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Document of
The World Bank

Report No: PAD525

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 32.6 MILLION
(US$50 MILLION EQUIVALENT)

AND A PROPOSED GRANT

FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND
IN THE AMOUNT OF US$ 8.33 MILLION

AND A PROPOSED GRANT

FROM THE LEAST DEVELOPED COUNTRIES FUND TRUST FUND
IN THE AMOUNT OF US$ 4.62 MILLION

AND A PROPOSED GRANT

FROM THE ETHIOPIA SUSTAINABLE LAND MANAGEMENT PROJECT TRUST FUND
IN THE AMOUNT OF US$ 42.65 MILLION

TO THE

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FOR A

SUSTAINABLE LAND MANAGEMENT PROJECT II (SLMP-2)

October 29, 2013

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CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2013)

Currency Unit	=	Ethiopia Birr
Ethiopia Birr18.92	=	US$1
US$1.53408	=	SDR 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADLI	Agriculture Development-led Industrialization
ATA	Agricultural Transformation Agency
BoA	Bureau of Agriculture
CBPWDG	Community-Based Participatory Watershed Development Guidelines
CPS	Country Partnership Strategy
CRGE	Climate Resilient Green Economy
CSA	Climate-smart Agriculture
CSO	Civil Society Organization
CWT	Community Watershed Team
DA	Development Agent
DPs	Development Partners
EIAR	Ethiopian Institute for Agricultural Research
ESIF	Strategic Investment Framework for Sustainable Land Management
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GTP	Growth and Transformation Plan
GEF	Global Environment Facility
GEO	Global Environmental Objectives
GGWI	Great Green Wall Initiative
GIZ	Gesellschaft fur Internationale Zusammenarbelt
GoE	Government of Ethiopia
GTP	Growth and Transformation Plan
IDA	International Development Association
KWDC	Kebele Watershed Development Committee
KWT	Kebele Watershed Team
LDCF	Least Developed Countries Fund
MDTF	Multi Donor Trust Fund
M&E	Monitoring and Evaluation
MERET	Managing Environment Resources for Transition Project (WFP)
MIS/IT	Management Information System/Information Technology
MoA	Ministry of Agriculture

MoEPF	Ministry of Environmental Protection and Forest
MoFED	Ministry of Finance and Economic Development
MoWIE	Ministry of Water, Irrigation and Energy
NFE	Non-Farm Economic Enterprises
NGO	Non-Governmental Organization
NSLMSC	National Sustainable Land Management Steering Committee
NSLMTC	National Sustainable Land Management Technical Committee
O&M	Operation and Maintenance
PAD	Project Appraisal Document
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
PDO	Project Development Objective
PIF	Agricultural Sector Policy and Investment Framework
PIM	Project Implementation Manual
PSU	Project Support Unit
REDD	Reducing Emissions from Deforestation and Forest Degradation
RED&FS	Rural Economic Development and Food Security Platform
RPF	Resettlement Policy Framework
SAWAP	Sahel and West Africa Program
SLM	Sustainable Land Management
SLMP-1	Sustainable Land Management Project
SLWM	Sustainable Land and Water Management
SNPPR	Southern Nations, Nationalities, and Peoples Regional State
WB	World Bank
WFP	World Food Program
WOA	Woreda Office for Agriculture
WSC	Woreda Steering Committee
WWDC	Woreda Watershed Development Committee

Regional Vice President:	Makhtar Diop
Country Director:	Guang Zhe Chen
Sector Director:	Jamal Saghir
Sector Manager:	Magda Lovei
Task Team Leaders:	Edward Felix Dwumfour / Dinesh Aryal

ETHIOPIA
Sustainable Land Management Project (SLMP-2)

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PAD DATA SHEET

Ethiopia

Sustainable Land Management Project-2 (P133133/P133410)

PROJECT APPRAISAL DOCUMENT

AFRICA

AFTN3

Report No.: PAD525

Basic Information			
Project ID	Lending Instrument	EA Category	Team Leader
P133133/P133410	Investment Project Finance	B - Partial Assessment	Edward Felix Dwumfour / Dinesh Aryal
Project Implementation Start Date		Project Implementation End Date	
22-Nov-2013		7-Apr-2019	
Expected Effectiveness Date		Expected Closing Date	
21-Mar-2014		7-Apr-2019	
Joint IFC			
No			
Sector Manager	Sector Director	Country Director	Regional Vice President
Magda Lovei	Jamal Saghir	Guang Zhe Chen	Makhtar Diop

Borrower: Federal Ministry of Finance and Economic Development, Federal Democratic Republic of Ethiopia

Responsible Agency: Ministry of Agriculture

Contact:	Melaku Tadesse	Title:	National Coordinator
Telephone No.:	00251116462353	Email:	mela635@gmail.com

Project Financing Data(in USD Million)					
[ ]	Loan	[X]	Grant	[ ]	Other
[X]	Credit	[ ]	Guarantee		

Total Project Cost:	107.61	Total Bank Financing:	50.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	2.00
International Development Association (IDA)	50.00

Global Environment Facility (GEF) (includes LDCF)	12.96
NORWAY Ministry of Foreign Affairs	42.65
Total	107.61

Expected Disbursements (in USD Million) – IDA

Fiscal Year	2014	2015	2016	2017	2018	2019			
Annual	2.00	8.00	10.00	12.00	12.00	6.00			
Cumulative	2.00	10.00	20.00	32.00	44.00	50.00			

Expected Disbursements (in USD Million) – GEF/LDCF

Fiscal Year	2014	2015	2016	2017	2018	2019			
Annual	0.50	2.00	4.00	3.50	1.96	1.00			
Cumulative	0.50	2.50	6.50	10.00	11.96	12.96			

Expected Disbursements (in USD Million) – MDTF

Fiscal Year	2014	2015	2016	2017	2018	2019			
Annual	2.00	7.00	12.00	12.00	7.00	2.65			
Cumulative	2.00	9.00	21.00	33.00	40.00	42.65			

Project Development Objective(s)

The Project's Development and Global Environment Objective is to reduce land degradation and improve land productivity in selected watersheds in targeted regions in Ethiopia.

Components

Component Name	Cost (USD Million)
Component 1: Integrated Watershed and Landscape Management	73.98
Component 2: Institutional Strengthening, Capacity Development and Knowledge Generation and Management	16.98
Component 3: Rural Land Administration, Certification and Land Use	12.20
Component 4: Project Management	4.45

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ] No [X]
Does the project require any waivers of Bank policies?	Yes [ ] No [X]

Have these been approved by Bank management?	Yes [ ]	No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	YES	
Natural Habitats OP/BP 4.04	YES	
Forests OP/BP 4.36	YES	
Pest Management OP 4.09	YES	
Physical Cultural Resources OP/BP 4.11	YES	
Indigenous Peoples OP/BP 4.10	YES	
Involuntary Resettlement OP/BP 4.12	YES	
Safety of Dams OP/BP 4.37	YES	
Projects on International Waterways OP/BP 7.50		NO
Projects in Disputed Areas OP/BP 7.60		NO

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Safeguards	X		CONTINUOUS

Description of Covenant
- The Recipient shall implement the project in accordance with the relevant Safeguards Instruments.

Fiduciary capacity		30-Apr-2014	

Description of Covenant
- The Recipient shall appoint no later than three months after the Effective Date a chief accountant, a senior accountant, an accountant at the federal MoA SLMP Project Support Unit, and sixty (60) mobile accountants at the Regions to cover both regional and Woreda level accounting assignments, all with qualifications, experience and terms of reference satisfactory to the Association.

Conditions

Name	**Type**
- The Co-Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or the right of the Recipient to make withdrawals under it have been fulfilled.	Effectiveness
- The Recipient has appointed a senior technical staff at MoA as the National Project Coordinator for the SLM Support Unit, with qualifications, experience and terms of reference satisfactory to the Association.	Effectiveness

- The Recipient has adopted a Project Implementation Manual and Procurement manual, including, inter alia, detailed Project implementation arrangements and institutional roles and responsibilities, detailed implementation schedule, financial management and reporting, procurement, monitoring and evaluation, and procedures for implementation of the Safeguards Instruments for the Project, all in form and substance satisfactory to the Association.	Effectiveness

Team Composition

Bank Staff

Name	Title	Specialization	Unit
Edward Felix Dwumfour	Senior Environmental Specialist	Team Lead	AFTN3
Dinesh Aryal	Senior Operations Officer	Co-Team Lead	AFTN3
Louise F. Scura	Sector Leader	Sustainable Development	AFTSN
Stephen Danyo	Senior Natural Resources Management Specialist	Natural Resources Management	AFTN1
Zoe Kolovou	Lead Counsel	Legal	LEGAM
Mohammad Nadeem	Legal Analyst	Legal	LEGAM
Markus P. Goldstein	Practice Leader	Gender	AFTPM
Niklas Buehren	Extended Term Consultant	Gender	AFTPM
Madjiguene Seck	Communications Associate	Communications and Gender	AFTN3
Nneka Okereke	Communications Associate	Communications, Social Accountability and Gender	ECRGE
Nicholas Meitaki Soikan	Consultant	Consultation & Participation	AFTN1
Kennan W. Rapp	Senior Social Development Specialist	Social Development	CPFCF
Mika-Petteri Torhonen	Senior Land Policy Specialist	Land Policy	ECSEN
Andrew Osei Asibey	Monitoring and Evaluation Specialist	Monitoring and Evaluation	AFTDE
Begashaw Wukaw Woldu	Technical Specialist	Public Works	AFTSE
Asmita Tiwari	Disaster Risk Management Specialist	Disaster Risk Management	AFTN2
Tesfaye Ayele	Senior Procurement Specialist	Procurement	AFTPE

Jose Janeiro	Senior Finance Officer	Disbursement	CTRLA
Abiy Demissie Belay	Financial Management Specialist	Financial Management	AFTME
Klaus Deininger	Lead Economist	Land Administration	DECAR
Victor Bundi Mosoti	Counsel	Legal Advice	LEGEN
Michael Carroll	Consultant	Rural Development/Agronomist	AFTN3
Million Alemayehu Gizaw	Consultant	Natural Resources Management	AFTN3
Andre Rodrigues de Aquino	Carbon Finance Specialist	Carbon Finance	CPFCF
Teklu Tesfaye	Senior Agricultural Specialist	Agriculture Development	AFTA3
Ademola Braimoh	Senior Natural Resources Mgmt. Spec.	Natural Resources Management, Soil and Water Conservation	AES
Chukwudi Okafor	Senior Social Development Specialist	Social Development and Social Safeguard	AFTCS
Asferachew Abate Abebe	Environmental Specialist	Environmental Management and Safeguard	AFTN3
Mistre Hailemariam Mekuria	Team Assistant	Team Assistant	AFCE3
Aurore Simbananiye	Program Assistant	Program Assistant	AFTN3
Yesmeana Butler	Program Assistant	Program Assistant	AFTN3

Non Bank Staff

Name	Title	Office Phone	City

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments

Institutional Data

Sector Board

Environment

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %

Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	60	40	60
Agriculture, fishing, and forestry	Forestry	40	60	40
Total		100		

☐ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Environment and natural resources management	Other environment and natural resources management	30
Environment and natural resources management	Water resource management	30
Environment and natural resources management	Biodiversity	20
Environment and natural resources management	Climate change	20
Total		100

I. STRATEGIC CONTEXT

A. Country Context

1. Ethiopia is a large and diverse country. It is located in the Horn of Africa and is a land-locked country with an area of 1.1 million km^2—about the size of Bolivia. Its bio-physical environment includes a variety of contrasting ecosystems, with significant differences in climate, soil properties, vegetation types, agricultural potential, biodiversity and water resources. Ethiopia is a country of many nations, nationalities and peoples, with a total population of 91.7 million (2012)[1]. Only 17 percent of the population lives in urban centers, the great majority of them in Addis Ababa. At a current annual growth rate of 2.6 percent, Ethiopia's population is estimated to reach 130 million by 2025, and is projected by the UN to be among the world's top ten, by 2050. Ethiopia is vulnerable to terms of trade shocks from international food and fuel prices, and to large domestic weather-related shocks as the 2011/12 East Africa drought demonstrated.

2. Ethiopia has a federal, democratic government system, established in the early 1990s, with nine autonomous states ('regions') and two chartered cities[2]. Decentralization of governance to the regional and district (*woreda*) levels has been actively pursued, intensively since 2003. The Ethiopian People's Revolutionary Democratic Front (EPRDF) has been in power in Ethiopia since 1991. EPRDF comprises four regionally-based parties from the four major regions (Amhara, Oromia, Southern Nations, Nationalities and Peoples (SNNPR), and Tigray). The long-serving Prime Minister, Meles Zenawi, (from Tigray) died in August 2012, and was succeeded by Hailemariam Desalegn (from SNNPR) who has pursued largely the same policies. The next national elections are scheduled for 2015.

3. Ethiopia has experienced strong economic growth over the past decade. Economic growth averaged 10.7 percent per year in 2003/04 to 2011/12 compared to the regional average of 5.4 percent. Growth reflected a mix of factors, including agricultural modernization, the development of new export sectors, strong global commodity demand, and government-led development investments. Private consumption and public investment have driven demand side growth, with the latter assuming an increasingly important role in recent years. On the supply side, growth was driven by an expansion of the services and agricultural sectors, while the role of the industrial sector was relatively modest. More recently annual growth rates have declined slightly, but still remain at high single-digit levels. Growth in the export of goods has also moderated in recent years and a decline was observed in 2012/13 for the first time since 2008/09. There have been bouts of high inflation in recent years and, while inflation is currently much lower, keeping it down remains a major objective for monetary policy.

4. Ethiopia is one of the world's poorest countries, but has made substantial progress on social and human development over the past decade. The country's per capita income of US$370 is substantially lower than the regional average of US$1,257 and among the ten lowest worldwide[3]. Ethiopia is ranked 173 out of 187 countries in the Human Development Index (HDI) of the United Nations Development Program (UNDP). However, high economic growth has helped reduce poverty, in both urban and rural areas. Since 2005, 2.5 million people have been lifted out

[1] Source: United Nations. According to the Central Statistics Office of the Government of Ethiopia, the population figure is 82.6 million.

