledge of SLM and environmental issues and are able to properly implement biodiversity and environmentally-friendly SLM practices	100	402	402%	Achieved and exceeded due to the high demand of SLM MPs
Increased number of households that have adopted and are implementing SLM practices.	10,000	8,500	85%	Substantially achieved
Conflict Resolution Frameworks are effectively operational at the communal level, through Land Tenure and Land-Use Conflict Litigation commissions.	10	21	210%	Achieved and exceeded

Component 3: Coordination, monitoring and evaluation, and communication

6. **Objective of Component 3:** The main objective of this component is to ensure proper project management, coordination, monitoring and evaluation, and communication.

7. **Outputs of Component 3**: Five Intermediate Outcome Indicators (IOIs) have been fully achieved. Baseline studies were done at the beginning of Project implementation, M&E mechanisms under PAPNDP were adapted to the GEF project and used, the GIS database on land and natural resources was updated and used, progress reports (financial/technical) were regularly issued, and 14 SLM best practices and lessons were identified in a participatory manner. A compendium of good practices has been published. The safeguard policies have been implemented satisfactorily. The procurement plan was prepared and review annually. Procurement activities are completed.

Results in achieving component 3 performance indicators are summarized below:

Table 3: Results achieved for Component 3 Key Performance Indicators

Component 3 Indicators	PAD Target	Achievement	Achievement against PAD Target (%)	Remarks
Baseline or target values to be determined (see above), have been determined during the first year o f project implementation	Yes	Yes	100%	Achieved
M&E mechanisms under PAPNDP are adapted to the GEF project and are being used	Yes	Yes	100%	Achieved
GIS database on land and natural resources is in place and is being used	Yes	Yes	100%	Achieved
Progress reports (financial/technical) are issued in a timely manner	Yes	Yes	100%	Achieved
SLM best practices and lessons are identified in a participatory manner, and are regularly disseminated.	At least 10	14 SLM best practices were documented	140%	Achieved and exceeded. A compendium of best SLM practices is available, as well as video documentaries.

Annex 3. Economic and Financial Analysis

1- Overview

1. This annex presents the economic and financial analysis (EFA) for the GEF-funded Sustainable Agro-Pastoral and Land Management Project, under the Community Development Program Support Project (GEF-SLM PROJECT). The project aims to enable communities to combating land degradation in critical areas, with the objective to increase farm productivity and to generate key global benefits such as the reduction of carbon emissions, the augmentation of carbon sequestration and the decrease of sediment discharge into critical water bodies.

2. In order to measure the efficiency of the Project and assess the PDO and the GEO, the analysis calculates FRRs and ERRs and their corresponding NPVs. The analysis uses farm models and FAO's *Ex-ante Carbon Balance tool* (EX-ACT[1]) to estimate both "on-site" and "off-site" incremental benefits. Data was sourced during field visits[2] and from the household survey (carried out by the World Bank Institute- WBI) that was prepared to evaluate the impacts of SLM practices[3]. The EFA mainly focuses on the returns from the investments under component 1 ("Enhanced Integration of SLM into local development"). The project also creates a number of important externalities under component 2 and component 3, which have not been quantified because of the difficulty to assess in monetary terms the effects of institutional strengthening and capacity building. As a matter of fact, the present analysis assesses partially the efficiency and PDO/GEO of the project[4].

3. The analysis shows that the main types of sub-projects implemented during the Project (that can be classified as "land under agroforestry farming systems" and "pasture lands for cattle production under fodder cropping systems"), that represented about 75 percent of all sub-projects, are financially and economically desirable. Under the presented assumptions, NPVs are positive and FRRs/ERRs of these 2 broad categories of sub-projects are in the order of 17.6-19.6 percent and 18.1-21.2 percent respectively for a 25 year project lifecycle and a 10 percent discount rate. The project's returns are nevertheless sensitive to several scenarios (changes in the adoption rates, decreases in prices and yields), as reflected by the sensitivity analysis presented in the last chapter of this study.

4. Finally, the ICR results could not be compared with those calculated in the PAD because the *ex-ante* EFA has not computed Internal Rate of Return (IRRs) or NPVs. This shortcoming in the project design was due to the difficulty to appraise in advance the returns from CDD investments and the complexity to quantify environmental benefits.

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[1] Although EX-ACT was initially designed to provide *ex-ante* estimations of the impact of agriculture and forestry development projects on Green House Gas (GHG) emissions and carbon sequestration, the tool can also be used for *ex-post* economic and financial analysis.

[2] Field visits took place during the ICR mission (April 17-20, 2012) in the 4 regions of the Project.

[3] Mbwangue, J., Mouafo, R., Nkami, G., Kapto S., 2010. *Analyse économique des pratiques innovantes GDT au Cameroun*. Washington DC : World Bank Institute. From the results of the household survey, an " economic analysis" was prepared. The analysis was updated and improved for this *ex-post* analysis.

[4] Performing the financial and economic analysis of projects' subcomponents is a common practice in the *ex-post* evaluation of projects.

2- Identification of GEF-SLM project's benefits

5. The Project activities are expected to generate three main benefit streams: (i) "**on-site" private benefits** within the community and communes involved in the project, (ii) **regional benefits downstream** of the project areas; and (iii) **global public benefits** beyond the project areas. Those expected benefits can be described as follows:

On-site private benefits (micro-project level)

- *Increased yields.* Yield increases (mainly maize in the 4 regions targeted by the Project) are due to the adoption of SLM approaches, such as (i) improved agronomic practices (e.g. maize in association with nitrogen-fixing legume species such as cowpeas or soybeans), (ii) integrated crop-livestock farming systems (e.g. organic manure used as fertilizing inputs), (iii) agro-forestry practices (e.g. fertilizing vegetal species such as *Crotelaria, Cajanus Cajan, Sesbania, Calliandra, Cassia* used in association with crops) improving soil fertility, (iv) reduced soil erosion and reduced soil fertility mining due to conservation measures to contain water run-off (using tree varieties such as *Eucalyptus, Acacia* and *Tallis*). These agronomic practices and land conservation approaches ultimately resulted in improved crop yields due to the better quality of the soils (in terms of available nutrient stocks). According to this ICR's Annex 4 (outcomes per component), maize yields increased from an average of 1.5-2.5mT/ha (baseline) to 2.4-7mT/ha in the project areas. Project beneficiaries reported that yield increases are due to the GEF-SLM project. This circumvents the possible issues related to cause-and-effect attribution of impact due to other factors that are outside the project's control (weather volatility, rural finance). For the analysis, it was conservatively assumed that maize yields would increase from 1.5mT/ha to 3mT/ha.
- *Increased revenues*. The Project improved welfare at the household level. This was due to improved revenues and food security, hence helping to reduce poverty. According to the household survey, the project contributed to significant farm revenue increases. The net revenue per hectare averages CFAF 300,000 for project beneficiaries (i.e. in the "with project situation") and about CFAF 220,000 for non-beneficiaries (i.e. in the "without project" situation). These revenues improved the capacity of households to tackle education and health priority expenditures. Besides, increasing revenues was critical to ensure sustainability, since farmers will continue to adopt SLM practices only if they can get financial benefits not only in the long-term, but already in the short term. According to the household survey, 92 percent of project beneficiaries are willing to use their revenues to reinvest in SLM.
- *Positive social externalities (human capital strengthening and women empowerment) (not quantified in the analysis).* The Project contributed to strengthen human capital through an improved access to the education system for children of the beneficiary households. Besides, trainings in participatory appraisal, monitoring and evaluation empowered communes, grassroots community groups and their members. Furthermore, CDD approaches have yielded *successful* social impacts in Cameroon (e.g. empowerment of women), as reported in the ICR of the first phase of the PNDP. The empowerment of women strengthened their voice in community planning and management, hence

providing women with the opportunity to influence resource allocation toward more gender-equitable outcomes (World Bank, 2010)[5].