[2] The Regions are Afar, Amhara, Benishangul-Gumuz, Gambella, Harari, Oromia, Somali, SNNPR (Southern Nations, Nationalities and Peoples), and Tigray. The chartered cities are Addis Ababa and Dire Dawa.

[3] Gross National Income, World Bank Atlas Method.

of poverty, and the share of the population below the poverty line has fallen from 38.7 percent in 2004/05 to 29.6 percent in 2010/11 (using a poverty line of US$0.6/day). However, because of high population growth the absolute number of poor (about 25 million) has remained unchanged over the past fifteen years. Ethiopia is among the countries that have made the fastest progress on the Millennium Development Goals (MDGs) and HDI ranking over the past decade. It is on track to achieve the MDGs related to gender parity in education, child mortality, HIV/AIDS, and malaria. Good progress has been achieved in universal primary education, although the MDG target may not be met. The reduction of maternal mortality remains a key challenge.

5. GoE is currently implementing its ambitious Growth and Transformation Plan (GTP; 2010/11-2014/15), which sets a long-term goal of becoming a middle-income country by 2023, with growth rates of at least 11.2 percent per annum during the plan period. To achieve the GTP goals and objectives, GoE has followed a "developmental state" model with a strong role for the Government in many aspects of the economy. It has prioritized key sectors such as industry and agriculture, as drivers of sustained economic growth and job creation. The GTP also reaffirms GoE's commitment to human development. Development partners have programs that are broadly aligned with GTP priorities.

B. Sectoral and Institutional Context

6. Ethiopia's diverse production landscapes provide a range of services to poor rural people, including crops and livestock, timber and firewood, and fresh water. Unfortunately, these landscapes are increasingly unable to sustain prosperity or reduce poverty due to persistent land degradation that affects agricultural productivity, the availability of forest products, and damages the hydrologic cycle.

7. Agriculture is the key pillar of the economy and the most important source of growth and poverty reduction. The sector accounts for almost 48 percent of GDP and 85 percent of export earnings. Agricultural production is largely rain-fed and dominated by small-scale farmers and enterprises that produce 90– 95 percent of the country's cereals, pulses and oil seeds. Small-holder production is dominated by five major cereal crops – teff, maize, wheat, sorghum and barley- which account for 75% of the cultivated area. Services provided by natural resources including soil, water, forests and biodiversity play a critical role for the livelihood of a large majority of the population. While much of the agriculture serves subsistence purposes, smallholders also provide most of traded commodities, including for exports, and about 70 percent of the raw material requirements of agro-based domestic industries.

8. Agriculture, and therefore economic growth and food security of the country, rely on sustainable management of land and water. Land degradation is a major cause of the country's low and declining natural resource and agricultural productivity, persistent food insecurity, and rural poverty. The minimum annual cost of land degradation in Ethiopia is estimated at the range of 2-3 percent of agricultural GDP. Studies have shown that by the mid-1980s, some 27 million ha, or almost 50 percent of the Ethiopian highlands (which make up about 45 percent of the total land area) was considered to be significantly eroded, of which 14 million ha was seriously eroded, and over 2 million ha was beyond reclamation. It is estimated that some 30,000 ha are lost annually as a result of soil erosion, representing over 1.5 billion tons of soil that is removed annually by a variety of land degradation processes. This is a significant loss for a country that is expecting the sector to play a key role in generating surplus capital to speed up the overall socio-economic development of the country.

9. Ethiopia is one of the world's rich countries in biodiversity. Due to the variation in climate, topography and vegetation, Ethiopia has a very diverse set of ecosystems ranging from humid forest and extensive wetlands to the desert of the Afar depression. Ethiopia is one of the twelve known ancient countries for crop plant diversities in the world and has valuable reserves of crop genetic diversity, of which 11 cultivated crops have their center of diversity in the country. The extensive and unique conditions in the highlands of the country have contributed to the presence of a large number of endemic species. The flora of Ethiopia is very diverse with an estimated number between 6,500 and 7,000 species of higher plants, of which about 15 per cent are endemic. In terms of fauna, About 277 species of mammals, 861 species of birds (and 69 Important Bird Areas (IBAs)), 201 reptile species, 145 species of freshwater fish, 324 butterflies and 63 species of amphibians are known from Ethiopia. The larger mammals are mainly concentrated in the south and southwest border and adjacent areas of the country. The mountain areas in the north are also home to many endemic species of mammals, particularly the Walia Ibex, Semien Fox and Gelada Baboon.

10. Ethiopia is already experiencing changes in its climate. Between 1960 and 2005, mean annual temperature has increased by 1.3 degrees Celsius. Unusually hot weather has also increased, with a 20% increase in the number of "hot" days during the same period. A study conducted by the University of Oxford projected increases in temperature of 1.1 to 3.1 degrees Celsius by 2050. The 2007 National Adaptation Program of Action (NAPA) identified 11 priority adaptation activities, including small scale irrigation and water harvesting systems, enhanced early warning systems for droughts and floods, and improved management of rangelands and wetlands. In terms of climate change mitigation, Ethiopia contributes relatively low CO_2 emission levels (0.1 ton per capita). Agriculture and forestry account for 85% of total emissions. The latest National Communication[4] submitted to the United National Framework Convention on Climate Change (UNFCCC) Secretariat in 2001 highlights the importance of four key sectors for mitigating emissions – energy; land-use change and forestry; agriculture; and waste. However, given high rates of economic growth and GoE target of becoming a middle income country by 2025, emissions could rise considerably in a "business as usual" scenario. In order to address this potential situation, Ethiopia has developed an unusual position among low income countries by setting ambitious plans for mitigating its emissions and moving to a green, carbon-neutral, economic model. The strategy for achieving this goal is based on four key actions, of which two are directly related to the agricultural sector: improving crop and livestock production practices, and protecting and re-establishing forests.

11. Given the predominant geo-climatic conditions, inherent fragile soils, undulating terrain, and highly erosive rainfall, Ethiopia has continuously faced challenges in conserving its soil fertility. Coupled with these natural constraints, the environmentally inadequate farming methods that many farmers practice make the country highly vulnerable to soil erosion. Moreover, about one-third of the agricultural land is moderately to strongly acidic because of long neglect in soil conservation and traditional farming practices. Gully formation and sedimentation of waterways, lakes, dams and irrigation channels are wide-spread.

12. The main anthropogenic causes of land degradation are complex and diverse, including poor land use and management practices throughout the landscape. Climate risks further amplifies them, complicating GoE's ability to respond.

[4] http://unfccc.int/resource/docs/natc/ethnc1.pdf

- Poor cropland management practices: The farming system, particularly in the highlands, is dominated by subsistence cereal crops, which provide little ground cover when the most erosive rains occur (June-August). This system often requires frequent tillage and pulverization of the soil, rendering it more susceptible to erosion. Furthermore, limited soil conservation practices and the breakdown of traditional land productivity restoration measures, such as shifting cultivation, contribute to land degradation.

- Rapid depletion of vegetation cover: Household energy needs are predominantly supported by wood and other biomass, causing an unprecedented level of deforestation. The loss of vegetation cover has been further exacerbated by agriculture expansion and livestock grazing. As a result, the land is stripped of vegetative biomass, exposing it to high levels of soil erosion. Ethiopia's once dense forests, covering about 40 percent of the country's land area, have been reduced to only 2.4 percent, covering around 3.3 million hectares of high forests in 2005 (Woody Biomass Inventory and Strategic Planning Project, 2005, cited in the R-PP)[5]. Average deforestation rates range from 1 to 1.5% annually (Lemenih and Woldemarian, 2010), a high rate for a low forest cover country.

- Poor livestock management: Ethiopia has one of the largest livestock populations in the continent with more than 53 million cattle of which only 25 percent graze in rangelands. The remaining 75 percent graze in highlands, leading to serious overgrazing in areas that are already under high pressure. Since the country has a free grazing system, there is no incentive for cattle holders to apply improved management practices in grazing areas. The scarcity of grazing land and livestock feed has forced the widespread use of crop residues to feed livestock. Removal of crop residues for feed and utilization of cattle manure for fuel, further reduces the soil's organic matter and nutrients. This breach in the soil nutrient cycle seriously depletes soil quality, increases erosion, and eventually reduces soil productivity.

- Insecure land tenure system: In the past, land tenure insecurity caused by frequent land redistribution have encouraged farmers in Ethiopia to favor short term exploitation of land resources over long-term conservation, further contributing to land degradation and low farm productivity.

13. Cognizant of the adverse effects of tenure insecurity on food production and the environment, since 1997 GoE embarked upon policy and institutional reforms that have laid the ground for establishing and implementing an effective land administration system. The core and key element of reform in the drive to improve tenure security among farming households was registration and certification of rural lands. A number of studies have shown that this registration and certification of rural land has attained its primary objective of enhancing tenure security.

14. A highly decentralized, participatory, pro-poor, low-cost and rapid first-level registration and certification process was adopted. Elected village land committees of 5-7 members at sub-district levels were established to affirm existing landholding rights before they were registered. Women were encouraged to become members of these committees. Public awareness campaigns were conducted informing rural communities about the objectives of the land registration process and the role of the village land committees. As a result, investment in soil and water

[5] This comprises of only high forest cover. The country also had around 9.6 million hectares of high woodlands in 2005.

conservation, including terracing and construction of bunds[6], planting of trees and perennial crops, as well as participation in the land rental market and access of women to land have all increased while land related disputes have decreased.

15. A number of problems and challenges were manifested in implementing these programs mainly falling in the areas of technical deficiencies, inadequate institutional capacity and lack of financial resources. The GoE has now developed a five-year strategic plan to broaden and deepen rural land administration reform. The objective is to strengthen the country's land administration and management systems at all levels of government for efficient and transparent land service delivery and to embark upon second level registration that will enhance tenure security by issuing geo-referenced parcel index maps to land holders. This task is immensely resource demanding and requires modern technologies, skilled personnel, and the establishment of a Land Information System for data updating and efficient service delivery.

16. To address the complex and diverse constraints to sustainable development, the GoE introduced, in addition to the GTP and the CRGE Strategy, a series of policies, strategies, investment plans and institutional reforms including:

- The Agriculture Development Led Industrialization (ADLI), formulated in the early nineties, and the first generation poverty reduction strategy (2000-2005) within the Sustainable Development and Poverty Reduction Program (SDPRD).
- The Plan for Accelerated and Sustainable Development to End Poverty – PASDEP (2006-2010): PASDEP focused on eight initiatives which included: (i) raising investments to improve agricultural infrastructure; (ii) enhancing access to financial services, markets, support services in research and extension; (iii) improving efficiency and expanding use of water for irrigation; (iv) improving land tenure security; and (v) enhancing access to improved farm inputs.
- The multi-year (2009-2023) Ethiopia Strategic Investment Framework for Sustainable Land Management (ESIF) and the (2010-2020) Agricultural Sector Policy and Investment Framework (PIF) were formulated within the framework of the New Partnership for Africa's Development (NEPAD)'s TerrAfrica partnership and Comprehensive Africa Agricultural Development Programme (CAADP), respectively. The overall development objective of ESIF is to improve the livelihoods and economic well-being of the country's farmers, herders and forest resource users by scaling up sustainable land management practices with proven potential to restore, sustain and enhance the productivity of Ethiopia's land resources. The Agriculture Sector PIF aimed to contribute to Ethiopia's achievement of middle income status by 2025 by sustainably increasing rural income and national food security through increasing agricultural productivity and production, accelerating agricultural commercialization and agro-industrial development, reducing degradation and improving productivity of natural resources, and achieving universal food security and protecting vulnerable households from natural disasters.
- The Disaster Risk Management Strategic Program and Investment Framework (DRM-SPIF) aimed to reduce the risks and impacts of disasters through the establishment of a

[6] Bunds (often called dikes) are containment walls or structures that are designed to prevent inundation or spills/breaches to prevent and control rain water induced erosion.

comprehensive and integrated disaster risk management system. The DRM-SPIF is consistent with the GTP and the priorities enshrined in the Hyogo Framework for Action (HFA) and translating these priorities into programs along the lines of prevention and mitigation, preparedness, response and recovery and rehabilitation.

- The Agriculture Transformation Agency (ATA) was established by law after the completion of the Growth and Transformation Plan (GTP) with the mandate of supporting the achievement of the GoE's agriculture sector targets as articulated in the GTP, the CAADP, the Agriculture Sector PIF, and other key government strategies. ATA is expected to undertake a range of activities to support the programmatic work areas contained in its mandate that include: problem solving, implementation support, capacity building, and stakeholder coordination. At its core, ATA is focused on fostering greater on-farm productivity through a renewed push for marketing, diversification, coping strategies for household resilience, and natural resource management.

17. The Rural Economic Development and Food Security Sector Working Group (RED&FS SWG) is the Government-Donor coordination platform for agriculture, natural resource management and food security. Its objective is to jointly review sector level implementation status, and to coordinate and harmonize efforts of various development partners supporting thematic areas under RED & FS. It was formally established in April 2008, and is composed of an Executive Committee and three Technical Committees (Agricultural Growth; Sustainable Land Management; and Disaster Risk Management and Food Security). The RED&FS SWG is mandated to share information on GoE's policies, strategies, and programs based on the five-year national development plan objectives and targets; to review sector level implementation status; to coordinate and harmonize efforts of various development partners supporting the sector; and to interact with and mobilize partners to provide additional support so as to achieve Government's five-year plans and the Millennium Development Goals (MDG).

18. Within the context of these initiatives, in particular the ESIF and the Agricultural PIF, the Sustainable Land Management Program was established. The Sustainable Land Management Project (SLMP-1) which was approved by the World Bank's Board on April 29, 2008, was a significant contributor to this. SLMP-1 has made progress in introducing sustainable land management practices in selected areas of the country, including remarkable progress in rehabilitating targeted degraded areas which were previously uneconomical and unproductive. Implemented in 45 critical watersheds of six regions, the project supported a comprehensive strategic approach to improved natural resources management, which included a highly participatory identification of degradation factors and impacts, the subsequent planning and design of the most appropriate interventions, and the community-led implementation of improved practices and infrastructure. As a result, a total of 98,000 rural households (190,000 ha) benefitted from a combination of environmental and productive interventions (a detailed description SLMP-1 interventions is provided in Annex 2).