Regional and downstream benefits

- *Reduced sedimentation (not quantified in the analysis).* In addition to improving yields, land husbandry activities under the GEF-SLM Project contributed to reduce the negative externalities of land *degradation* downstream the erosion points, namely sedimentation, flood damages and eutrophication of rivers and watersheds. Specific sub-projects (such as the communal project in Kouoptamo in the West Region) were implemented to foster flood control and protect downstream farming plots. These off-site benefits were not quantified in the analysis due to the difficulty to quantify the relation between watershed management activities (such as adoption of SLM practices), their physical effects (for example stabilization of top soil, reduced flooding) and their translation into quantifiable measures. This exercise necessitates substantial amount of long-term data and biophysical modeling that are beyond the scope of this economic and financial analysis[6].
- *Spillover effects from beneficiary communities to non beneficiary communities.* The project had spillover effects to non-*beneficiaries* communities and communes, outside the Project areas, as a result of the diffusion of technologies and trainings received by beneficiaries. The household survey performed by WBI reports that 25 percent of non-beneficiaries sampled during the survey exercise adopted SLM practices on about 28 percent of their land. Direct observations on the field confirmed these spillovers.

Global Public benefits

- *Institutional strengthening (not quantified).* In line with the activities performed under the PNDP, the Project provided capacity building and institutional support to the decentralized authorities (mainly the Communal and Regional Decision Committees) for development planning, *financing* and management (more particularly through the introduction of SLM activities in the Local Development Plans and Communal Development Plans). The project also strengthened line Ministries (Ministry of Territorial Administration and Decentralization, Ministry of Agriculture and Rural Development) and their related decentralized services to implement Project's activities. Last but not least, the recruitment of national consultants to support the implementation of micro-project strengthened the local capacity in providing technical services to rural communities.

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[5] Cameroon: *Community Development Program Support Project in support of the first phase of the Community Development Program*. Implementation Completion and Results Report. Report Number: ICR0000976. Washington DC: World Bank.

[6] A measure of this off-site benefit could be **the estimation of the cost of removing sediment loads**. In EFA of other Bank-financed projects, cost of removing sediment loads were estimated to be USD 2.50 per ton (used in the *Madagascar Irrigation and Watershed Management Project*- IWMP), USD 8-25 tons (used in *Kenya Agricultural Productivity and Sustainable Land Management Project*) or USD14 (used in the *Rwanda Land Husbandry, Water Harvesting and Hillside Irrigation Project*- LWH). In LWH, afforestation activity on about 120,000 hectares is estimated to reduce sediment loads of about 216,500 tons per year, which is approximately 1.8 ton per ha per year; while 0.45 ton per ha per year was used in the IWMP in Madagascar. 1.13 ton per ha per year was used for LWH or 5,425 ton per year (given the 4,800-ha coverage of LWH), valued at 115 USD 76,000 per year.

- *Global environmental public benefits.* It is expected that improved land husbandry, integrated ecosystem, landscape management and reforestation is (and will) improve the resource base of the *Cameroonian* population in particular, benefit human kind in general and respond the global emerging challenge of climate change overall. More particularly, the Project has generated one main global public benefit, namely the reduction of carbon emission by increasing below and above ground sequestration of carbon. Although the links between land *degradation* and Green House Gas (GHG) are complex (Pagiola, 1999)[7], several studies suggest that SLM measures such as those implemented during the GEF Project contribute to GHG mitigation by at least 0.5 tons per hectare per year (World Bank, 2007; World Bank, 2009)[8]. By using the EX-ACT model (see below), the present EFA will attempt to measure CO_2 sequestration for the two main SLM systems implemented under the GEF-project auspices.

3- Methodology and assumptions

6. **Methodology**. The analysis focused on the economic and financial returns generated by the two most typical categories of sub-projects funded during the project lifecycle, namely (i) land under agroforestry farming systems and (ii) pasture lands for cattle production under fodder cropping system. These 2 major categories of SLM systems, with benefits being quantifiable for the analysis (as discussed earlier, sub-projects aiming to reduce conflicts or decrease sedimentation were not analyzed due to the difficulty to quantify benefits), accounted for about 75 percent of all subprojects implemented. These investments represented about 50 percent of total component 1 costs. As a matter of fact, the present analysis assesses partially the efficiency and PDO/GEO of the project.

7. **Farm budgets**. Based on the data collected during the ICR mission and those from the household survey[9], the farm models typified the average quantity (and costs) of outputs (maize, fruits, live animals), inputs (fertilizer, seeds, fodder) and labor, both in the "with project" and "without project" situations. The average cost of the community SLM investments (about CFAF 4,200,000; GEF plus beneficiary co-financing) was given by the micro-project database (that was used for M&E purposes by the Project Coordination Unit[10]). The average stream of incremental benefits over 25 years, net of costs incurred by the sub-project, were aggregated to calculate financial IRRs and NPVs.

8. **Adoption rates**. Based on the findings of the household survey and direct observations during the field visits, the analysis considered a progressive realization of sub-project benefits. For maize and fodder production, it was assumed that the benefits would be step-wise (due to the pace of adoption of the improved practices and the progressive acreage of land under SLM). Those were estimated as follows: 20 percent in year 1; 30 percent in year 2; 50 percent in year 3 and 60 percent in year 4. The analysis also assumed that the observed increases in yields came

[7] Pagiola, S. 1999. *Global Environmental benefits of land degradation control on agricultural land*. World Bank environment paper No.16. Washington DC: World Bank.

[8] Kenya: *Agricultural Productivity and Sustainable Land Management Project*. Project Appraisal Document. Washington, DC: World Bank. October 17, 2007; Rwanda: *Land Husbandry, Water Harvesting and Hillside Irrigation Project*. Project Appraisal Document. Washington, DC: World Bank. 2009.

[9] The survey assessed the impacts of SLM practices on farm productivity and revenues. To do so, the survey sampled 240 beneficiary and 240 non-beneficiary households in 6 areas where the project was implemented.

[10] The database details: (i) the area of implementation, (ii) the activities of the subprojects, and (iii) the share of sub-projects' operational costs supported by the Project and by beneficiaries (incremental costs).

from the investments made during the Project and, as discussed above, disregards the possible issues related to cause-and-effect attribution of impact.

9. **Crop prices** were derived from several sources, including direct interviews with beneficiaries during field visits and statistics from FAO's Global Information and Early Warning System (GIEWS) (Food Price data and Analysis Tool). 2011-2012 average prices (constant prices) were used.

10. **The financial analysis** was performed from the perspective of the group (community/ commune). The private Cost Benefit Analysis (CBA) computed the costs and benefits directly experienced by the beneficiaries when adopting SLM practices. **The economic analysis,** however, included "off-site" benefits (positive externalities), such as improved carbon sequestration, to determine whether the investments were economically viable from the perspective of the society ("social" or "economic" CBA). This data (proxied by the ERR) appears to be important to assess efficiency towards the PDO/GEO. The economic analysis also differs from the financial analysis due to a shadow price[11] that was assumed for maize.

11. **Carbon balance**. The EX-ACT model system was used to assess the mitigation effects of the two main sub-projects (i.e. whether they contributed to more sinks of carbon than sources). The tool, developed by FAO[12], provides estimations of the impact of agriculture and forestry development projects on carbon sequestration. The software consists of a set of linked Excel spreadsheets where information such as (i) dominant soil types in Cameroon; (ii) climatic conditions in the project areas; and (iii) land use and land management practices, are described in the "with project" situation and "without project" situation. The main output of the tool consists of the carbon balance (expressed in $mTCO_2eq.ha^{-1}.year^{-1}$) resulting from the activities of a sub-project.

12. Changes in land use brought by the micro-project are inserted in the different "modules" of EX-ACT. More particularly, changes in land use are (i) increased acreage with improved agronomic practices; (ii) increased acreage with manure application; and (iii) increased acreage with improved nutrient management. It was calculated that the micro-project would allow fixing an average of 2.1 tons and 3.4 tons of equivalent CO_2 per hectare and per year for the "land under agroforestry farming systems" and "pasture lands for cattle production under fodder cropping system".

13. **Valuing carbon**. As far as the value of emission reduction is concerned, activities that result in increased carbon sequestration in Biocarbon Fund projects are generally compensated at US$4-5 per ton of CO_2 (World Bank, 2009). Under the GEF Project, carbon sequestration activities were not compensated, so the benefits from reduced carbon emissions accrued to global

[11] Assumed with a 0.9 conversion factor due to data scarcity about potential market failures or the impact of policy-induced distortions on the price of maize. As far as labor was concerned, a conversion factor of 1 was assumed. For other crops and products (such as fodder, livestock products which are not tradable), it was assumed that the market prices were a good estimate of the economic prices.