19. In addition to SLMP-1, the World Bank through the Bio-Carbon Fund (BioCF) supported the Humbo Assisted Natural Regeneration Project. The project has successfully led to the rehabilitation of heavily degraded land over 2,500 hectares, while generating carbon revenues distributed to seven cooperatives in the Humbo area (Southern Nations region) in the form of local community assets such as schools and clinics. It has also been the first project in Africa to be registered under the Clean Development Mechanism which generated substantial knowledge

on carbon sequestration at the national level. The proposed Project will build on the success and expand the scope of the SLMP-1 and Humbo project while supporting farmers to make investments that can better reduce existing and future climate risks.

20. The REDD+ Readiness Proposal prepared by MoA and EPA, which lays out Ethiopia's strategic plans to strengthen national capacity and institutional framework to reduce GHG emissions from deforestation and forest degradation, and access potential benefits from a future international REDD+ mechanism. As part of the REDD+ Readiness process, the World Bank has recently launched the preparation of the Oromia REDD+ Pilot Program. This large-scale Program will seek to promote activities that lead to reduced emissions from deforestation and forest degradation, in addition to carbon stock enhancement, in the Regional State of Oromia. The World Bank BioCarbon Fund is supporting the SLMP-2 and expects to pilot an innovative mechanism of results-based payments against emissions reductions, and also against proxies to emissions reductions. The Program design is led by the Ministry of Agriculture and the Oromia Forest and Wildlife Enterprise.

C. Higher Level Objectives to which the Project Contributes

Regional and National Priorities

21. At the national level, the proposed Project is consistent with the GoE's GTP and supports a multi-partner effort to achieve the objectives of the ESIF and the Agricultural PIF. It contributes to the GTP's objectives, in particular, to attain a high average real GDP growth rate of 11 percent per annum within a stable macroeconomic framework. Furthermore, the proposed Project is aligned with the Government's CRGE Strategy. It contributes to all three key objectives of CRGE Strategy, i.e., to foster economic development and growth; to ensure abatement and avoidance of future emissions; and to improve resilience to climate change.

22. By introducing sustainable land and water management practices, the Project will also contribute to the GoE's CRGE Strategy by reducing GHG emissions from land use change, and increasing carbon stocks in biomass and organic soil. The Government and other stakeholders, including extension workers, community groups, and NGOs would be provided with additional skills and training to promote climate smart agriculture[7], and integrated land management practices that internalize climate induced risks and the conservation of biodiversity and soil.

23. At the regional level, the proposed Project is part of the World Bank/GEF Sahel and West Africa Program (SAWAP) in support of the pan-African Great Green Wall Initiative (GGWI), launched in 2007 by African Heads of State. The SAWAP, with over US$1 billion in financing from IDA, GEF and other partners, supports the implementation of a country-driven vision for integrated natural resource management for sustainable and climate-resilient development in 12 countries in West Africa and the Sahel (Benin, Burkina Faso, Chad, Ethiopia, Ghana, Mali, Mauritania, Niger, Nigeria, Senegal, and Sudan, and Togo).

24. The Project also builds on the TerrAfrica partnership program for SLWM. TerrAfrica is an African-driven global partnership program to scale up sustainable land and water management

[7] Climate smart agriculture in SLMP-2 refers to practices that seek to increase agricultural productivity, strengthen farmers' resilience to climate change, reduce GHG emissions and increase carbon sequestration. It includes proven practical techniques — such as mulching, intercropping, conservation agriculture, no-till, crop rotation, cover cropping, integrated crop-livestock management, agroforestry, improved grazing, and improved water management — and innovative practices such as more resilient food crops.

across sectors in over 23 participating Sub-Saharan countries, including Ethiopia which has served on the Executive Committee. TerrAfrica supported the development of the Government's ESIF, as well as the preparation of SLMP-1 and the proposed SLMP-2. TerrAfrica reinforces investments, institutions and information at country and regional levels, and provides a platform for convening knowledge across projects, programs, and countries.

World Bank Regional and Country Partnership Strategy

25. The World Bank Group's Country Partnership Strategy (CPS, FY13-16) adopted by the Board on August 29, 2012 builds on the progress achieved by Ethiopia in recent years and aims to help GoE address structural transformation and assist in the implementation of the GTP. The CPS framework includes two pillars. Pillar One, "Fostering competitiveness and employment", aims to support Ethiopia in achieving: (i) a stable macroeconomic environment; (ii) increased competitiveness and productivity; (iii) increased and improved delivery of infrastructure; and (iv) enhanced regional integration. Pillar Two, "Enhancing resilience and reducing vulnerabilities", aims to support Ethiopia in improving the delivery of social services and developing a comprehensive approach to social protection and risk management. Good governance and state building form the foundation of the CPS. In line with the GTP, gender and climate change have been included as cross-cutting issues to strengthen their mainstreaming across the portfolio. The programs of IFC and MIGA are well aligned with the CPS framework, contributing mainly to the strategic objectives under Pillar One. The Project contributes to Pillar Two of the CPS.

26. The project is also consistent with the World Bank's goal of ending extreme poverty and promoting shared prosperity. It is also consistent with the Bank's Regional Strategy for Africa. The strategy has two pillars: (a) competitiveness and employment, and (b) vulnerability and resilience, and a foundation—governance and public sector capacity. The long-term challenges and emerging issues identified in the strategy are consistent with the World Bank's Post-Crisis Directions and the International Development Association (IDA) policy framework. The Project contributes to the second pillar of the strategy.

Consistency with GEF Strategies and Strategic Programs

27. The SLMP-2 is consistent with the GEF's Biodiversity, Climate Change, and Land Degradation focal area strategies. It would also contribute to the Sustainable Forest Management and Adaptation strategies. The Project contributes to the GEF LD-SP3 objective of reducing pressures on natural resources from competing land uses in the wider landscape. Project support would enhance cross-sectoral coordination in integrated landscape management. Furthermore, it would support farmers in adopting integrated land management practices. The Project would also contribute to the objectives of GEF BD-SP2 of mainstreaming biodiversity conservation and sustainable use into production landscapes and sectors, and the objectives of GEF CC-SP5 of promoting conservation and enhancing carbon stocks through sustainable management of land use, land-use change, and forestry. The Project also contributes to the GEF-SFM objective of reducing pressures on forest resources and generating sustainable flows of forest ecosystem services through adoption of good forest and water management practices by the participating farmers. In addition, the Project would also contribute to both objectives of Climate Change Adaptation: CCA-1 by reducing vulnerability to the adverse impacts of climate change; and CCA-2 by increasing adaptive capacity to respond to the impacts of climate. It will address some of the vulnerabilities to climate variability and change identified in Ethiopia's NAPA including:

strengthening/enhancing drought and flood early warning systems; development of small scale irrigation and water harvesting schemes in arid, semi-arid, and dry sub-humid areas; improving/enhancing rangeland resource management practices in the pastoral areas; and promotion of on farm and homestead forestry and agroforestry practices in arid, semiarid and dry sub-humid parts of Ethiopia. The Project will also contribute to the National Communication's priority sectors in particular Agriculture, and Land-Use Change and Forestry, in mitigating GHG emissions. Furthermore, it will also contribute to the Technology Needs Assessment under the UNFCCC, especially the priority technologies for land use change and forest sector through improved management of existing forests and expansion of forest cover.

II. PROJECT DEVELOPMENT OBJECTIVES

A. Project Development Objective (PDO) and Global Environment Objective (GEO)

28. The Project's Development and Global Environment Objective is to reduce land degradation and improve land productivity in selected watersheds in targeted regions in Ethiopia. The objective would be achieved through the provision of capital investments, technical assistance and capacity building for small holder farmers in the watersheds and government institutions at national and sub-national levels.

B. Project Beneficiaries

29. The Project would be implemented in 135 watersheds/woredas (including the 45 watersheds that were partially supported by SLMP-1), covering 937 kebeles in the National Regional States of Amhara, Tigray, Oromiya, SNNP, Gambela, and Benshangul Gumuz. Direct and indirect beneficiaries of the Project include an estimated 1,850,000 people, consisting of the following (some of which overlap): (i) up to 832,500 people who belong to households that directly benefit from watershed and landscape management interventions at the site level; (ii) 344,800 people that benefit directly from the different stakeholder training and capacity building activities; (iii) 500,000 people that benefit directly from the rural land administration and certification schemes; and (iv) 1,020,000 people that benefit indirectly from improved watersheds and landscapes such as improved water flow downstream, reduced siltation to reservoirs, or reduced risk to erosion and mudslides.

30. The project is considered innovative as it emphasizes a multi-sectoral landscape approach that supports GoE to coordinate efforts on land use, land management, and land administration. This approach will generate multiple benefits including contributions to, *inter alia*, productivity, resilience to climate risks, enhancements to natural wealth and diverse livelihood opportunities, and water security – and ultimately poverty reduction and prosperity.

C. PDO/GEO Level Results Indicators

31. The proposed PDO/GEO level results indicators are:

- Total incremental land area brought under sustainable and climate-smart/resilient land and water management practices (ha);
- Total area restored or reforested/afforested on both individual and communal land (ha); and
- Increase in the amount of biomass in the intervention areas (ton/ha).

III. PROJECT DESCRIPTION

A. Project Components

32. The Project will build on the wealth of technical, operational and institutional experiences and lessons learnt through the implementation of GoE's SLM Program, including the Bank-financed SLMP-1 and similar initiatives supported by other bilateral and multilateral partners in the country and the region.

33. The Project will be implemented through four components: (i) Integrated Watershed and Landscape Management; (ii) Institutional Strengthening, Capacity Development and Knowledge Generation and Management; (iii) Rural Land Administration, Certification and Land Use; and (iv) Project Management. The main features of individual project components are summarized below.

Component 1 – Integrated Watershed and Landscape Management (Total: US$73.98 million of which US$32.00 million from IDA, US$6.00 million from GEF, US$3.40 million from LDCF and US$32.58 million from others)

34. The objective of this component is to support scaling up and adoption of appropriate sustainable land and water management technologies and practices by smallholder farmers and communities in the selected watersheds/woredas. This objective would be achieved through the financing of demand-driven subprojects aimed at the introduction of tested watershed management practices such as land and water conservation, afforestation/reforestation, rehabilitation of degraded areas, protection of ecologically critical ecosystems, conservation agriculture such as no-/low tillage, agroforestry, climate-smart agriculture, and pasture management. Another relevant goal of this sub-component is to reduce GHG emissions at the watershed level and to enhance productivity through the promotion and adoption of low-carbon, climate-smart technologies and practices.

35. Suitable interventions in each watershed (or micro-watersheds within a watershed) would be identified based on the particular agro-ecological conditions (topography, rainfall patterns, existing degradation levels, etc.) and included in a Watershed Management Plan, to be developed through a highly participatory process including opportunities for the entire communities to provide their views and to act, utilizing the procedures established in the existing Community Based Participatory Watershed Development Guidelines (CBPWDG) developed by the Ministry of Agriculture (MoA), applied for the implementation of SLMP-1, and to be updated by SLMP-2. The operational details for the planning, design, implementation and O&M of the watershed plans will be incorporated in the Project Implementation Manual (PIM).

36. The expected performance indicators for this component would include: (i) total number of land users (households) adopting sustainable and climate-smart/resilient land management practices on individual lands disaggregated by gender; (ii) total rehabilitated land area in hectares (individual and communal) brought under a climate-smart watershed management system as a result of the project; (iii) amount of carbon accumulation in biomass in 10 selected watersheds below and above ground (ton Carbon/ha) as a result of the project; and (iv) increase in per cent of households adopting and applying backyard crop (including fruit trees, vegetable gardens), agro-processing and livestock management practices in the targeted watersheds. The project component objective will be achieved through the implementation of the following sub-components:

Sub-component 1.1 – Sustainable Natural Resource Management in Public and Communal Lands

37. This subcomponent would focus on the implementation of the set of environmental measures required for the rehabilitation of degraded lands while addressing the main causes of degradation (overgrazing, water runoff, soil nutrient depletion, reduced fallows and expansion, etc.), with the aim of stabilizing the highland areas of the watersheds, and maintaining their ecological services and contributing to land productivity, mainly through communal infrastructure and income-generating activities, mainly in the 90 new watersheds. These will be achieved through the adoption of suitable biological and physical conservation measures that ensure run-off and soil erosion are curtailed, increasing land productivity and soil fertility. Complementing these, benefit streams would be created through markets and other market-based type instruments such as results-based payments for a variety of services provided by communities through environmentally responsible stewardship. The comprehensive package of the demand-driven of soil and water management practices and interventions that would be implemented to achieve the objectives of this subcomponent is described in Annex 2.

Sub-component 1.2 – Homestead and Farmland Development, Livelihood Improvements and Climate Smart Agriculture

38. Interventions under this subcomponent will aim at enhancing the income and livelihood of the communities and farmer families through income generating and value added activities both at the homestead and farm level in all 135 watersheds assisted by the project. The increased adaptation of the entire watershed to rainfall patterns and adverse climatic events, combined with reduced degradation-related risks (achieved through Subcomponent 1.1), will provide suitable conditions for beneficiaries to adopt improved, climate-smart farming practices and diversify and/or intensify their current production systems. For this, technical and financial assistance will be provided to stabilize soils and increase fertility; improve water retention, harvesting and infiltration; increase biomass (especially carbon) accumulation above and below ground; and promote the adoption of climate-smart tillage and production practices in farm plots and home gardens. In addition, community infrastructural development will be improved with the aim of improving and broadening their livelihood opportunities and building their resilience to changing climate. The practices and activities expected to be supported under this subcomponent are listed in Annex 2.