[12] The tool was jointly developed by the Investment Center Division (TCI), the Policy and Programme Development Support Division (TCS) and the Agricultural Development Economics Division (ESA). The software requires a minimum amount of data to obtain crude estimates of sequestered carbon. The results should be interpreted with some caution due to some assumptions and default values that are used to run the system.

society. As in other Bank projects (World Bank, 2009), a "social price"[13] was more suitable to perform the analysis. Some studies consider a price range of US$5-125 per ton of CO_2 as the economic value of carbon sequestration (Dutilly-Diane, 2007), whereas other papers estimate a US$17-25 range (Frankhauser, 1995). The EFA conservatively used an estimate of US$10 per ton of CO_2.

4- Baseline Results

14. Calculations of IRRs and NPVs assumed a 10 percent opportunity cost of capital (like in other environmental projects) and a 25 years Project's lifecycle (due to the long term benefits arising from agroforestry activities).

15. Results suggest that the adoption of recommended SLM practices is financially desirable from the private perspective. Under the above-mentioned assumptions, FRRs of the "land under agroforestry farming systems sub-projects" and "pasture lands for cattle production under fodder cropping systems subprojects" average 17.6 and 19.6 percent, and NPVs are in the order of US$ 4,000-6,000 (payback time of 3 years). Results also show that the SLM investments are economically justified. ERRs of the above-mentioned sub-projects are about 18.1 percent and 21.2 percent respectively, and corresponding NPVs are in the order of US$4,500-6,450.

Micro-project	FRR (NPV)	ERR (NPV)
Micro-project 1: "Land under agro-forestry farming systems	17.6% (USD 6,009)	18.1% (USD 6,450)
Micro-project 2: Pasture land for cattle production under fodder cropping system	19.6% (USD 3,991)	21.2% (USD 4,500)

5- Sensitivity Analysis

16. A basic sensitivity analysis was performed using 3 key variables affecting the project: (i) output prices, (ii) yields increases and (iii) changes in the adoption rates.

i. ***Uncertainty about price volatility***. According to GIEWS, prices of maize have been following an upward trend since early 2011. In December 2011, prices were up to about 40 percent higher than in December 2010. Besides, the food consumer price index (food CPI) increased by about 10 percent between 2007 and 2008 and by 7 percent between 2010 and 2011(Laborsta, 2012)[14]. As a matter of fact, the sensitivity analysis tested the impact of a 15-20 percent decrease in maize prices.

ii. ***Weather variability***. The findings of World Bank's 2010 World Development Report (WDR)[15] on climate change show that a 10 to 15 percent decrease of yields is a reasonable assumption for the sensitivity analysis over a 25 years horizon: Müller and others (2009)[16],

[13] *"The social price is conventionally calculated as the pollution tax required to keep GHG emissions at the socially optimal level. Expressed in terms of global warming, the optimal level of GHG emissions is the level at which the incremental cost of GHG mitigation is equal to the value of averted damage due to climate change attributable to GHG."* (extracted from the Economic and financial analysis of the World Bank-funded RSSP2 in Rwanda).

[14] Data collected on the International Labor Organization (ILO) database: http://laborsta.ilo.org/STP/guest

[15] World Development Report, 2010, Development and Climate Change, Washington DC: World Bank.

[16] Müller, C., A. Bondeau, A. Popp, K. Waha, and M. Fader. 2009, Climate Change Impacts on Agricultural Yields, Background note for the WDR2010, Washington DC.

cited in the 2010 WDR, showed that climate change will depress agricultural yields by 10 to 20 percent in Cameroon by 2050.

iii. ***Adoption rates***. The above baseline results depend on assumptions of a fairly quick response by groups of farmers to the opportunities presented by the Project (20, 30, 50 and 60 percent). A sensitivity analysis has been undertaken on a more conservative rate of adoption by farmers in terms of use of SLM practices in the future (10, 25, 40 and 50 percent).

17. The ERR of micro-projects appear to be sensitive to changes, more particularly to prices, but returns remain overall quite robust and above the opportunity cost of capital.

	Land under agro-forestry farming systems	**Pasture land for cattle production**
Scenario/ changes in the main variables	**ERR**	**ERR**
Baseline IRR	18.1%	21.2%
With a 15 percent decrease in crop prices	14.7%	18.9%
With a 20 percent decrease in crop prices	13.5%	18.1%
With a 10 percent decrease in crop yields	17.8%	19.7%
With a 15 percent decrease in crop yields	17.6%	18.9%
With 10, 25, 40 and 50 percent adoption rate stream	16%	18.2%

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Ousmane Seck	Senior Rural Development Specialist	AFTS3	Team Leader # 1
Fathma D. Jalloh	Junior Professional Associate	AFTS3	
Francois Mkouonga	Rural Development Specialist	AFTS3	
Valerie Layrol	Rural Development Officer	AFTS3	
Erick C.M. Fernandes	Adviser	ARD	
Sheela. Reddi	Language Program Assistant	AFTS3	
Edeltraut Gilgan-Hunt	Environmental Specialist	AFTS3	
Yvette L. Djachechi	Senior Social Development Specialist	AFTS3	
Kouami Hounsinou Messan	Procurement Analyst	AFTPC	
Pin Foon (Marie-Louise) Ah-kee	Procurement Analyst	AFTPC	
Fridolin Ondobo	Financial Management Specialist	AFTFM	
Germaine Mafougon	Team Assistant	AFMCM	
Ingrid Mollard	Consultant	AFTS3	
Désiré R. Coquillat	Consultant	AFTS3	
Cheikh A. T. Sagna	Consultant	HDNED	
Glenn Hodes	ET Consultant	ENVCF	
Gilles M. Veuillot	Council	LEGAF	
Pierre Morin	Senior Procurement Specialist	AFTPC	
Wolfgang M.T. Chadab	Finance Officer	LOAG 2	
Supervision/ICR			
Bernadette Djapa Nyanjo	Procurement Assistant	AFCC1	
Helene Pieume	Public Information Associate	AFRSC	
Ousmane Seck	Senior Rural Development Specialist	AFTS3	Team Leader # 1
Lucienne M. M'Baipor	Senior Social Development Specialist	AFTCS	
Kouami Hounsinou Messan	Senior Procurement Specialist	AFTPC	
Emeran Serge M. Menang Evouna	Forestry Specialist	AFTN1	
Enagnon Ernest Eric Adda	Financial Management Specialist	AFTME	
Manievel Sene	Senior Rural development Specialist	AFTA1	Team Leader # 2
Jeanne d'Arc Edima	Team Assistant	AFCC1	
Sekou Keita	Consultant	AFTFM	
Amadou Nchare	Agric. Economist	AFTA1	Team Leader # 3
Marie Claudine Fundi	Language Program Assistant	AFTA1	
Jonas Bwangue	Consultant	WBI	
Vallet, Julien	Consultant	FAO	
Sylvie Munchep Nze	Team Assistant	AFCC1	

(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		
FY05	9.73	69.31
FY06	43.98	204.74
FY07	5.99	17.89
Total:	59.7	291.94
Supervision/ICR		
FY08	11.76	37.84
FY09	14.04	73.74
FY10	4.25	28.88
FY11	14.55	36.62
FY12	7.46	25.72
Total:	52.06	202.80

Annex 5. Beneficiary Survey Results

5.1. Impact of SLM Investment on Household Revenues

1. The performances of the SLM project are encouraging. In areas that were under investigation, almost all indicators of the project have been achieved. A variety of SLM technologies has been popularized. These include agro-forestry, reforestation, forage, and crops in contour lines, hedges to restore the system of farmland, grass strips and stone bunds to control soil erosion. Over 70 percent of the project beneficiary farms are under SLM. Of the multiple activities undertaken, crop agriculture contributes the largest proportion to household income (71 percent) followed by livestock production (14.9 percent). Remittance and transfers are also important accounting for 5 percent and 6.5 percent for beneficiary and non-beneficiaries, respectively, of the SLM Project. A breakdown of farm revenues after employing the techniques of sustainable soil and crop production reveal that farms for the beneficiaries of the SLM Project recoup the highest profits. The perceived increase in production is substantially greater than the decrease among the beneficiaries. The average net farm income among beneficiaries has increased compared to non-beneficiaries. This performance may fall in the long run if limiting factors such as access to markets, improving land tenure, selection of gender sensitive appropriate SLM technologies, and adaptation to climate change are not taken into account. Greater synergy between the Community Driven Development Program (PNDP), which promotes socio-economic investments and land use management plans, would therefore require to be strengthened.

5.2. Land Capital Management and Agricultural Enterprise Income Strategies under Climatic Stress in Cameroon

2. Agricultural land as natural capital contributes to the quality of life by directly providing environmental services that cannot be imported, and by supplying the natural resources that, through a human controlled production process, become valuable to communities. The goal of this research was to assess the farmland management choices in western and northern Cameroon and evaluate the agricultural enterprise income strategies employed under a scenario of climatic stress. Under climatic variability and future climate change, the hypothesis that farmers make choices amongst soil based, cropping strategies and/or a mixed soil and crop measures to insure the resilience of their production and income was tested, and whether these selections is influenced by farmers' socioeconomic environment (e.g. income, age, gender, education, climate, soil type, etc.) was statistically established. The rationale for this experiment was that the pressure on land resources necessitates the development of sustainable farmland management systems. Primary data was employed by surveying farms and households in the West and North regions of Cameroon. The field survey was conducted under the National Community driven Development Program (*Programme National pour le Développement Participatif* - PNDP). The PNDP program has contact-households (beneficiaries) that receive information and training on environmental and ecosystem management. Both beneficiaries and non-beneficiaries of the program were sampled and studied on the possibility of their adoptive behaviors of the principles of sustaining natural capital. We noted that farmers adopt tree planting as key strategy to enhance soil properties, protect crop plants and provide other goods and services for households' needs. Of the multiple activities undertaken, crop agriculture contributes the largest proportion to household income (71 percent) followed by livestock production (14.9 percent). Remittance and transfers are also important accounting for 5 percent and 6.5 percent for beneficiary and non-

beneficiaries, respectively, of the PNDP program.

3. A breakdown of farm revenues after employing the techniques of sustainable soil and crop production reveal that farms for the beneficiaries of the capacity building programmes of the PNDP recoup the highest profits. Observable changes in rainfall are reported by 52.5 percent of households in North region. More than 70 percent of farming households in the West region report observable changes in rainfall. More residents in the Adamaoua region report observable changes in rainfall. About 52 percent of the farmers interviewed in the North region perceived long-term changes in temperature. Most of them perceive temperature to be increasing. Only 15 percent noticed the contrary, a decrease in temperature. For the beneficiaries of the SNC capacity building initiatives, soil management options are reported by 20.1 percent of households in North Cameroon, while 27.5 report employing crop management measures, with 12.5 percent relying on socio-cultural practices to ease the perceived stress of declining rainfall. In the Adamaoua region, 34.1 percent use soil management, 19.5 percent use crop management and 12.2 percent employ socio-cultural measures. In the west region, soil management options are used by 15.4 percent compared to 46.2 percent who use crop management measures and 10.1 percent that chose socio-cultural measures. A very significant proportion of farmers across the three regions report doing nothing to cope and adapt to the onslaught of climate variability, and the observable long-term changes in temperature and rainfall. This is important as it exposes the households to income shocks and food insecurity, and the associated vulnerabilities.

Annex 6. Stakeholder Workshop Report and Results

Perception des différentes parties prenantes sur les résultats du projet

Le PGDT s'est mis en œuvre avec la participation active de toutes les parties prenantes, au rang desquelles on peut citer (i) les bénéficiaires constitués des communautés organisées autour d'un comité de concertation et les maires, (ii) les différents prestataires composés des Organismes d'appui local et des consultants, (iii) les sectoriels dont les plus sollicités provenaient du MINEPDED, MINFOF, MINEPIA, MINCDAF, du MINAS, etc., et (iv) l'équipe du projet.

Sur la base des différentes missions de supervision, ainsi que des missions d'évaluation conjointe et indépendante réalisée entre autres par les Consultants indépendants et l'Institut de la formation de la Banque mondiale (WBI) et de la mission de clôture du Projet, on peut résumer la perception des parties prenantes de la manière suivante.

Pour les communautés et maires :

Globalement, ces bénéficiaires directs apprécient: (i) le mode de sélection des microprojets à financer qui privilégie les priorités exprimées par elles dans le cadre du processus d'élaboration du PCD, (ii) leur position de maître d'ouvrage dans la mise en œuvre des différentes interventions, (iii) le renforcement des capacités systématique associé à la mise en œuvre de tout microprojet, lequel a permis la constitution d'un réseau de leaders paysans expérimentés et (iv) la durabilité des interventions.

Dans la région de l'Adamaoua, lors de la mission de clôture, il est clairement apparu que les maires ont bien saisi les impacts et retombées positives enregistrées sur les conditions de vie des populations et l'amélioration de la qualité des sols. « Lorsqu'il faut parler des avantages du PDGT je manque généralement de mots tant ils sont nombreux et palpables. Dans ma commune pour ne prendre que ce cas, la transhumance et les conflits agropastoraux ont largement baissé du fait de la culture fourragère » confie Mr. Alamdou Pierre Maire de Meiganga, ce que renchérit les maires de Ngaoundal et de Martap. Une plus value à laquelle s'ajoutent la scolarisation des enfants qui ne sont plus désorientés par la transhumance, et le meilleur recouvrement des taxes fiscales pour la commune. Au delà de la vulgarisation de la culture fourragère, le PDGT a permis d'inculquer aux populations des bonnes pratiques destinées à protéger l'environnement, ainsi que de nouvelles espèces (Champs fourrager dans le Centre, introduction de l'acacia albida dans plusieurs sites au Nord), d'améliorer la fertilité des sols et d'augmenter les rendements. « Depuis l'arrivée du PGDT notre localité a obtenu d'énormes bénéfices. L'embouche bovine nous permet aujourd'hui de vendre notre bétail à un très bon prix, et le fumier laissé par les animaux nourris sur place a largement fertilisé nos sols » explique Hamadou un habitant delà localité de Mbang Foulbé dans la commune de Ngan-Ha. D'ailleurs, pour pérenniser l'action, la plupart des communes ont prévu une ligne de crédit dans leur budget pour soutenir les initiatives en cours et fournir un appui aux personnes intéressées.

Dans les autres régions de l'Ouest, Centre et Nord, les maires de Bangangté, Kouoptamo, Lagdo et de Yoko estiment que le Projet leur a donné l'occasion de constituer non seulement des forêts : source multiforme de revenu à moyen et long terme, mais également une réserve foncière. Ils estiment également que le Projet a fortement contribué à repositionner l'importance du compost,

dans la production agricole. Dans les zones d'intervention de l'Ouest et du Nord, les ordures ménagères et les résidus des plantes des champs constituent désormais une matière première importante pour les communautés.

En revanche, ces bénéficiaires pensent que les microprojets sont très localisés et ne couvrent qu'une infime partie des besoins de dégradation, et que la durée d'accompagnement reste insuffisante et n'a pas permis de les soutenir dans leur initiative d'organisation en coopératives. De nombreuses communautés n'ayant pas été au contact des technologies GDT sollicitent l'intervention du PGDT, notamment à Yoko.

Pour les prestataires (Consultants, organismes d'appui local)

Pour cette catégorie d'acteurs impliqués aussi bien dans le montage que dans la mise en œuvre des microprojets, le PGDT leur a donné l'occasion non seulement, de renforcer leurs capacités en matière de GDT, mais aussi d'affiner leur expertise. Au-delà des emplois générés, l'utilisation de ces prestataires a permis à certains d'entre eux de faire valoir cette expertise pour des emplois plus promoteurs. Mais la plupart des prestataires déplorent la complexité des procédures liées à la mise en œuvre du PGDT, ainsi que les difficultés liées à l'enregistrement de leur contrat. En particulier, ils pensent que les enveloppes allouées aux prestations sont très modestes et sont fortement grevés par les divers impôts. Ils ont fortement suggéré une rallonge de la durée d'accompagnement pour garantir un transfert intégral, et la mise en œuvre des interventions plus ambitieuses visant à tacler la problématique de dégradation à l'échelle d'un bassin versant.