Component 2 – Institutional Strengthening, Capacity Development and Knowledge Generation and Management (Total: US$16.98 million of which US$10.00 million from IDA, US$2.00 million from GEF, US$1.00 million from LDCF and US$3.98 million from others)

39. The objective of this component is to complement the on-the-ground activities to be implemented under Component 1 by strengthening and enhancing capacity at the institutional level, and building relevant skills and knowledge of key stakeholders, including government agencies, research organizations and academia involved in the sustainable management of natural resources, as well as the private sector, community leaders and small holder farmers. This would be achieved through the revision of existing policies, legislation and regulations related to (i) watershed management and protection such as the CBPWDG; (ii) reward and incentive schemes for market-based instruments such as carbon finance; (iii) payments for ecosystem services (PES), and (iv) policies on rural land use planning, benefit sharing, mechanisms for dispute resolution, etc. In addition, this component would support a comprehensive training

program that will include regular training events and exchange programs to enhance the capacity of local communities and institutions at national and sub-national levels. The main areas to be covered by the training program, include (i) climate smart watershed and landscape management/protection; (ii) biodiversity and ecosystem protection; (iii) participatory rural land administration and certification; (iv) participatory land use planning; and (v) participatory resource assessment, community governance, operation and maintenance of communal infrastructure, and climate smart production technologies and value chains. Under this Component, project funds would also be used to facilitate private sector involvement in supplying marketing and extension services such as veterinary shops, bull station service, private nurseries, etc. in the project areas.

40. The expected performance indicators for this component would include: (i) increase in number of beneficiaries satisfied with services delivered through this component; (ii) increase in the number of land users (small holder farmers disaggregated by gender) trained in planning and implementation of techniques of sustainable land management practices, entrepreneurship, business development/management, and land rights and registration awareness; (iii) the number of key service providers (disaggregated by gender) trained in community-based watershed management, cadastral surveying, rural land administration, certification and land use planning, and M&E, financial planning and procurement and other cross-cutting issues; (iv) the number of woredas with well-equipped information centers on sustainable and climate smart/resilient land management practices as a result of the project; and (v) the number of SLM related policies/instruments developed or improved. The project component objective will be achieved through the implementation of the following sub-components:

Sub-component 2.1 – Improvements to the NRM Policy Framework

41. This Sub-component will focus on the review, harmonization and revision of the legislative, policy and regulatory frameworks for sustainable land and water management at the federal, regional and woreda levels. The aim would be to support the establishment of the right balance between an enabling environment and the enforcement of legislation and regulations for combating land degradation and encouraging sustainable land and water management. In addition, the Sub-component will seek synergies with other initiatives including REDD+ interventions such as identification and testing of effective benefit-sharing mechanisms and legal frameworks that are supportive of sustainable forest management. The review would cover the body of environmental legislation that relates to the use and management of Ethiopia's natural resources (soils, forestry, grassland, water, wildlife, etc.) – in particular the Water Resources Management Proclamation, issued in March 2000 (Proclamation No.197/2000), the Water Resources Management Regulation issued by the Council of Ministers in March 2005 (Regulation No. 115/2005), the Rural Land Administration and Land Use Proclamation (Proclamation No. 465/2005), the Community Watershed Management Guidelines, among others. The specific aim would be to identify sector specific and multi-focal gaps and develop proposals to address them, including the need for broader legal frameworks. The review will also consider the federal, regional and woreda level legislative or administrative instruments required to enable local communities and specific user groups to formulate and enforce their own local by-laws for the utilization and management of both private and communal land and water resources. Detailed activities of this subcomponent are listed in Annex 2.

Sub-component 2.2 - Institutional Strengthening and Capacity Development

42. The goal of this Sub-component is to develop capacity of relevant stakeholders, including relevant public sector organizations, research and academia, rural communities and small holder farmers for successful implementation of sustainable and climate-smart land and water management activities. Furthermore, the Sub-component will support the development of a harmonized land information system and the strengthening of the institutional and policy regimes for geo-referenced rural land administration, land use and certification. Technical assistance will be provided to communities for the implementation of activities under Component 1, including sustainable and climate resilient land and water management, efficient renewable energy production and use, conservation crop and livestock farming practices, carbon stock sequestration in biomass and soils, participatory forest management, etc.. In addition, capacity building will be provided to other stakeholders including service providers such as extension services, seed and seedling producers, marketing entities and other private entrepreneurs interested in providing services in the project area. The activities expected to be supported under this subcomponent are listed in Annex 2.

Sub-component 2.3 – Knowledge Generation and Management

43. The objective of this Sub-component is to generate and share knowledge across the broad spectrum of project-related stakeholders to enhance knowledge and information regarding adoption of sustainable natural resource management, sustainable land and water management practices, climate-smart and conservation agricultural technologies and practices in the selected watersheds and throughout the country. The activities expected to be supported under this subcomponent are listed in Annex 2.

Component 3 - Rural Land Administration, Certification and Land Use (Total: US$12.20 million of which US$7.00 million from IDA and 5.20 million from others)

44. The objective of this component is to enhance the tenure security of smallholder farmers in the project area in order to increase their motivation to adopt sustainable land and water management practices on communal and individual land. It would support an ongoing national program that is providing land certificates to all landholders, by enhancing rural land certification and administration as well as local level land use planning at watersheds or kebeles assisted by the project. It would support the use of low-cost appropriate geo-referenced mapping technologies aimed at assisting in cadastral surveying and delineating the various rural land parcels, and thus at strengthening tenure security for smallholders. This Component would build on lessons and experiences emerging from the Government's own land certification activities, SLMP-1 and the Government of Finland-supported rural land certification initiatives in the Regional State of Benishangul-Gumuz and the Lake Tana sub-basin. The performance indicators will include: (i) total targeted communal lands issued with geo-referenced map-base land certificates; (ii) individual land parcels covered with geo-referenced maps; (iii) number of households in the intervention areas issued with geo-referenced map-base land certificates; and (iv) local level participatory land use plans prepared and implemented at kebele level within the intervention areas.

Sub-component 3.1 – Rural Land Administration and Certification

45. The objective of this Sub-component is to provide security of tenure to smallholder farmers in the project watersheds by supporting the process of awarding individual land certificates, as an

incentive to increase the adoption of sustainable land and water management technologies and practices. The expected performance indicator under this subcomponent would include: (i) number of individuals/households issued with geo-referenced map-base land certificates (gender disaggregated) or number of land parcels covered with geo-referenced map-base land certificates (gender disaggregated); (ii) number of communal lands issued with geo-referenced map-base land certificates or total area (ha) of targeted communal lands covered with geo-referenced map-base land certificates (ha). The activities expected to be supported under this subcomponent are listed in Annex 2.

Sub-component 3.2 – Local Level Participatory Land Use Planning

46. This Sub-component would complement the Watershed Management Plans by supporting the preparation of local land use plans for decision making on the best use of the land and its resources for improved, alternative, sustainable and productive development at the grass root level. Delineating land use types at the local level would help to ensure that the choice of a particular use represents the optimal alternative for ensuring sustainable use of individual plots. The expected performance indicators under this Sub-component would be the number of kebele level land use plans prepared. The activities expected to be supported under this subcomponent are listed in Annex 2.

Component 4 - Project Management (Total: US$4.45 million of which US$1.00 million from IDA, US$0.33 million from GEF, US$0.23 million from LDCF and US$2.89 million from others)

47. This component would partially finance the operation of the SLM Support Unit to support the Ministry of Agriculture in ensuring efficient delivery of project resources to achieve the PDO, as well as adequately monitoring and documenting progress and results. The component focuses on project management arrangements and mechanisms including support to project governance structures, coordination with other SLM partners, as well as monitoring and evaluation (M&E), preparation and supervision of implementation-related plans (including the Project Implementation Manual – PIM) and fiduciary responsibilities such as procurement, financial management and safeguard compliance.

48. In addition, the funds allocated to this component include the procurement of essential goods and equipment such as vehicles, motorcycles, field equipment, office equipment and furniture, imagery, software and other accessories for all public agencies involved in project implementation at the central, regional and district level. To strengthen project management, funds would be available to finance selected technical assistance such as financial management specialists, procurement specialists, climate finance specialists and monitoring and evaluation specialists at all levels. The key output/outcome of this component would be the effective implementation of project activities with due diligence and integrity.

B. Project Financing

Lending Instrument

49. The proposed Project is a 5-year Investment Project Finance of US$105.61 million, consisting of a US$50 million IDA credit blended with GEF and LDCF grants totaling US$12.96 million; and a contribution by the Government of Norway of US$42.65 million through a World

Bank Trust Fund[8]. The cash counterpart financing from the Government of Ethiopia would be approximately US$2.0 million to cover taxes and duties which bring the total project funding to US$107.61 million. It is also expected that there would be an in-kind contribution of US$4.52 million for staff and office costs from the federal and regional governments towards the implementation of the Project. Additional in-kind contribution will be provided by beneficiaries. Although in-kind contributions are expected to be substantial due to the high level of community participation in construction and O&M of infrastructure (as well as GoE's ongoing community mobilization program), they are not included in the project component costs, but will be recorded and reported periodically. Furthermore, an additional US$5.86 million being part of the contribution from the Government of Norway that will be channeled through a World Bank Executed Trust Fund would provide technical assistance to MoA to augment the capacity in watershed management, climate smart agriculture and sustainable land and water management. This is being processed through the trust fund system, and the funds allocated under it would be disbursed after the Project has become effective.

Component Cost Distribution

Table 1: Project Component and Costs:

Project Components	IDA (US$M)	GEF (US$M)	LDCF (US$M)	Norway (US$M)	GoE (US$M)	Total (US$M)
Component 1: Integrated Watershed and Landscape Management	***32.00***	***6.00***	***3.40***	***31.58***	***1.00***	***73.98***
Sub-Component 1.1: Sustainable Natural Resource Management in Public and Communal Lands	25.00	5.50	3.00	23.50		***57.08***
Sub-Component 1.2: Homestead and Farmland Development, Livelihood Improvements and Climate Smart Agriculture	7.00	0.50	0.40	8.00	1.00	16.90
Component 2: Institutional Strengthening, Capacity Development and Knowledge Generation and Management	***10.00***	***2.00***	***1.00***	***3.98***		***16.98***
Sub-Component 2.1: Improvements to NRM Policy Framework	2.00	0.20		1.00		3.20
Sub-Component 2.2: Institutional Strengthening and Capacity Development	6.00	1.00	0.45	2.00		9.45
Sub-Component 2.3: Knowledge Generation and Management	2.00	0.80	0.55	0.98		4.33
Component 3: Rural Land Administration, Certification and Land Use	***7.00***			***5.20***		***12.20***
Sub-Component 3.1: Rural land administration and certification	4.00			2.50		6.50
Sub-Component 3.2: Local level participatory land use planning	3.00			2.70		5.70
Component 4: Project Management	***1.00***	***0.33***	***0.23***	***1.89***	***1.00***	***4.45***
Total:	**50.00**	**8.33**	**4.63**	**42.65**	**2.00**	**107.61**

C. Lessons Learned and Reflected in the Project Design

50. The design and preparation of SLMP-2 benefitted from lessons drawn from the implementation of SLMP-1 and other similar initiatives financed by the Government of Ethiopia

[8] To manage exchange rate risks, the Grant Agreement between the GoE and World Bank indicates US$40.00 million which will be subject to an amendment prior to project closing.

and other development partners collaborating in the implementation of the National SLM program. The main lessons and experiences that were incorporated into the design of SLMP-2 include:

51. The demand-driven bottom-up approach adopted under SLMP-1 is relevant for natural resources management and local development in Ethiopia's rural set-up. This development approach in which communities steer affairs, have a voice in determining priorities and are actively involved in project identification, planning, development and implementation has contributed to generate ownership and is greatly valued by both beneficiary communities and local authorities. Similarly, it is important to provide enhanced support to technical design and implementation issues regarding subprojects especially road improvements and irrigation schemes, physical and biological rehabilitation practices, business development and planning, off-farm income generation, climate finance mainstreaming, market intelligence as well as providing options for solutions to identified development problems.

52. The need to build sustainable institutions at the local level can never be over-emphasized since they are crucial for delivery of service and attainment of project objectives. Lessons from SLMP-1 show that where local level implementation structures are established and sustained through targeted capacity building (training, exposure visits, field days, etc.) and reward and incentive schemes, implementation of project activities was more effective in terms of quantity and quality. Also, active engagement of woreda leadership in project management and implementation has been critical in the success attained in many SLMP-1 target areas. There is therefore a need for continuous sensitization of the woreda leadership and sectoral office heads to address the frequent changes in woreda authorities. Equally important are the regular experience-sharing events among woredas so that those woredas that fall behind can learn from those the better performers.

53. Implementation of SLMP-1 in the early years was constrained by inadequate M&E capacity and poor financial management and procurement capacity at the woreda level coupled with a high staff turnover. Finance and procurement officers assigned to SLMP-1 felt not sufficiently incentivized and motivated to deliver quality work on schedule. The experience of SLMP-1 suggests highlights the importance of enhanced recruitment procedures, appropriate incentive mechanism (working conditions, training, etc.) and harmonization of salaries and benefits among woreda staff working on different projects.

54. Lessons from similar projects in other countries including in Brazil, India and Kazakhstan and from other programs in Ethiopia suggest that SLM be considered as an integral part of rural development, and therefore, a more holistic approach is needed to support livelihood development at the rural community level. Rural households face a variety of constraints to ensuring sustainable livelihoods and increased incomes. Constraints include *inter alia* lack of new ideas and knowledge on income generating activities, new technologies, and value addition, particularly to increase shelf life of products for better marketing options as well as limited access to production inputs and markets. Support is therefore required to overcome such constraints and effectively improve livelihoods and income levels.

55. Although SLMP-1 developed a gender mainstreaming strategy, the effective implementation and results of such strategy requires the development of specific instruments and the involvement of technical staff with gender-related skills to ensure adequate women representation on the local implementation structures and including leadership positions.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

56. As in the case of SLMP-1, the organizational structure for the implementation of the SLMP-2 would comprise four levels - Federal, Regional, Woreda (District), and Kebele (Sub-District) which would be consistent with, and reinforce the country's decentralization program. Furthermore, SLMP-2 will be implemented by existing GoE structures and community institutions (see Figure 1). Implementation will be decentralized with beneficiary communities assuming primary responsibility for executing most project activities in the watersheds. As was the case in SLMP-1, the success of SLMP-2 core interventions will depend on strong community-based institutions. For this, the Project will support the strengthening of existing community structures, while building new ones in newly selected watershed areas. The necessary backstopping and coordination of technical support for activities to be implemented by communities in the watersheds will be provided by experts of the Woreda Offices of Agriculture (WOA), supported by Development Agents, project-funded community facilitators and providers of technical assistance (TA) from other development partners supporting the SLM program.