Pour les sectoriels et autres instituts de recherche

Ce groupe d'acteurs a joué un rôle prépondérant dans la mise en œuvre du PGDT. En plus de participer de manière active, aux différents ateliers de réflexion pour la mise au point des outils méthodologiques, de manière régalienne, ils ont donné leur avis technique et s'assurent de la conformité sectorielle des interventions retenues dans le cadre du Conseil Municipal élargi au sectoriel (COMES). Il en est de même des instituts de recherche notamment l'IRAD, l'ICRAF et l'ANAFOR qui ont apporté une contribution significative. Par la suite, les sectoriels ont suivi en tant qu'ingénieur de marché, les microprojets relevant de leur compétence. Il convient de souligner que, compte tenu de la rareté et de l'indisponibilité des consultants, les sectoriels ont été régulièrement chargés d'accompagner la mise en œuvre des microprojets dans le cadre des contrats-programmes, ce qui a d'ailleurs abouti à des résultats très encourageants.

Globalement, pour ce groupe d'acteurs, le PGDT leur a permis de mettre en valeur, leurs expertises et de renforcer de manière efficace les activités quotidiennes.

Lors de la mission de la clôture du Projet, d'après le représentant national du MINEPIA, le PGDT a tracé la voie pour la gestion durable des espaces agrosylvopastoraux et en particulier pour le développement du pâturage en zone rurale qui constitue aujourd'hui une compétence transférée aux communes. Il a par ailleurs, promis que la Direction d'aménagement des pâturages et de l'hydraulique pastorale avec des services déconcentrés au niveau des régions, prévue dans le cadre la révision en cours, de l'organigramme du MINEPIA devra fortement s'inspirer des approches et acquis du PGDT. Pour le représentant du MINAS, il a noté avec

satisfaction que les peuples autochtones vulnérables « mbororo » sont pris en compte, et que le PGDT a permis dans la région de l'Adamaoua en particulier, d'améliorer le niveau de sédentarisation et d'intégration socio-économique de cette frange de la population, avant de promettre un plus grand soutien aux bénéficiaires rencontrés sur le terrain.

De son côté, le MINDCAF a loué les initiatives prises en matière de résolution des conflits par l'introduction des PUGDT, avant de souhaiter que cet outil ait un caractère juridique plus fort pour être généralisé à l'échelle du pays. Pour le MINFOF et le MINEPDED, la mise en place des différentes pépinières et des plantations forestières au niveau communal a fortement contribué à renforcer les capacités d'intervention des maires, qui seront désormais plus aptes à accueillir les lignes de crédit que nous prévoyons régulièrement, pour les campagnes de reboisement. Enfin, le Projet a ouvert la voie, à de nombreux champs de recherche-actions.

Annex 7. Comments of Cofinanciers and Other Partners/Stakeholders

(No comments have been received)

Annex 8. Summary of Borrower's ICR and/or Comments on Draft ICR

REPUBLIQUE DU CAMEROUN
PROJET DE GESTION DURABLE DES TERRES AU CAMEROUN (PGDT)

(DON GEF NO: TF056925 - CM)

RESUME EXECUTIF DU RAPPORT D'ACHEVEMENT DU PGDT

1.EVALUATION DES OBJECTIFS DU PROJET

1.1. Objectif de développement du Projet[17]

L'objectif de développement du PGDT est de permettre aux communautés de contribuer à la lutte contre la dégradation des terres dans les zones critiques, à travers l'adoption et le développement par les communautés des bonnes pratiques, des capacités, outils et mécanismes adéquats nécessaires à l'amélioration de la productivité des terres et de la croissance agricole. L'objectif environnemental du Projet est d'améliorer le fonctionnement des écosystèmes par l'intégration de la gestion durable des terres dans le développement local et la réduction de la perte de la biodiversité dans les écosystèmes agro-sylvo-pastoraux fragiles.

1.2.Evaluation de l'objectif de développement

Tous les indicateurs associés aussi bien à l'objectif de développement qu'à l'objectif environnemental ont été largement dépassés (voir cadre de résultats). La superficie sous GDT est d'environ 88 000 ha, et dépasse donc les 50 000 ha attendus. Plus de 8400 ménages ont adopté les bonnes pratiques de GDT. En ce qui concerne l'objectif environnemental, de nombreuses espèces fauniques et floristiques ont été soit introduites dans plusieurs communautés (plus de 500 ha de Faidherbia au Nord), soit ont réapparu du fait de l'action du Projet (Crocodile dans les retenues d'eau des biefs au Nord, pique-bœuf et martin-pêcheur à l'Ouest). Enfin, il n'est pas encore possible de quantifier tous les impacts réels. Le temps de mise en œuvre du projet ne permet pas de suivre la croissance de certaines plantes et de manière précise, leur niveau de séquestration du carbone.

Au vu des causes profondes de la dégradation des terres qui constituent le support principal de production de plus des 2/3 de la population nationale, les objectifs du projet sont réalistes et en cohérence avec les priorités et les besoins exprimés par les communautés et les acteurs à la base. Particulièrement, le projet a suscité la prise de conscience collective de l'importance de la gestion des terres, mais suggère que des actions supplémentaires d'envergure soient développées et mises en œuvre pour renverser la tendance actuelle de désertification au Cameroun, qui va bien au delà des quatre (04) régions d'intervention du Projet (Nord, Adamaoua, Centre et Ouest). Par ailleurs, en plus de contribuer aux efforts globaux d'amélioration de la biodiversité et de lutte contre les changements climatiques, la pertinence du Projet est également liée à l'intégration de la GDT dans le développement local.

[17] Accord de don n° TF 056 925

En outre, organisé autour de trois principales composantes y compris la coordination, le Projet a été mis en œuvre en 5 ans (à la faveur d'une prorogation d'une année supplémentaire doublée d'une réallocation catégorielle) dans 23 communes des 4 régions de l'Adamaoua, du Nord, du Centre et de l'Ouest.

2.EVALUATION DES COMPOSANTES DU PROJET

Pour atteindre les objectifs définis, le projet était structuré autour de trois (03) composantes à savoir :

Composante 1 : Amélioration de l'intégration de la gestion durable dans le développement local

Le principal objectif de cette composante est de cofinancer, à la demande des bénéficiaires (communautés et communes), des microprojets sur la gestion durable des terres dans les sites d'intervention du Projet. Les objectifs visés par cette composante ont été largement atteints. En effet, il était prévu de cofinancer, 150 microprojets communautaires et 60 microprojets communaux. A la fin du projet, 290 microprojets ont été préparés et mis en œuvre, soit 233 communautaires et 57 communaux. De ce total, 191 microprojets communautaires sont achevés et réceptionnés, 34 en cours de mise en œuvre et 8 en attente de financement, tandis que 15 mp communaux sont achevés et réceptionnés, et 18 sont en cours, et 24 en instance de financement. Ces microprojets ont été préparés en prenant en compte le savoir/les bonnes pratiques endogènes. Les bénéficiaires ont été systématiquement formées autour des technologies introduites par le projet et qu'on peut regrouper en huit groupes : (i) gestion intégrée de la fertilité des sols, (ii) agriculture de conservation, (iii) collecte des eaux de pluies, (iv) agroforesterie, (v) gestion intégrée de l'agriculture et de l'élevage, (vi) pastoralisme et gestion des parcours, (vii) gestion durable des forêts plantées et (viii) gestion des conflits. Environ 8345 ménages ont adopté les bonnes pratiques, mettant sous GDT leurs différentes exploitations. Il a été convenu avec la Banque mondiale, à la suite des missions de supervision, de ne pas mesurer l'indicateur sur la fertilité des sols par les paramètres physico-chimiques car cela est complexe, onéreux et peu pertinent. La mesure de la fertilité des sols se fera de manière indirecte, à travers les rendements.

Composante 2 : **Appui institutionnel à la gestion durable des terres**

L'objectif de cette composante est de renforcer le cadre institutionnel au niveau national et les capacités des bénéficiaires à mieux intégrer les meilleures pratiques de GDT dans les plans de développement local. Cette composante vise également à faciliter le règlement des conflits entre agriculteurs, éleveurs, autres utilisateurs des ressources et les chefs traditionnels.

Au titre de cette composante, concernant l'indicateur sur la révision des textes sur le régime foncier, il s'est avéré être au dessus des compétences du Projet. Les initiatives engagées auprès du département ministériel en charge de ces questions ont abouti à une réorientation vers la mise en place d'un cadastre rural, plus complexe, onéreux et nécessitant un délai conséquent et une approche particulière. De même, étant donné la grande complexité et diversité des modes de gestion coutumière des terres au Cameroun, il est apparu qu'une révision objective du régime foncier demande un plus grand support politique et pourrait s'inscrire dans le cadre d'un programme particulier. Aussi, la plupart des maires n'ont pas souhaité aborder cette question de manière profonde, compte tenu de sa sensibilité et de son impact sur leur mandat. Compte tenu de ce qui précède, des dynamiques en cours et des résultats préliminaires d'une étude de faisabilité sur un couloir du bétail traversant la région du Nord, le Projet a plutôt facilité la préparation d'un projet d'arrêté portant actualisation et fonctionnement de ce couloir (d'environ 700 km), à travers un comité multisectoriel mis en place par le MINEPAT .

Pour ce qui est de la Commission Nationale Consultative pour l'Environnement et le Développement Durable, son fonctionnement n'est pas encore effectif et dépend fortement du ministère en charge des questions environnementales qui en assure le secrétariat. Toutefois, l'équipe du Projet a participé aux travaux du comité ad hoc mis en place par le Ministre en charge de l'Environnement et qui ont abouti aux différents textes portant modification ou complétant ceux existants liés à son fonctionnement à savoir: (i) le Décret N°2011/2492/PM du 18 aout 2011 modifiant et complétant certaines dispositions du décret N°94/259/PM du 31 mai 1994 portant création d'une Commission Nationale Consultative pour l'Environnement et le Développement Durable; (ii) l'Arrêté N° 004/MINEP du 09 novembre 2011 fixant la composition, les modalités de fonctionnement et de désignation des membres des Comités Spécialisés de la Commission Nationale Consultative pour l'Environnement et le Développement Durable et (iii) l'Arrêté N° 005/MINEP du 09 novembre 2011 fixant les attributions, la composition et les modalités de fonctionnement de la Commission Régionale de la Commission Nationale Consultative pour l'Environnement et le Développement Durable. A ce jour, les membres de cette Commission restent à être nommés ou désignés par les parties prenantes, avant l'organisation de l'atelier de lancement de ladite CNCEDD. Malgré la clôture du Don, suite à une requête du MINEPDED, le MINEPAT a marqué son accord pour un soutien technique et financier à l'organisation de cet important atelier.

Sous cette composante, des études et travaux menés ont débouché sur la mise au point d'une démarche d'actualisation des PDC et PDL, ainsi que d'élaboration des Plans d'Utilisation et de Gestion Durable des Terres. Sur le plan opérationnel, l'appui du Projet a permis de procéder à l'actualisation de 125 Plans de Développement Local (PDL) et de 20 Plans de Développement Communal (PDC), pour y intégrer les aspects de gestion durable des terres, desquels sont issus les microprojets soumis au financement. Ces plans de développement sont utilisés par d'autres partenaires (MINFOF, Centre Technique des Forêts Communales, etc.) pour la mise en œuvre de leurs actions notamment à Meiganga ou Yoko. De même, à titre pilote, 05 plans d'utilisation et de gestion durable des terres (PUGDT) ont été élaborés et mis en œuvre dans les communes de Lagdo, Pitoa, Bangangté, Okola et Ngaoundal. En outre, 21 cadres de résolution des conflits au niveau communal et local ont été redynamisés pour le règlement des conflits existants et la recherche du consensus en matière de gestion des terres. Il convient de souligner que ces outils méthodologiques sont capitalisés depuis 2010, dans le processus d'élaboration des plans communaux de développement dans le cadre du PNDP.

Concernant le renforcement des capacités des acteurs, tous les bénéficiaires des microprojets ont été systématiquement formés à la technologie valorisée ou introduite par le Projet. Au total, 402 communautés ont ainsi bénéficié de ces formations réalisées par les Consultants chargés de la mise en œuvre ou par les sectoriels compétents agissant dans le cadre de contrat-programme. En outre, plus de 400 consultants et sectoriels ont reçu des formations diverses dans les domaines liés à la planification de la gestion durable des terres, aux technologies potentielles de GDT, aux aspects socio-environnementaux, à la passation simplifiée de marché, à la gestion de contrat, etc.

Composante 3 : Gestion, Coordination, Suivi-évaluation et Communication

Suivi-évaluation et communication

Le PGDT a bénéficié des mécanismes de suivi et évaluation du PNDP, moyennant quelques adaptations. En effet, une fenêtre a été ouverte dans le logicel Tomprojet pour permettre le captage systématique des données sur les microprojets PGDT. Le système d'information géographique (SIG) mis en place est opérationnel et une base de données géoréférencées a été mise au point pour produire la carte des interventions PGDT en temps voulu.
Sur la base des microprojets mis en œuvre et organisés autour de huit technologies de gestion durable de terres, un compendium de 14 bonnes pratiques a d'ailleurs été édité et est en cours de vulgarisation. Des documentaires sur les réalisations du PGDT ont été produits aussi bien au niveau régional que national.

Aspects socio-environnementaux

Le Cadre de Gestion Environnementale et Sociale du PNDP a servi de de base à la prise en compte des aspects socio-environnementaux, y compris pour le PGDT. De manière systématique, comme dans le cas des microprojets financés par le PNDP, tous les projets GDT ont fait l'objet d'un screening socio-environnemental, donnant lieu à des mesures environnementales appropriées qui ont été intégrées dans le montage technique et financier du microprojet concerné. Des formulaires socio-environnementaux ont été annexés à toutes les requêtes de financement.

Aucun cas de déplacement involontaire n'a été enregistré dans la mise en œuvre des microprojets financés. Tous les sites d'implantation ont fait l'objet d'un acte de donation volontaire, annexé à la requête de financement.

S'agissant des Peuples Autochtones, les 23 communes d'intervention du PGDT n'abritent pas les peuples pygmées. Cependant, de nombreux éleveurs mbororos ont été des bénéficiaires directs du Projet dans les régions de l'Ouest, de l'Adamaoua et du Nord, notamment à travers les infrastructures et équipements pastoraux, les champs fourrages, ainsi que la mise en place des cadres de résolution des conflits entre agriculteurs et éleveurs. Dans les communes de Ngaoundal, Meiganga, Nyambaka, de nombreux éleveurs mbororo sont devenus des agriculteurs produisant du fourrage, ce qui a fortement limité la transhumance dans la région.

Aspects de passation de marché

En ce qui concerne les aspects de passation des marchés, des procédures et des outils particuliers ont été développés pour permettre la mise en œuvre efficace des interventions sur le terrain. Les plans annuels de passation des marchés ont été régulièrement préparés et soumis à la Banque pour non objection. Concrètement,, compte tenu du montant plafond des financements, les microprojets communautaires ont été essentiellement mis en œuvre en régie, tandis que les microprojets communaux ont systématiquement fait l'objet d'avis à appel d'offre. Les principales parties prenantes, y compris les communautés à la base, les commissions communales de passation des marchés et le personnel cadre du Projet ont bénéficié des formations à tous ces outils et démarches. Les différents documents de passation des marchés ont été classés et archivés, aussi bien dans les communes concernées que dans les Cellules régionales.