57. A Project Implementation Manual (PIM) will guide the implementation of the Project by covering the following aspects: (i) detailed implementation arrangements by components, including institutional arrangements, roles and responsibilities; (ii) identification and characterization of watersheds selected; (iii) the subproject cycle, including O&M arrangements; (iv) detailed implementation schedule; (v) financial management and reporting; (vi) procurement; (vii) monitoring and evaluation; and (vi) procedures for the implementation of the Environmental and Social Management Framework.

58. At the Woreda and Kebele Levels: On-the-ground implementation of the Project would be undertaken jointly by WOAs through the Woreda Watershed Development Committee (WWDC), the Kebele Watershed Development Committee (KWDC), and the communities. The WWDC and KWDC would assist communities in: (i) developing annual work plans and budgets for submission to the Regions for endorsement and integration into the Regions' work plans and budgets; (ii) facilitating community participation in watershed planning and rehabilitation; (iii) training; (iv) monitoring and evaluation; and (v) dissemination of innovations in SLM. They would also be responsible for the implementation of the land certification, administration and land use planning activities at the Woreda and Kebele levels.

59. At the Regional and Zonal levels: In each region, the Bureau of Agriculture (BoA) would lead the implementation of the project in the watersheds located within the region. BoA would approve and consolidate annual work plans and implementation progress reports submitted by the Woredas. The reports would then be submitted to the Federal SLMP Project Support Unit (PSU). BoA will appoint one senior technical staff as the Regional Coordinator for the SLM project, while the project would finance an accountant per Region to assist the Regional and Woreda Finance Offices in financial management and reporting. Also, at the regional level, Regional Steering Committees (RSC) composed of heads of all relevant sectors will continue to provide overall guidance and leadership for the project. The RSC would meet quarterly to review performance and provide the necessary guidance on project implementation, as well as endorsing the quarterly progress reports, the annual plans at the beginning of each fiscal year. At the Zonal level, the Zonal Agriculture Office (ZAO) will provide technical support, extension services and

M&E to a group of Woredas under its jurisdiction. The ZAOs will coordinate with the Woreda Offices of Agriculture (WOA).

60. At the Federal Level: Overall responsibility for SLMP-2 coordination and implementation at the federal level will be assumed by the Ministry of Agriculture (MoA), working in close collaboration with the Ministry of Finance and Economic Development (MoFED), the newly created Ministry of Environment and Forestry (MoEPF), the Ministry of Water, Irrigation and Energy (MoWIE) and other relevant public sector agencies. To fulfill its main responsibilities, MoA would use the existing institutional mechanisms already established to coordinate all projects on sustainable land management being financed by the Government and development partners. This mechanism comprises the National SLM Steering Committee, National SLM Technical Committee, and the SLM Support Unit in MoA.

61. The National SLM Steering Committee, chaired by the State Minister for Natural Resources in MoA has high level representation, including from MoFED, MoWIE, MoEPF, the Ethiopian Institute for Agricultural Research (EIAR), and a representative of BoAs. As was the case in SLMP-1, the Steering Committee will be responsible for the following tasks: (a) establishing policy guidelines and providing overall oversight of project implementation; (b) approving the annual federal and regional work plans and budget, and the annual procurement plan; and (c) reviewing the annual implementation performance report to be prepared by the SLM Support Unit and overseeing the implementation of corrective actions, when necessary.

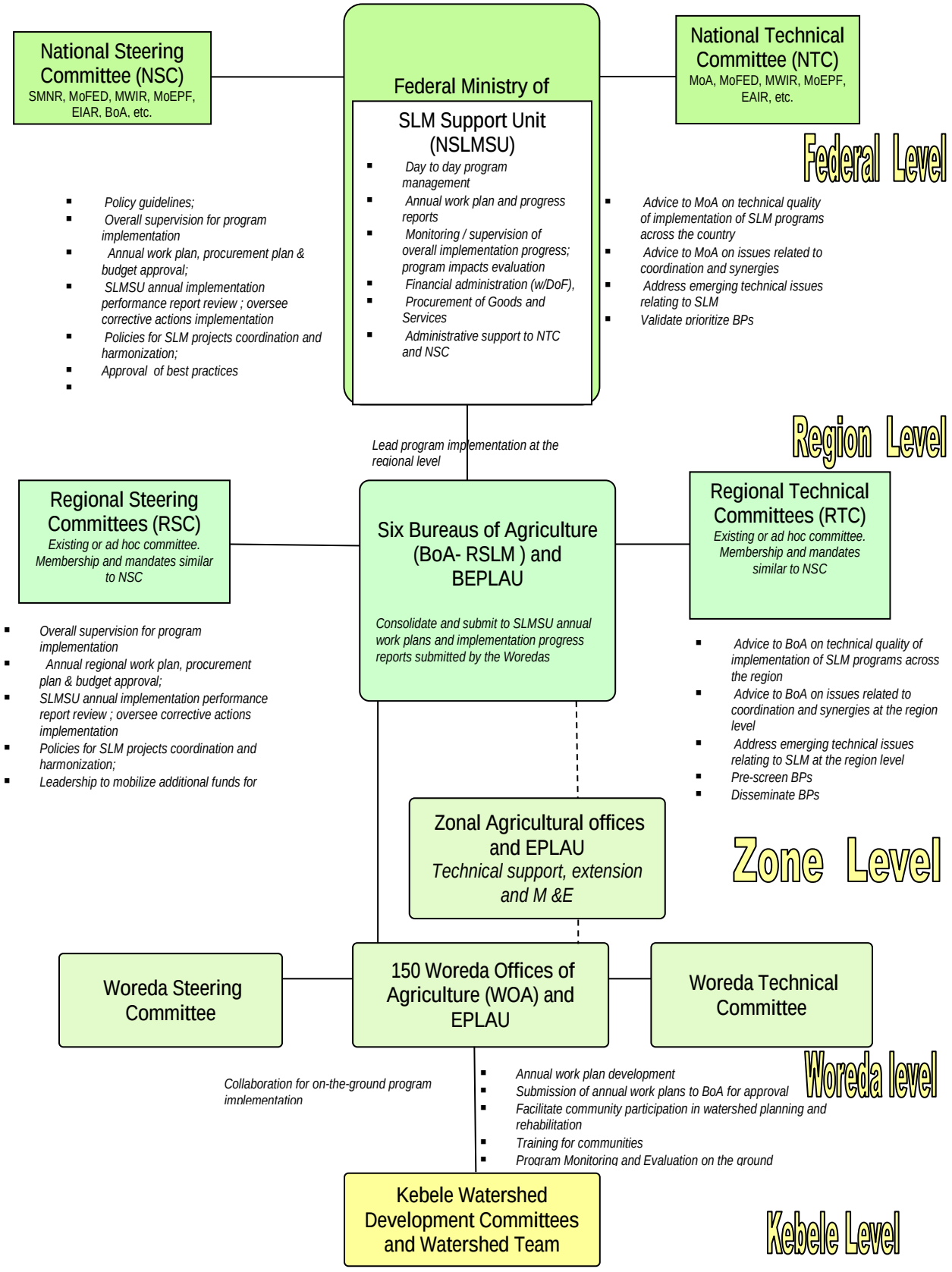
62. A SLM coordination mechanism/platform, the National SLM Technical Committee, along with the Task Forces under it, is one of the three partner platforms established under the Rural Economy Development and Food Security (RED&FS). The National SLM Technical Committee and the Task Forces is made up of senior technical staff from institutions such as MoA, MoFED, MoWIE, MoEPF and EIAR. Development partners supporting projects in SLM are also represented in this Committee. With regards to the proposed project, this Committee could have an expanded membership (to be defined in the PIM) and would be responsible for providing technical advice to MoA on the quality of implementation reports and special studies such as policy documents, guidelines, documentation of best practices, and M&E reports.

63. The existing SLM Support Unit at MoA would be responsible for the day-to-day management of SLMP-2 including: (a) preparation of consolidated annual work plans and progress reports; (b) monitoring and, supervising overall implementation progress and evaluation of project impacts; (c) financial administration; and (d) procurement of goods and services. The Unit would be strengthened to address the expanded project scope and increased workload, and will also provide administrative support to the National SLM Steering Committee and the SLM Technical Committee. MoA will appoint one senior technical staff as the National Project Coordinator for the SLM Support Unit.

64. Partners: In addition to the proposed Project, a number of developments partners are currently supporting GoE's SLM program, either through funding of specific areas/watersheds in the country or by providing complementary support in terms of thematic investments or institutional strengthening and capacity building. In particular, the technical assistance and the overall support provided by the German-financed SLM program (KfW/GIZ) represented an important contribution to the implementation of SLMP-1 at the central, regional and district level. GIZ specialists were involved in the development of the SLMP-2 and GIZ is committed to further support the MoA and its NRM Directorate for the scaling up of the SLM program. As

such, GIZ will continue to support the SLMP mainly in the Regions of Amhara, Oromia and Tigray during the implementation of SLMP-2 with process-oriented capacity development through advisory services, coaching and training throughout the watershed planning and implementation cycle. Although the current funding cycle for SLM by German cooperation is scheduled to close at the end of 2014, it is expected that the Ethiopian Government will prioritize continued and expanded support to the SLM program during the next period of bilateral negotiations (scheduled for June 2014). Regardless, the support from GIZ in 2014 will be important to allow the provision of adequate TA support to the newly incorporated watersheds/woredas under SLMP-2.

Figure 1: Organizational Arrangements for Implementing Sustainable Land Management Project (SLMP-2)



B. Results Monitoring and Evaluation

65. Taking into consideration the critical importance of monitoring an evaluation in highly decentralized and demand-driven projects, a comprehensive Monitoring and Evaluation (M&E) system would be implemented, building on the existing M&E system developed for SLMP-1. The M&E system will (a) assess and document timely progress towards outputs, outcomes, and intermediate results as agreed in the annual work plans; (b) identify implementation gaps and challenges for proactive corrective actions; and (c) document and incorporate lessons learned into project implementation. Additional M&E measures to be adopted include: (i) developing participatory monitoring and evaluation activities; (ii) monitoring of livelihood and productivity interventions; (iii) diversifying M&E tools, to include technical audits of infrastructure, independent process monitoring, case studies, cost-benefit analysis of investments, etc.; (iii) upgrading the Management Information System (MIS) from the existing Windows based system to a web-based system; and (iv) establishing a robust monitoring system for ecosystem services accounting, particularly carbon sequestration.

66. Based on the project's Results Framework, the M&E system will generate, aggregate and systematically record data and information from various levels (regions, woredas, kebeles and micro-watersheds) as well as qualitative and quantitative surveys related to the Project's outcome/results indicators, implementation progress and performance, and project characteristics. It will analyze such data to evaluate results, track implementation progress and bottlenecks for quick resolution, and monitor process quality.

67. Evaluation of outcome and impact: Results will be measured by a set of qualitative and quantitative indicators (see Annex 1: Results Framework). A rapid socio-economic and biophysical survey was conducted during project preparation to determine preliminary baseline values for the selected indicators in the results framework. In addition, analyzed data will be used to establish cumulative targets. To complement the initial information, a more detailed baseline survey is planned for the first year of the Project implementation.

68. MoA and the Bank would jointly conduct the necessary surveys and in-depth assessments, conducted by independent consultants, to support a comprehensive mid-term review (MTR), tentatively scheduled for mid-2016, and an end-of-project evaluation. These evaluations will be enriched by yearly thematic/beneficiary assessments, on a sample basis.

69. Reporting: Reporting formats have been discussed during project preparation and further refined during the early stages of implementation in order to ensure that information gathered is relevant for both the GoE and the Bank.

70. Safeguards monitoring: It will be carried out by the SLM Support Unit throughout SLMP-2 implementation so as to ensure that project activities are executed in a manner that prevents or minimizes potential adverse environmental and social impacts, in accordance to the ESMF. It will include tracking the application of safeguards instruments including the execution of management plans. In addition, safeguard monitoring will include undertaking environmental and social performance reviews through visits to a sample of project-supported watersheds each year to assess compliance with safeguard instruments, determine capacities, identify gaps and provide guidance for improving future performance. Reporting formats also include indicators on safeguards.

71. Participatory monitoring & evaluation: SLMP-2 will create opportunities for project implementers and beneficiaries at all levels, including the grass-root level, to actively participate in the project's M&E.

72. Arrangements for results monitoring and reporting: These are discussed in detail in Annex 3. Roles and responsibilities for monitoring and reporting will be shared among entities at four levels (federal, regional, woreda and kebele levels), in accordance with the Government's decentralized policy.