Etat de décaissement et dossiers en instance

En se basant sur Client Connection, la structure de financement se présente comme suit à fin avril 2012 :

Catégorie	Description de la catégorie	Alloué (FCFA)	Décaissé (FCFA)	Non décaissé (FCFA)
Totaux		**2 996 718 594**	**2 659 761 432**	**336 957 162**
1	Biens et équipements	104 885 151	79 774 582	25 110 569
2	Consultants et audits	424 535 134	408 489 464	16 045 670
3	Microprojets	1 937 878 024	1 625 214 286	312 663 738
4	Fonctionnement	204 775 771	159 316 069	45 459 702
5	Formation et ateliers	324 644 514	250 313 986	74 330 528
	Non encore justifié par une DRF		136 653 045	-136 653 045

Mais en tenant compte des opérations en cours de finalisation, la situation projetée se présentera comme suit :

Catégorie	Description de la catégorie	Alloué (FCFA)	Décaissé (FCFA)	Non décaissé (FCFA)
Totaux		**2 996 718 594**	**3 093 350 344**	**-96 631 750**
1	Biens et équipements	104 885 151	83 787 632	21 097 519
2	Consultants et audits	424 535 134	451 110 240	- 26 575 106
3	Microprojets	1 937 878 024	1 975 767 034	- 37 889 010
4	Fonctionnement	204 775 771	183 509 247	21 266 524
5	Formation et ateliers	324 644 514	262 523 146	62 121 368
	Non encore justifié par une DRF		136 653 045	-136 653 045

Il faut dire qu'en réalité un montant de F CFA 433 588 912 est en cours de mobilisation sous forme de :

DRF en traitement A la Bm	
DRF N° 30 à 56	287 669 233
DRF N° 31	3 723 180
DRF N° 57	10 042 360
Sous - total DRF en traitement	**301 434 773**
DRF en cours de transmission à la CAA	
DRF N° 58 Diverses dépenses	84 529 283
DRF 59 % PREFINANCEMENTS A REMBOURSER	12 910 000
Dossiers en instance de présentation	34 714 856
Sous - total DRF en cours de transmission	**132 154 139**

En ajoutant ce montant au montant décaissé et justifié de FCFA 2 659 761 432 donné par client connection (pour un taux actuel de 89 percent), l'on passerait à FCFA 3 093 350 344 ce qui porterait **le taux réel de décaissement à 103 percent.**

Globalement, le financement du Projet est entièrement consommé et l'on a d'ailleurs fait appel aux fonds de contrepartie FCFA pour satisfaire tous les engagements actuels. Enfin, le PGDT a également fait l'objet d'audit technique et financier annuel, et aucun dysfonctionnement préjudiciable n'a été relevé.

3. EVALUATION DU DISPOSITIF D'EXECUTION DU PROJET

Adossé au PNDP, le projet a été mis en œuvre conformément à un manuel d'exécution préalablement élaboré, précisant l'enchaînement logique de ses activités sur le terrain. Il a été conduit par l'équipe du PNDP au niveau central et régional, induisant une surcharge de travail pour le personnel préalablement en place.

La mise en œuvre du Projet s'est fortement appuyée sur l'utilisation des consultants individuels, aussi bien pour l'élaboration des requêtes que pour leur mise en œuvre. Leur disponibilité en qualité et quantité suffisante, a été parfois source de nombreux retards dans la mesure où des appels à candidature étaient en général groupés.

L'utilisation par le PGDT du cadre institutionnel déjà en place (personnel, organes d'exécution, organes de délibération, etc.) ainsi que des procédures quasi-similaires a permis de limiter les risques de duplication, de gaspillage de temps et des ressources. Les différents aménagements opérés dans le cadre du PNDP, notamment le renforcement de la maîtrise d'ouvrage à la Commune (en matière de passation de marchés, transfert de compétence) ont été non seulement des facteurs déterminants pour le processus de décentralisation, mais ont également permis d'améliorer l'appropriation de la GDT par les maires.

4. AUTRES RESULTATS ET IMPACTS DU PROJET

Sur la base des différents rapports des évaluations conjointes et indépendantes réalisées entre autres par les Consultants indépendants, l'Institut de la formation de la Banque mondiale (WBI) dans le cadre de l'étude d'impact économique du PGDT, d'autres résultats et impacts préliminaires se présentent comme suit :

1. *Expansion progressive des pratiques et augmentation croissante des superficies sous GDT* : Dans les zones d'intervention du Projet à prédominance agricole, notamment Kouoptamo et Bangang-Fokam, 91 % des ménages parmi les bénéficiaires ont adopté au moins une technologie GDT qui leur a été apprise, et la mettent désormais en œuvre dans 77% de leurs exploitations. Le rythme de réplication des technologies GDT est assez encourageant. En plus des bénéficiaires, environ 25% des ménages non-bénéficiaires pratiquent la GDT dans au moins 28% de leur exploitation. Des progrès significatifs sont également perceptibles chez les éleveurs. Dans cette catégorie, 23% des ménages bénéficiaires ayant au moins un pâturage ont adopté les pratiques de GDT. De l'estimation faite par les différents consultants, le nombre de ménages ayant adopté les bonnes pratiques est de l'ordre de 8 456.

2. *Amélioration de la productivité des sols et bonnes pratiques* : Une amélioration de la productivité des terres a été enregistrée dans les 04 régions d'intervention. Ces rendements varient selon la pratique GDT utilisée. Pour ce qui est des céréales (maïs plus précisément), le rendement qui variait entre 0,7 t et 1,5 t/ha, est passé dans la fourchette de 2,5 à 5 t/ha dans le Centre et l'Ouest. Dans l'Adamaoua et au Nord, ce rendement est passé de moins de 2 t/ha à plus de 5 t/ha dans certaines communautés.

3. *Augmentation des revenus et réinvestissement des bénéfices*. Selon le rapport de WBI sur l'impact économique, dans l'ensemble 82% des exploitants agricoles et 97% d'éleveurs ont déclaré que la fertilité des sols et l'amélioration des pâturages sont respectivement les facteurs

explicatifs de l'augmentation de leurs productions. L'augmentation a été significative, en particulier dans la région de l'Adamaoua où s'est développée la culture fourragère.

5. *Professionnalisation/changement de métiers*. De nouveaux emplois, temporaires et permanents, ont été crées dans les zones d'intervention du Projet. Plus de 48 pépiniéristes ont été recrutés de manière permanente (12 au Nord, 28 dans l'Adamaoua et 06 à l'Ouest) pour la production et le suivi des plants dans les communes concernées. De même, le suivi rapproché des bénéficiaires par des consultants indépendants a favorisé un transfert de compétence et l'émergence d'une « certaine expertise locale ». De nouvelles fonctions de « Conseiller Local GDT » sont nées, notamment à Fada dans la Commune de Meiganga, et constituent l'un des impacts inattendus du PGDT. Par ailleurs, les éleveurs nomades ont commencé à se sédentariser à la faveur de la mise en place et l'expansion des champs fourragers, mais aussi à s'intéresser à l'agriculture.

6. *Réduction des conflits à travers le PUGDT et la redynamisation des cadres de résolution de conflits :* Les projets GDT ont permis d'enclencher les processus de recherche de consensus entre différents utilisateurs de la terre, au moyen de la redynamisation des cadres de résolution des conflits, mais aussi par la mise en œuvre des plans d'utilisation et de gestion durable des terres.

5. QUELQUES LEÇONS APPRISES

De manière générale, en complément et en cohérence avec le PNDP auquel il est adossé, le PGDT a permis de tirer et de conforter les enseignements ci-après :

1. Transfert des ressources aux communes. le Projet a mis en évidence la capacité des communes avec l'appui d'opérateurs de proximité, à élaborer une vision de développement des aspects de gestion durable des terres de leur espace territorial, à recevoir et à gérer dans la transparence, les ressources disponibles. Cependant, compte tenu de leurs capacités encore limitées et non homogènes, il est indispensable que ce mécanisme soit accompagné d'un renforcement des capacités et d'un dispositif approprié de suivi-accompagnement.

2. Amélioration du cadre institutionnel de gestion durable des terres. Le PUGDT se positionne comme un outil important de planification de l'espace rural, au profit des différents utilisateurs actuels et potentiels. De même, élaboré sur la base d'un consensus bien négocié, il permet d'atténuer de manière considérable les conflits locaux, et peut servir de base aux travaux de la Commission consultative pour les règlements des litiges agro-pastoraux au niveau communal. Il apparaît important d'institutionnaliser davantage cet outil, entres autres à travers la CNCEDD dans la perspective de sa généralisation à l'ensemble des communes du pays.