C. Sustainability

73. The results expected to be achieved under the proposed SLM project are highly likely to be sustained beyond its five-year implementation period because of the following reasons:

- First, technical support to the intended project beneficiaries would be provided through the existing government extension system whose capacity in community-based watershed management would be further strengthened under the project. Also, climate finance mainstreaming is envisaged to yield (in selected woredas) 20-year financing streams for extension work. Capacity is expected to be built under the project for long term adherence to international carbon finance standards that ensure security of carbon credit generation to potential buyers and confidence in Ethiopian credits. Therefore, it is expected that the extension system would continue to provide demand-driven services beyond the lifespan of the SLM project.
- Second, as noted above, sustainable land management is one of the priorities outlined in Ethiopia's Growth and Transformation Plan of 2010 and the CRGE Strategy of 2011. Also, the Government is committed to strengthening tenure security through a land certification program, and it has already made a commitment to issue land certificates to cover both individual and communally-held lands, with geo-referencing and mapping of plots. It is also committed to scaling up successful models of community-based climate-smart/resilient approaches to sustainable land management.
- Finally, the SLM project is designed to address not only environmental management issues, but also the productivity and income issues associated with land management as well as poverty alleviation, livelihood and resilience building interventions. Therefore, the intended beneficiaries would have financial and other incentives, such as land tenure security, payments for ecosystem services and carbon finance to maintain management practices and technologies introduced under the project. Furthermore, long-term ownership of infrastructure and commitment to adequate O&M would be ensured through the active participation of beneficiaries in the planning, design, construction, and operation of watershed interventions. Experience in other parts of the world indicates that where there is tenure security, farmers are more likely to make long-term environmentally sound investments to further improve land productivity and their incomes.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Description of Risk	*Rating*
Stakeholder Risk	Substantial
Implementing Agency Risk	
Capacity	Substantial
Governance	Moderate
Project Risk	
Design	Moderate
Social and Environmental	Moderate
Program and Donor	Low
Delivery Monitoring and Sustainability	Moderate
Overall Implementation Risk	**Substantial**

B. Overall Risk Rating Explanation

74. The project faces a number of challenges to achieve its objectives partly due to the highly decentralized and demand-driven nature of the main activities, as well as capacity constraints at all levels of implementation, governance and stakeholders. Measures to address some of these risks were taken as part of SLMP-1 implementation and during the SLMP-2 preparation phase. Nevertheless, with the expanded scope of the project and introduction of additional activities, such as those to enhance climate resilience, the residual project implementation risk is substantial. The risks detailed in the ORAF (see Annex 4), along with the proposed mitigation measures, was reviewed and agreed at negotiations.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

75. The economic and financial analysis conducted as part of project preparation suggests that the proposed interventions are economically and financially feasible. Although there are significant differences across watersheds, the overall Economic Rate of Return (ERR) of a moderate intervention (physical conservation measure with improved fodder) is 24% over a 25-year period, without taking into account other environmental benefits that are difficult to quantify in monetary terms, such as reduced impacts downstream from siltation, maintenance of biodiversity including genetic resources and processes important for agriculture such as below ground biodiversity and pollinators, and protection of the hydrologic cycle such as from the maintenance of groundwater recharge functions. The ERR is computed based on a conversion factor of 50% for rural labor, a conversion factor used by IFPRI in its recent cost-benefit analysis in Nile Basin Ethiopia (Schmidt, Tadesse, 2012)[9]. The analysis also shows that these rates of returns are smaller (11%) for the conventional approach of intervention through physical

[9] The ERR for a moderate intervention is lower (21%) if the national conversion factor set by MoFED is used. MoFED set it at 66% for rural labor in 2008.

structure and much higher (56%) for a more integrated approach, where physical structures are combined with improved fodder and fertility management options.

76. From the farmers' point of view, participation in the project is attractive compared to alternative opportunities, as it would generate them a financial rate of return of 19%. On the part of the Government as an investment entity, investing in SLM should not be motivated by the desire to generate revenue for itself. This is not possible because many of the net benefits, which are environmental in nature, although not subject to taxation, benefit society as a whole.

77. Notwithstanding the fact that the environmental benefits are not captured in the 24% ERR, sensitivity analysis indicate that the net economic benefits are robust because the ERR is able to withstand shocks such as significant increases in project costs or reductions in project benefits and still remain above the opportunity cost of capital. (See details in Annex 6)

78. The results of the analysis are slightly higher than those obtained from the first phase of the World Food Programme (WFP)-funded Managing Environment Resources for Transition (MERET), whose interventions are similar to those of the proposed project. An ex-post economic and financial analysis of the MERET project, which was implemented in moisture-deficit areas of Ethiopia, indicated an actual ERR of 13.5-13.8 over the course of 25 years.

B. Technical

79. The design for the proposed SLMP-2 is technically, institutionally and operationally sound, as it is based on successful watershed management projects in Ethiopia and other countries. The design of the watershed component largely reflects the experience and lessons from the SLMP-1 and Humbo Projects. In turn, SLMP-1 design benefitted from the WFP-financed MERET project in the “food insecure” areas and the German-financed Sustainable Utilization of Natural Resources (SUN) project. The project applies a comprehensive intervention strategy using the watershed as the primary planning and implementation unit, and promotes a set of technically proven demand-driven investments that takes into consideration environmental, productive and social challenges and opportunities. Furthermore, the design of the project addresses the overall technical and institutional requirements for the effective provision of support services to watershed-level interventions, by providing adequate financing for training, technical assistance and capacity building.

80. Lessons from similar projects and the analysis of relevant information, including the TerrAfrica-supported Sustainable Land Management in Practice and the Ethiopian Strategic Investment Framework for Sustainable Land Management (ESIF) have been instrumental in the design of the project. These publications, which provide detailed guidelines on the design and implementation of community-based watershed management interventions, land and water management, climate smart agriculture, would be used for designing and/or assessing sub-project activities.

81. Similarly, the design of land certification and administration activities to be implemented under the SLMP-2 is based on successful pilot projects in Ethiopia, particularly supported under SLMP-1 and by other donor financed projects, and the Government’s own land certification initiatives. As noted previously, the Government’s Stage 1 certification process provides land users with temporary certificates that have general information about the user, location of his/her plot, and neighboring plots, but the plots are not geo-referenced or mapped.

C. Financial Management

82. A financial management (FM) assessment was conducted in accordance with the Financial Management Manual issued by the Bank's Financial Management Sector Board on March 2010. The objective of the assessment was to determine whether the participating institutions have adequate financial management systems and related capacity in place which satisfies the Bank's Operation Policy/ Bank Procedure (OP/BP) 10.00. The assessment also included the identification of key perceived financial management risks that may affect program implementation and proceeded to develop mitigation measures against such risks. The assessment was conducted from Federal to regional to woreda level implementing entities selected on sample basis.

83. The project financial management arrangements will be coordinated and managed by the MoA's SLMP Support Unit with the support of BoA's, WoFEDs and Regional support units at regional/local government level. Consistent with the Government's preference, the Bank agreed to have the proposed Project continue using a channel II[10] fund flow mechanism of the Government. Accordingly, the FM procedures largely follow the existing arrangement with few enhancements to address lessons learned from SLMP-1.

84. Based on the assessment conducted, the proposed FM arrangements meet the IDA's requirements as per OP/BP 10. It is adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by IDA. However, action plans were agreed to address some of the weaknesses observed. The residual FM risks after implementation of mitigation measures are rated as ***"Substantial"***.

D. Procurement

85. Procurement for SLMP-2 would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated January 2011; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011, Bank's Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants Dated October 15, 2006 and the provisions stipulated in the Legal Agreement. The general description of the various items under different expenditure category is described in the Annex 3(c). A Procurement Plan will detail procurement methods, estimated costs, post/prior review requirements, etc. for each contract to be financed by project proceeds. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

86. Procurement of the SLMP-2 will be carried out in a decentralized manner in 135 watersheds located in six regional states of Ethiopia. At the central level, the Project Support Unit in MoA is the focal organization for implementation of the SLMP-2. The Bureaus of Agriculture (BoA) and/or Pastoral Development Agencies and the Woreda Agricultural Development Offices shall serve as the implementing organizations of SLMP-2 in the respective regions. The land and watershed management activities will be carried out in the existing and new watersheds in the beneficiary Woredas, and may involve local community participation in procurement. The capacity assessment of sample Woredas and regions indicate that the procurement risk is rated as

[10] Channel II is a fund flow mechanism whereby funds from donors are directly deposited into the designated account held by a sector ministry. These funds then flow first to the regional sector bureaus and from there to the woreda finance offices.

"***High"***. The gap observed is related to institutional capacity and lack of skilled staff at all levels of implementing agencies. Inadequate procurement planning practice, weak oversight and auditing arrangements are the main limitations observed. A set of measures has been incorporated in the project to mitigate the procurement risk and address the gaps observed in the procurement assessment (see Annex 3(c)).

E. Social (including Safeguards)

87. The project is expected to fund community level infrastructure and income generating activities in the wider context of integrated watershed and landscape management, resulting in reducing land degradation at the community level. The preparation of the project involves community mobilization and communication to sensitize the beneficiary communities on how they will work together with technical specialists to reduce water flow from the upper watershed and how they can organize into user groups, to manage the watershed and monitor the treated communal land and gullies.

88. The broader project sensitization and mobilization will also include capacity development and institutional strengthening of relevant stakeholders, including public sector organization, academia and research institutions, rural communities and small holder farmers for sustainable watershed management and protection, land and water management, biodiversity conservation, and climate smart agriculture activities. These stakeholders would become conversant with the basic principles and rationale of participatory approaches and will be involved in various ways in the project implementation, and would ensure that beneficiaries of the project as well as all those who would be impacted upon are aware of the objectives, scope and reach of the project. Experience have shown that using participatory methods helps communities develop and implement programs that best match local needs and demands.

89. The experience of the SLMP-1 shows that livelihood improvement activities are critical to sustainable land management, particularly for those living in vicinity of the affected degraded land. The proposed SLMP-2 will incorporate these lessons and proactively link livelihood activities to local conditions of participating communities and would assist them in developing income generating activities in environmentally friendly and sustainable manner. Furthermore, a social assessment was prepared to help make the project responsive to social development concerns, particularly in targeting benefits for poor and underserved people while minimizing or mitigating risk and adverse impacts. The social assessment also includes gender sensitivity analysis to improve the gender focus of the project and particularly take into consideration women's role in rural land management.

90. SLMP-1 did not trigger OP4.12 because implementation of sub-projects did not result in land take. SLMP-2, however, may have minimal impact that will be site specific with no significant adverse social impact, and recognizing that the project deals with rehabilitation, civil works, treatment of gully sites and community infrastructure, OP 4.12 was triggered as a precautionary measure and a Resettlement Policy Framework was prepared, consulted upon, and disclosed before appraisal. The Banks' OP 4.10 is triggered, predicated on the fact that some areas selected to be supported by the project would be occupied by vulnerable and underserved groups who meet the requirements of the policy. Issues related to OP4.10 were defined in detail through the Social Assessment (SA) for the project, which examined the groups affected by and involved in the project. The findings of the SA, the process used in fostering free, prior, and informed consultations and achieving broad community support, and provision of grievance redress, benefit sharing, monitoring, evaluation, and reporting during implementation relating to

vulnerable groups have been included in the project as social risk mitigation measures and benefits (See Annex 3).

F. Environment (including Safeguards)

91. The project is assigned the Environmental Category B and has triggered eight out of the ten safeguard polices: Environmental Assessment (EA), Pest Management, Natural Habitat, Forests, Involuntary Resettlement, Indigenous Peoples and Dam Safety. The environmental issues of the project are primarily associated with the activities of Component 1 (Integrated Watershed and Landscape Management). The overall environmental impact of the project is positive, especially given that activities play a pivotal role in rehabilitating degraded landscapes and conservation of valuable ecosystems through afforestation/reforestation, and biological and physical soil and water conservation on agricultural lands and other ecologically critical ecosystems. In order to maximize the positive impacts, the project will use the Community Based Participatory Watershed Development Guidelines (CBPWDG) developed by MoA in planning and implementation of watershed management subprojects. The project will also play a positive role by building climate adaptation and resilience in the rural communities by promoting CSA practices.

92. However, some limited negative impacts may arise as a result of some infrastructure sub-projects to be financed, such as construction of small scale irrigation schemes, construction of water harvesting structures, and rehabilitation of community access roads. The negative impacts of these sub-projects would be avoided or mitigated through the implementation of the mitigation measures developed. The Environmental and Social Management Framework (ESMF) prepared as part of this project includes measures for addressing broader environmental and social impacts and impacts on natural habitats and forests, an Integrated Pest Management Plan, and, on Dam Safety, refers to the FAO Manual on "Small Earth Dams: A guide to sitting, design and construction" as well including a summary of the Ministry of Agriculture's guidelines on the construction of small dams. The ESMF will be used to develop detailed site-specific Environmental Management Plans (EMPs) that will be consulted upon and disclosed prior to the commencement of civil works under Component 1. The effective use of the ESMF would be regularly reviewed as part of the project's M&E system.

93. Since the project triggered the Pest Management Policy, an Integrated Pest Management Plan (IPMP) has been included as part of the ESMF. The ESMF has been disclosed in-country and in the Info Shop prior to appraisal in accordance with Bank requirements.

G. Other Safeguards Policies Triggered

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[X]	[]
Pest Management (OP 4.09)	[X]	[]
Physical Cultural Resources (OP/BP 4.1 1)	[X]	[]
Involuntary Resettlement (OP/BP 4.12)	[X]	[]
Indigenous Peoples (OP/BP 4.10)	[X]	[]
Forests (OP/BP 4.36)	[X]	[]
Safety of Dams (OP/BP 4.37)	[X]	[]
Projects in Disputed Areas (OP/BP 7.60)	[]	[X]
Projects on International Waterways (OP/BP 7.50)	[]	[X]

Annex 1: Results Framework and Monitoring

COUNTRY: ETHIOPIA - SUSTAINABLE LAND MANAGEMENT PROJECT (SLMP-2)

PROJECT DEVELOPMENT OBJECTIVE (PDO) is to reduce land degradation and improve land productivity in selected watersheds in targeted regions in Ethiopia
Global Environment Objective: (Same as above)

PDO Level Results Indicators*	Core	Unit of Measure	Baseline 2013	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018				
1. Total incremental land area brought under sustainable and climate-smart/resilient land management practices[11]	☒	ha	300,000	400,000	600,000	800,000	910,000	910,000	Annually	Annual reports, field monitoring reports, joint monitoring missions (JMM) and report from GIS	Ministry of Agriculture (MoA)	Measuring land area which was previously degraded and has been rehabilitated with improved SLM technologies as defined in the footnote
2. Total area of restored or reforested/afforested on both individual and communal land	☒	ha	TBD[12] in the first year with specific survey in the targeted watershed	NA[13]	TBD in the first year	TBD in the first year	TBD in the first year	TBD in the first year	Annually after the second year	Annual reports, field monitoring reports, joint monitoring missions (JMM) and report from GIS	MoA	
3. Increase in the amount of biomass in the intervention areas	☒	Ton/Ha	TBD from a baseline survey conducted in year 1	NA	NA	TBD after baseline survey	NA	TBD after baseline survey	Mid-term and end of project evaluation	Sample survey	MoA and WB joint baseline survey	Biomass is understood according to the standard FAO definition.