De manière spécifique, compte tenu de la complexité des interventions mises en œuvre, d'autres enseignements ont trait à :

1. Durée et qualité d'accompagnement des Mp et autres interventions**.** La durée contractuelle de l'accompagnement des bénéficiaires était de un an. Cette durée a été jugée insuffisante au regard de la complexité et de la nature même de certains microprojets tels que l'aménagement des forêts communales, le reboisement, etc. Il est fortement recommandé que cette durée soit davantage rallongée, non seulement pour garantir le succès du Mp, mais aussi compte tenu de la nécessité d'organiser les bénéficiaires en comité de gestion, puis plus tard en organisations de producteurs (GIC, GIE, coopératives, etc.). Il en est de même pour l'élaboration et la mise en œuvre du

PUGDT dont la durée contractuelle était de un an. S'agissant de la qualité d'accompagnement, elle influence directement et fortement le succès ou non du Mp. Au delà des actions de sensibilisation et de formation, l'accompagnateur doit entre autres (i) être présent sur le terrain, (ii) faire preuve de patience et de motivation, (iii) jouir d'une expertise technique avérée, (iv) s'appuyer sur un mécanisme de suivi endogène

2. Plafond de financement et répartition des microprojets. Le plafonnement de financement des microprojets à 4 et 20 millions FCFA, respectivement pour les microprojets communautaires et microprojets communaux a constitué une limitation dans le choix des interventions. Il a favorisé l'adoption d'une approche axée sur les moyens disponibles et dans un espace donné, au détriment d'une approche plus holistique centrée sur le diagnostic approfondi et sur le bassin versant. Par ailleurs, ceci a donné lieu à une diversification des interventions sur le terrain, ce qui ne permet pas d'optimiser les impacts à l'échelle d'un territoire donné. Dans le cadre des projets de reboisement, cette diversification ne rend pas aisées la capitalisation et valorisation de ces initiatives.

3. Nécessité de garantir la sécurité foncière. L'insécurité foncière peut expliquer la timidité dans l'adoption des pratiques GDT dans certaines zones du Projet. Dans les Communes de Lagdo et Tcholliré par exemple, cette insécurité foncière a favorisé le développement d'une agriculture itinérante dévastatrice des terres.

4. Adaptation des choix technologiques selon le genre et la division du travail. Le choix des technologies GDT selon le genre est un autre facteur important à considérer, pour garantir une meilleure appropriation des interventions. Ceci est valable également pour le choix des espèces forestières, ou des légumineuses à mettre en place dans les parcelles des bénéficiaires.

5. Mise en synergie des interventions du PNDP et autres acteurs clés et celles du PGDT. La vulgarisation des technologies GDT devrait être accompagnée des investissements socio-économiques tels que les magasins de stockage de graines, les marchés et les routes, d'une amélioration de la tenure foncière. En effet, une analyse rapide du marché dans les zones de l'étude révèle qu'une proportion importante (plus de 60%) de la production est vendue aux intermédiaires, principalement à cause des difficultés de transport, du manque d'information sur les prix, de l'absence de coopératives de marketing et de la nature périssable des produits.
Cette synergie rendue possible avec le Programme National de Développement Participatif (PNDP) auquel est adossé le PGDT, a constitué un facteur de succès et doit rester une préoccupation constante pour toute opération GDT et s'élargir donc à toutes les autres parties prenantes.

6. PERSPECTIVES ET SUGGESTIONS

En termes de perspective, le Gouvernement est engagé à travers le PNDP, à parachever toutes les opérations initiées dans le cadre du Projet. Il s'agit en particulier de : (i) le suivi des opérations en cours notamment les 52 microprojets en cours d'exécution qui doivent être réceptionnés avant le 10 août 2012 ; (ii) le suivi du démarrage effectif des 32 microprojets préparés avec contribution déjà mobilisée des bénéficiaires et qui reste tributaire au déblocage de la contrepartie attendue de la Banque (objet des DRF en instance); (iii) la finalisation du projet d'arrêté portant création et fonctionnement du couloir de circulation du bétail dans la région du Nord ; (iv) le fonctionnement effectif de la Commission Nationale Consultative pour l'Environnement et le Développement Durable (CNCEDD) dont les différents textes portant

modification et complétant ceux existants liés à son fonctionnement viennent d'être révisés, et (v) la recherche de financement pour la mise en œuvre du projet du couloir de circulation du bétail dans la région du Nord. Aussi, le Gouvernement s'engage également à capitaliser tous les acquis de cette opération, et notamment dans les différentes départements ministériels impliqués.

En fin, compte tenu des impacts positifs générés par ce projet aussi bien dans l'amélioration des revenus, que du renversement de la tendance de dégradation des terres dans les zones concernées, le Gouvernement souhaite que la Banque mondiale facilite le renouvellement des opérations similaires afin que l'expérience et les bénéfices induits dans le cadre de ce Projet soient davantage renforcés et même étendus à d'autres régions du Cameroun.

Borrower's Comments on Draft ICR

En référence à votre lettre ci-dessous, je viens par la présente vous faire savoir que le rapport d'achèvement de la Banque mondiale ne soulève pas de commentaires particuliers de notre part en l'état. Il est pour l'essentiel conforme à la réalité de la mise en œuvre du PGDT.

Toutefois, il convient de préciser plutôt (voir page 36, point B) que le Conseil Municipal élargi aux Sectoriels (COMES) a été institué y compris pour les opérations du PNDP, depuis la revue à mi-parcours, pour substituer les 02 organes de délibération existants au début du Projet notamment le Comité Paritaire d'Approbation au niveau Provincial (CPAP) pour les PCD et les microprojets communaux, et le Comité Paritaire d'Approbation au niveau Communal (CPAC) pour les PDL et microprojets communautaires.

Par ailleurs, compte tenu des impacts et des enseignements tirés de la mise en œuvre de ce Projet, le PNDP sollicite de la Banque Mondiale, pour étendre à l'échelle du pays et pérenniser les acquis enregistrés, un appui dans la mobilisation des ressources pour la réalisation du projet structurant de couloir de circulation du bétail dans la région du Nord, ainsi que pour les actions ciblées de renforcement des capacités nationales en matière de GDT et de changement climatique.

Annex 9. List of Supporting Documents

1) Aide-Memoires of Supervision Missions from 2006 to 2012

2) Implementation Status and Results (ISR) reports, December 2006 to July 2012

3) Country Assistance Strategy, February 23, 2010

4) Mid-Term Review report, October 2009

5) PNDP, PDGT et WBI (2010). Analyse Economique des pratiques Innovantes GDT au Cameroun

6) PNDP, PGDT (2011). Compendium de bonnes pratiques de Gestion Durable des terres au Cameroun

7) PNDP, PGDT (2010). Gestion Durable des Terres dans les Plans de Développement et Elaboration des Plans d'utilisation et de Gestion Durable des Terres : Guide Méthodologique

8) PNDP, PGDT et WBI (2010). SNC Reference Document-Cameroun, Vision 2035 of Agricultural and Pasture Land Production

9) Project Appraisal Document, Sustainable Agro-Pastoral and Land Management Promotion Project Under the Community Development Program Support Project, May 18, 2006

10) Rapport d'achèvement du projet PGDT préparé par le gouvernement du Cameroun, Avril 2012

IBRD 33382

CAMEROON

- SELECTED CITIES AND TOWNS
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- RIVERS
- MAIN ROADS
- RAILROADS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES

0 40 80 120 160 Kilometers

0 40 80 120 Miles

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Lake Chad
1963 Level
1973 Level
2001 Level
Fotokol
Maltam
To Massaguet
To Maiduguri
To Mandélia
To Maiduguri
Mora
Mandara Mts.
EXTREME NORD
Maroua
Yagoua
To Guelengdeng
Kaélé
To Kim
To Pala
Figuil
To Leré
NIGERIA
CHAD
Garoua
Touroua
Bénoué
NORD
Faro
Mbé
Mts Mbang.
Vina
Ngaoundéré
Ngai
ADAMAOUA
Adamaoua Mts.
Banyo
Djérem
Tibati
Ngaoundal
NORD-OUEST
Wum
Kumbo
Bamenda
Bankim
Sangbé
Garoua Boulai
To Bouar
To Ikom
Mamfe
Mbu
Foumban
Bafoussam
Dschang
OUEST
Yoko
Lom
CENTRE
CENTRAL AFRICAN REPUBLIC
SUD-OUEST
Bafang
Nkongsamba
Mbam
Bélabo
Bertoua
Kadei
Batouri
Kumba
Wou
Yabassi
Nanga Eboko
LITTORAL
Mt. Cameroon (4,095 m)
Buea
Tiko
Limbe
Douala
Ntui
YAOUNDÉ
Akonolinga
Abong Mbang
Yola
Edea
Eséka
Nyong
EST
Mbalmayo
Boumba
EQUATORIAL GUINEA
Echambot
Kribi
Ebolowa
Sangmélima
Lokomo
SUD
Ambam
Kom
Dja
Moulourdou
To Oyem
Gulf of Guinea
EQUATORIAL GUINEA
GABON
CONGO

12° E 14° E 16° E
12° N 10° N 8° N 6° N 4° N 2° N 10° E

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