[11] Tested best practices for land and water management models include appropriate physical conservation structures, afforestation/reforestation, biodiversity conservation and protection of ecologically critical ecosystems, issuance of 2nd level certificate, climate smart agriculture, conservation tillage and pasture management.
[12] To be determined
[13] Not available

Intermediate Level Results Indicators												
Results Indicators*	**Core**	**Unit of Measure**	**Baseline 2012/13**	**Cumulative Target Values****					**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**	**Description (indicator definition etc.)**
				Dec 2014	**Dec 2015**	**Dec 2016**	**Dec 2017**	**Dec 2018**				
Component 1: Integrated Watershed and Landscape Management												
1. Land users (households) adopting at least three additional sustainable and climate-smart/resilient land management practices on individual lands disaggregated by gender	☒	%	0	5 %	15 %	25 %	40 %	50 %	Semi-annual after the first project year	Implementation progress reports, JMM and sample survey	MoA	This does not include communally implemented soil and water conservation. But also includes improved livestock management.
2. Total land area in hectares (individual and communal) brought under a catchment management system as a result of the project[14]	☒	Ha	0	30,000	80,000	140,000	190,000	190,000	Annually after the second project year	Implementation progress reports, JMM, report from GIS and sample survey	MoA	This indicator refers to mainly closed areas covered with trees and managed by user groups
3. Amount of carbon accumulation in 10 selected watersheds below and above ground as a result of the project		Ton C/ha	TBD from a baseline survey conducted in year 1	NA	NA	NA	TBD after baseline survey conducted in year 1	TBD after baseline survey conducted in year 1	End of project survey at fourth year for some of watersheds and at fifth year for others	Activity baseline and monitoring survey, VCS SALM methodology, CDM AR methodology		This indicator applies to the 10 pilot watersheds selected for carbon financing and the methodology is on international standard
4. Increase in per cent of households adopting and applying		**%**	0	NA	2%	5%	10%	15%	Annually after the second	Implementation progress reports, JMM	MoA	This indicator measures HHs engaged in fattening and

[14] This indicator will be complemented by the use of GEF Tracking Tools to report mainstreaming BD in agricultural practices, CC and LD benefits.

backyard livestock management practice in the targeted watersheds									project year	and sample survey		rearing without sending animals for free grazing.
5. New technologies (sustainable and climate smart/resilient practices) applied on a large scale in the project intervention areas[15]		**Number**	0	NA	NA	2	4	5	Annual	Progress reports	MoA	Large scale implies at least 10% adoption rate by HHs. E.g of new technologies includes conservation agriculture, Faidherbia albida, bamboo and others outside of the commonly applied ones.

Intermediate Level Results Indicators

Results Indicators*	**Core**	**Unit of Measure**	**Baseline 2012/13**	**Cumulative Target Values****					**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**	**Description (indicator definition etc.)**
				Dec 2014	**Dec 2015**	**Dec 2016**	**Dec 2017**	**Dec 2018**				
Component 2: Capacity Development, Knowledge Generation and Management												
6. Direct project beneficiaries (number), of which female (percentage)	☒	Number	0					1,850,000	Annually after first year	Implementation progress report and JMM after 2nd year	MoA	
7. Number of land users (small holder farmers disaggregated by gender) trained in (a) planning and implementation of techniques of sustainable and		Number	0	a= 50,000 b= NA c= 500	a=120,000 b= 2,000 c= 2,500	a= 200,000 b= 7,000 c= 4,000	a= 250,000 b= 10,000 c= 4,000	a= 300,000 b= 10,000 c= 4,000	Semi-annual after first project year	Implementation progress reports, JMM and mid-term sample survey	MoA	Both female headed hhs and those in marriage will be counted as beneficiary women when the gender disaggregated report is made

[15] This indicator will be complemented by the use of GEF Tracking Tools to report mainstreaming BD in agricultural practices, CC and LD benefits, and resilience to CC.

climate-smart/resilient land management practices; (b) entrepreneurship, business development/management; and (c) land rights and registration awareness												
8. Number of woredas with well-equipped information centers on sustainable and climate-smart/resilient land management practices as a result of the project	☒	Number	0	NA	75	135	135	135	Annual after first project year	Implementation progress reports, JMM and sample survey	MoA	Center implies office space, SLM related documents and materials, SLM knowledge system installed and accessed.

Intermediate Level Results Indicators												
Results Indicators*	**Core**	**Unit of Measure**	**Baseline 2012/13**	**Cumulative Target Values****					**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**	**Description (indicator definition etc.)**
				Dec 2014	**Dec 2015**	**Dec 2016**	**Dec 2017**	**Dec 2018**				
Component 2: Capacity Development, Knowledge Generation and Management												
9. Number of SLM related strategies developed or improved		Number	0	NA	1	3	5	6	Annually after first year	Implementation progress reports, JMM	MoA	SLM strategies include: CBPWDG, ESIF, PIM, Livestock strategy, farmer land use strategy, etc
10. Number of key service providers (disaggregated by gender) trained in (a) community–		Number	0	a= 2,000 b= 2,000 c= 600	a= 7,000 b= 7,000 c= 1,200	a= 10,000 b= 10,000 c= 1,800	a= 15,000 b= 14,000 c= 1,800	a= 15,000 b= 14,000 c= 1,800	Semi-annual after first project year	Implementation progress reports, JMM and mid-term sample survey	MoA	Key service providers include: Federal, regional and woreda experts, DAs,

based watershed management; (b) cadastral surveying, rural land administration, certification and land use planning; (c) M&E; and financial planning/management and procurement and other cross-cutting issues.												Decisions makers, Private service providers

Intermediate Level Results Indicators

Results Indicators*	**Core**	**Unit of Measure**	**Baseline 2012/13**	**Cumulative Target Values****					**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**	**Description (indicator definition etc.)**
				Dec 2014	**Dec 2015**	**Dec 2016**	**Dec 2017**	**Dec 2018**				
Component 3: Rural Land Administration, Certification and Use												
11. Total number (and area) of targeted communal lands issued with geo-referenced map-base land certificates.	☒	ha	0	NA	60,000	140,000	180,000	190,000	Annual	Implementation progress reports, JMM and sample survey	MoA	Target for number of certificates will be determined after generating data for average size of a site.
		Number of certificates	0	NA	1,100	2,600	3,600	3,800				
12. Number of individual land parcels covered with geo-referenced maps	☒	Number	200,000	300,000	600,000	1,000,000	1,600,000	2,000,000	Annual	Implementation progress reports, JMM and sample survey	MoA	
13. Number of households in the intervention areas issued with geo-referenced map-base certificates disaggregated by gender	☒	Number	50,000	75,000	150,000	250,000	400,000	500,000	Annual	Implementation progress reports, JMM and sample survey	MoA	

14. Local level participatory land use plans prepared and implemented at kebele level within the project intervention areas		Number	0	70	170	300	500	540	Annual	Implementation progress reports, JMM and sample survey	MoA	

Annex 2: Detailed Project Description
ETHIOPIA: SUSTAINABLE LAND MANAGEMENT PROJECT (SLMP-2)

BACKGROUND

1. Given the predominant geo-climatic conditions, inherent fragile soils, undulating terrain, and highly erosive rainfall, Ethiopia has continuously faced challenges in conserving its soil fertility. Coupled with these natural constraints, the environmentally inadequate farming methods that many farmers practice make the country highly vulnerable to soil erosion. Moreover, about one-third of the agricultural land is moderately to strongly acidic because of long neglect in soil conservation and traditional farming practices. Gully formation and sedimentation at the river banks, dams and irrigation channels are wide-spread consequences.

2. The main anthropic causes of land degradation are complex and diverse, including:

- Poor agricultural practices: The farming system, particularly in the highlands, is dominated by subsistence cereal crops, which provide little ground cover when the most erosive rains occur (June-August). This system often requires frequent tillage and pulverization of the soil, rendering it more susceptible to erosion. Furthermore, limited soil conservation practices and the breakdown of traditional land productivity restoration measures, such as shifting cultivation, contribute to land degradation.
- Rapid depletion of vegetation cover: Household energy needs are predominantly supported by wood and other biomass, causing an unprecedented level of deforestation. The loss of vegetation cover has been further exacerbated by agriculture expansion and livestock grazing. As a result, the land is stripped of vegetative biomass, exposing it to high levels of soil erosion. Ethiopia's once dense forests, covering about 40 percent of the country's land area, have been reduced to only 2.4 percent. Even this remaining forest is being depleted at an alarming rate.
- Poor livestock management: Ethiopia has one of the largest livestock populations in the continent with more than 53 million cattle of which only 25 percent graze in rangelands. The remaining 75 percent graze in highlands, leading to serious overgrazing in areas that are already under high pressure. Since the country has a free grazing system, there is no incentive for cattle holders to apply improved management practices in grazing areas. The scarcity of grazing land and livestock feed has forced the widespread use of crop residues to feed livestock. Removal of crop residues for feed and utilization of cattle manure for fuel, further reduces the soil's organic matter and nutrients. This breach in the soil nutrient cycle seriously depletes soil quality, increases erosion, and eventually reduces soil productivity.
- Insecure Land Tenure System: Over the years, land tenure insecurity caused by frequent land redistribution have encouraged farmers in Ethiopia to favor short term exploitation of land resources over long-term conservation, further contributing to land degradation and low farm productivity.

3. The project is expected to address the above-described situation by building on the overall achievements, experience and lessons learned for the implementation of the SLMP-1 project, which closed on September 30, 2013. Within the context of a watershed-based integrated natural resource management plan, SLMP-1 supported a comprehensive set of measures and practices. By the end of 2012, 190,000 ha of degraded communal, farmlands and homesteads have

successfully been treated and managed using physical and biological measures. To stabilize soil, over 26 million slips of predominantly *vetiver* and *desho* grasses have been raised and planted on communal and farmlands. Over 380,000m^3 of cut-off drains and waterways have been constructed to reduce run-off. The Project has supported liming on 715ha of communal and individual lands and planting of nitrogen-fixing leguminous plants in over 1,900ha of agricultural land. Also, over 900,000m^3 of compost have been produced and applied on farmlands and homesteads. The area covered with animal manure is about 53,000ha. Nearly 37,000ha of communal lands have so far been put under enclosures to allow natural regeneration to occur, while nearly 1,500ha of communal pastures have been managed and improved through, for example, rotational grazing and by incorporating various species of indigenous fodder grasses in to the system.

4. The introduction of various homestead improvements and income generating activities, including bee keeping and honey production using modern beehives, livestock fattening, supply of better breeds of small ruminants and poultry have contributed towards improvement of income and assets building at household level. By the end of 2012, 98,000 rural households have benefited from improved livestock production using cut-and-carry system, stall feeding, improved breeds, and livestock fattening. The Project has made progress in providing small-scale infrastructure facilities to boost the supply of drinking water for both human and animal (e.g., hand-dug wells, springs) consumption, and farm irrigation through small water course diversions and canals. Project funds have been used to irrigate over 1,800ha of land by financing the construction of small scale irrigation facilities. These investments have made possible for farmers to crop more than twice and do mixed cropping on the same plot of land, thereby increasing farm output, productivity, and improving food security and household level incomes.

5. Other measures that are being widely practiced include: (i) the introduction of agroforestry practices and improved fodder management systems; (ii) adoption of conservation agriculture technologies such as low/no-tillage agricultural practices; (iii) adoption of soil fertility improvement techniques through incorporation of nitrogen-fixing leguminous plant species and use of organic manure into agricultural systems; and (iv) introducing improved practices for grazing through rotational grazing, cut-and-carry and animal fattening systems. In addition, the project has undertaken institutional strengthening for implementing sustainable land management at regional, district and community and actively promoted homestead and cultivated land activities.

PROJECT DEVELOPMENT OBJECTIVE

Project Development Objective (PDO) and Global Environment Objective (GEO)

6. The Project's Development and Global Environment Objective is to reduce land degradation and improve land productivity in selected watersheds in targeted regions in Ethiopia. The objective would be achieved through the provision of capital investments, technical assistance and capacity building for small holder farmers and government institutions at national and sub-national levels.

7. By introducing sustainable land and water management practices, the project will also contribute to GoE’s objective of reducing GHG emissions from land use change, and increasing carbon stocks in biomass and soil. For this, all stakeholders, including extension workers, community groups, and NGOs would be provided with additional skills and training to promote

climate smart agriculture, and integrated land management practices that internalize climate induced risks and the conservation of soil, water and biodiversity.

Project Beneficiaries

8. The Project would cover six regions, 90 new and 45 existing woredas/watersheds and 937 kebeles (see map at the end of the document). Direct and indirect beneficiaries of the Project include an estimated 1,850,000 people, consisting of: (i) up to 832,500 people who belong to households that directly benefit from watershed and landscape management interventions at the site level; (ii) 344,800 people that benefit directly from the different stakeholder training and capacity building activities; (iii) 500,000 people that benefit directly from the rural land administration and certification schemes; and (iv) 1,020,000 people that benefit indirectly from improved watersheds and landscapes such as improved water flow downstream, reduced siltation to reservoirs, or reduced risk to erosion and mudslide.

PDO/GEO Level Results Indicators

9. The proposed PDO/GEO level results indicators include:

- Total incremental land area brought under sustainable and climate-smart/resilient land management practices (ha);
- Total area restored or reforested/afforested on both individual and communal land (ha).
- Increase in the amount of biomass in the intervention areas (ton/ha).

PROJECT DESCRIPTION

Project Components

10. The proposed Project is one of the projects encompassing the SAWAP program in support of the Great Green Wall Initiative (GGWI) and that it builds on TerrAfrica Platform for Sustainable Land and Water Management (SLWM). The Project would build on the experiences and lessons learnt as well as progress made under the World Bank/GEF financed support and other similar initiatives in the country and elsewhere. It would focus a significant level of investment in main watersheds in the six regional states in Ethiopia. The proposed project would not be implemented in the urban states of Addis Ababa and Dire Dawa.

11. The Project will be implemented through four components summarized below: (i) Integrated Watershed and Landscape Management; (ii) Institutional Strengthening, Capacity Development and Knowledge Management; (iii) Rural Land Administration, Certification and Land Use; and (iv) Project Management.

Component 1 – Integrated Watershed and Landscape Management (Total: US$73.98 million of which US$32.00 million from IDA, US$6.00 million from GEF, US$3.40 million from LDCF and US$32.58 million from others)

12. The objective of this Component is to support scaling up and adoption of best-fit sustainable land and water management technologies and practices by smallholder farmers in selected watersheds/woredas in the country. The Component objective would be achieved through the introduction of tested best practices in land and water management, including watershed management, afforestation/reforestation, biodiversity conservation and protection of ecologically critical ecosystems, conservation agriculture such as no-/low tillage, agroforestry, climate smart agriculture, and pasture management in selected watersheds in the country. The Community

Based Participatory Watershed Development Guidelines (CBPWDG) developed by the Ministry of Agriculture (MoA), the PIM, and the lessons on best practices from projects, pilots and other initiatives will be the project's guide. The expected performance indicators of this Component would include: (i) total number of land users (households) adopting sustainable and climate resilient land management practices on individual lands disaggregated by gender; (ii) total communal land area brought under multi-functional resource management (e.g. agro forestry, woodlot, bee keeping, fodder and non-timber forest products, tree crops, etc.); (iii) amount of carbon accumulation in biomass in 10 selected watersheds below and above ground (ton Carbon/ha) as a result of the project; and (iv) increase in per cent of households adopting and applying backyard livestock management practices in the targeted watersheds.

13. Suitable interventions in each watershed (or micro-watersheds within a watershed) would be identified based on the particular agro-ecological conditions (topography, rainfall patterns, existing degradation levels, etc.). Implementation of specific interventions would be predominantly through demand-driven subprojects, identified and designed by beneficiary communities assisted by TA providers in the context of the Watershed Management Plans. The operational procedures, instruments and institutional responsibilities for the overall subproject cycle will be described in the PIM. The Component would be implemented through a comprehensive set of activities grouped in the following Sub-components:

14. ***Sub-component 1.1 – Sustainable Natural Resource Management in Public and Communal Lands***: This subcomponent would focus on the implementation of the set of environmental measures required for the rehabilitation of degraded lands while addressing the main causes of degradation (overgrazing, water runoff, gully formation and expansion, etc.), with the aim of stabilizing the highland areas of the watersheds, and increasing their ecological services and productivity, mainly through communal infrastructure and income-generating activities, mainly in the 90 new watersheds. One key objective will be to create benefit streams through markets and other market-based type instruments such as results-based payments for a variety of services provided by communities through environmentally responsible stewardship. Also, another pertinent objective of this Sub-component is to reduce GHG emissions within the entire watershed and to enhance productivity through the adoption and execution of low-carbon climate-smart technologies and practices. Another objective will be to improve communal infrastructural development in selected watersheds/woredas with the aim of improving and broadening their livelihood opportunities and building their resilience to changing climate. All these objectives are expected to be achieved through the scale-up adoption of suitable biological and physical conservation measures that ensures run-off and soil transport is curtailed, increased land productivity and improved soil fertility resulting in enhanced crop and livestock production. To ensure the attainment of these objectives, the following activities will be supported:

- Soil and water conservation measures: Appropriate biological and physical soil and water conservation measures/practices such as construction of terracing, check dams, water harvesting (e.g. trenching), reseeding, re-vegetating, etc. will be implemented on farm lands. These measures will also be applied to the treatment of gullies on individual farmlands. Incremental GEF/LDCF resources will fund some of these activities. It will likely also generate climate change mitigation benefits.
- Treating degraded areas and gullies in individual and communal lands by adopting locally appropriate physical and biological land and water management measures/practices such as

terracing, water harvesting (e.g. deep-trenching, percolation ponds, etc.), reforestation/afforestation, reseeding with grass and soil fertility enhancing plant species. Gullies will be treated through a broad range of physical and biological measures, including the construction of check dams, gully reshaping and stabilization with appropriate plant species including multi-purpose perennial trees, shrubs and grasses. Incremental GEF/LDCF resources will fund some of these activities.

- Construction of water harvesting structures including rain water collection, various ground water recharging measures, spring development and construction of water ponds/wells for both agricultural (crop and livestock) and human uses based on the need of the community and suitability of local conditions will be undertaken. Project funds will support construction and maintenance of both modern and indigenous structures. Incremental funding from GEF/LDCF will support some of these activities.
- Construction and rehabilitation of communal access roads and paths to nearby markets to ensure transportation of agricultural products. Project funds will also be used to create road access to community forests and recreational (ecotourism) destinations.
- Introducing forest and wood land management practices that will include supporting local communities and religious institutions in the preparation and execution of community (participatory) wood land/forest management plans. Funds would be used to scale up participatory forest management (PFM). Incremental GEF/LDCF resources will fund some of these activities.
- Reforestation and Afforestation through establishing central, communal and private nurseries for the production of diverse range of tree and shrub species that can be used as a source of food, feed and energy, and to enhance soil fertility. This will include fruit seedlings and also for multiplication of various grass and fodder species that would be used for rehabilitation of degraded areas and stabilization of gullies but also for fodder production for livestock. Incremental GEF/LDCF resources will fund some of these activities.
- Introducing variety of plant species including fodder crops into pasture and rangelands to increase their productivity and to ensure the overall calorific value of feed for grazing animals. Incremental GEF/LDCF resources will fund some of these activities.
- Introducing biodiversity conservation techniques at community and individual farm levels. Sub-activities may include identification of endemic and endangered local plant species, collection of seed and planting material as well as local varieties and accessions, multiplication of genetic material, in-situ conservation at individual farm and local level, establishment of community gene banks, nursery establishment, etc. Incremental GEF/LDCF resources will fund some of these activities.
- Establishing and/or strengthening community level protected area system, conservation zones, communal reserves, groves, wildlife corridors, etc. Incremental GEF/LDCF resources will fund some of these activities (See Annex 7 for details).
- Enhancing land productivity through selected agroforestry technologies/practices that can improve soil fertility, increase crops yield and buffer crop production to drought stress, provide shade for livestock and people in the fields, based on local conditions and existing indigenous knowledge. Incremental GEF/LDCF resources will fund some of these activities.
- On-the-ground roll out of the National Faidherbia Program launched by the late Prime Minister Meles in 2011 and the Bamboo Initiative. Funds will be used to establish optimum

populations of *Faidherbia albida* in farmers' fields and bamboo plantations on communal lands in selected watersheds under the project. The systematic implementation of *F. albida* establishment on-farm through either farmer-managed natural regeneration (FMNR) of the trees in crop fields, or through the establishment of planted seedlings at optimal densities, will be implemented based on farmers' preferences and cropland suitability.

- Creating markets for environmentally responsible stewardship: Farmers will be introduced to market-based and result-based approaches to environmental management that rewards community members for ecosystem conservation and restoration. These will include interventions that lead to entry into carbon markets, and markets for biodiversity conservation, for watershed protection, for adoption of conservation agriculture, and for landscape beauty and recreation. Funds will also finance activities that protect farmers' rights and knowledge base in these complex markets. Baseline studies will be conducted and capacity will be built for the monitoring of the services, particularly carbon sequestration.
- The intercropping of cereals with a range of other alternative fertilizer tree species (e.g. *Cajanus cayan*) will also be promoted, according to local conditions, featuring tree/shrub biomass incorporation, conservation agriculture with trees (CAWT), and promotion of different shade trees in the coffee and spice farming system. This will include the use of multipurpose legume trees and shrubs that fix nitrogen and form an association with *mycorrhiza* for soil fertility enhancement.

15. ***Sub-component 1.2 – Homestead and Farmland Development, Livelihood Improvements and Climate Smart Agriculture***: The main focus of this Sub-component is to enhance the income and livelihood of beneficiary communities and farmers through sustainable, climate smart income generating and value added activities both off-farm and on-farm. The increased adaptation of the entire watershed to rainfall patterns and adverse climatic events, combined with reduced degradation-related risks (achieved through Subcomponent 1.1), will provide suitable conditions for beneficiaries to adopt improved, climate-smart farming practices and diversify and/or intensify their current production systems. For this, technical and financial assistance will be provided to stabilize soils and increase fertility; improve water retention, harvesting and infiltration; increase biomass (especially carbon) accumulation above and below ground; and promote the adoption of climate-smart tillage and production practices in farm plots and home gardens. In addition, community infrastructural development will be improved with the aim of improving and broadening their livelihood opportunities and building their resilience to changing climate. This objective will be achieved through the adoption and scale up of soil and water conservation measures and appropriate water resource harvesting technologies for conservation and use in homestead areas. The following activities will be supported:

- Promotion and adoption of Conservation Agriculture technologies for improved tillage, seeding and crop protection practices will be tested, validated and promoted. This would include minimized soil disturbance through conservation or zero tillage, reduced soil exposure to water erosion, intercropping, reduced use of pesticides and chemical fertilizers, etc. Incremental funding from LDCF will support some of these activities.
- Construction and operation of small scale irrigation schemes: Traditional irrigation systems will be assessed and improved in order to address their water use efficiency. Moreover, new small scale irrigation schemes will be implemented as per the potential and suitability of the areas/farm lands in the target watersheds. Incremental funding from LDCF will

support some of these activities.

- Integrated soil fertility management: Various soil fertility management practices will be integrated as a package and promoted and implemented as per the local conditions and farmers' indigenous knowledge including manuring, composting, mulching, cover copping, crop rotation, and intercropping at the field and homestead level.
- Integrated tree-food crop-livestock systems at the homestead: Appropriate integration of agro-silvo-animal husbandry systems/practices will be introduced at homestead level based on the need of local farmers and the suitability of local conditions. Practicing an integration of multi-purpose food and tree cropping with livestock rearing at the homestead can improve the fertility and organic matter content including carbon of the soils and increase crop yields and household food security. As appropriate, incremental funding from LDCF will support some of these activities.
- Establishing pockets of wood stands at homestead level to provide tangible and intangible benefits such as timber for house construction and fuelwood for heating and cooking. Excess wood can be harvested for sale. Trees around homes also contribute to a broad range of intangible services such as improving biodiversity, soil health and water conservation, protection of humans and animals against wind and direct sun.
- Promoting fuel-saving/fuel-efficient technologies at homes and rural institutions through the development and distribution of fuel efficient cook stoves, drawing lessons from the Africa Clean Cooking Energy Solutions (ACCES)[16] initiative. This would reduce the amount of woody biomass harvested for heating and cooking purposes and thereby reducing deforestation and forest degradation while generating other environmental, health and social benefits. Furthermore, as heating and cooking efficiency improves, it is expected that farmers' use of cow manure and crop residues for cooking and heating will reduce and these materials may be used on crop fields at both the homestead and farms to enhance soil fertility.
- Establishing fodder/forage using agroforestry shrubs and trees that enhance the availability of fodder for livestock and bees will be established, based on local conditions and farmers' preferences. These will include the establishment of fodder banks around the homestead (e.g., *Dobera glabra*, *Ficus thonningii*), as live fences (e.g., *Chameacytisus palmansis*), boundary plantings, and parkland systems (*Acacia mellifera*). Introduction of selected techniques for the sustainable utilization of wild forage tree/shrubs will also be a focus in the lowland areas.
- Poultry and animal fattening: Animal fattening, dairy and poultry development activities will be promoted and implemented around homesteads and in targeted project sites which are suitable for these activities to improve household income.
- Beekeeping: Beekeeping activities will be promoted and implemented especially in areas that are enclosed for protection through selected community members/groups (e.g., landless youth and female household heads) to increase income.
- Introduction of high value crops: High value vegetables, root crops and fruit seeds and or

[16] ACCES aims to promote enterprise based, large-scale dissemination and adoption of clean cooking solutions in Sub-Saharan Africa (SSA). By increasing access to modern technologies and cleaner fuels, the initiative seeks to alleviate the adverse health, environment, and socio-economic impacts of traditional cooking practices in SSAFor more information, see http://siteresources.worldbank.org/EXTAFRREGTOPENERGY/Resources/WorldBank_ACCES_AFREA_AFTEG_ESMAP_FINAL.pdf

seedlings will be provided to selected farmers based on agreed set of criteria by the project implementers and community members in targeted watersheds.

- Adding value and marketing of products: Farmers will be assisted in the identification and improvement of potential high value agricultural commodities/products which could contribute towards improving household income. The project will support farmers to improve product quality and market accessibility.
- Food and income diversification: high-value fruit and leafy-tree technologies will be introduced around the homestead based on farmers' preferences, the species requirements and land availability. Common fruit trees (e.g., apple, banana, mango, inset, etc.), under-utilized perennial food crops (e.g., cactus), improved high-value tree crops (e.g., *Ziziphus mauritania, Tamarindus indica*), and vegetable trees (Moringa) will be promoted.

Component 2 – Institutional Strengthening, Capacity Development and Knowledge Generation and Management (Total: US$16.98 million of which US$10.00 million from IDA, US$2.00 million from GEF, US$1.00 million from LDCF and US$3.98 million from others)

16. The goal of this component is to complement the on-the-ground activities to be implemented under Component 1 by strengthening and enhancing capacity at the institutional level, and building relevant skills and knowledge of key stakeholders, including government agencies, research organizations and academia involved in the sustainable management of natural resources, as well as the private sector, community leaders and small holder farmers. The Component objective would be achieved through the execution of a number of activities. This would include the review of existing policies and legislations related to: (i) watershed management and protection, such as the Community Based Participatory Watershed Development Guidelines (CBPWDG); (ii) reward and incentive schemes for market-based instruments such as carbon market finance and payments for ecosystem services (PES); (iii) policies on rural land use planning; (iv) benefit sharing arrangements; (v) mechanisms for dispute resolution, etc. Also, Component objectives would be achieved through building the capacity of stakeholders and partners through a comprehensive training and farmer exchange program covering the following themes: (a) climate-smart watershed and landscape management/protection; (b) biodiversity and ecosystem protection; (c) participatory rural land administration and certification; (d) participatory land use planning; (e) participatory resource assessment; (f) landscape beauty and recreational development; etc.

17. Under this Component, project funds would also be used to facilitate private sector involvement, for example, in supplying marketing and extension provisions such as vet shops, bull station service, private nurseries, etc. in the project area.

18. The expected performance indicators of this Component would include: (i) increase in number of beneficiaries satisfied with services delivered; (ii) number of land users (small holder farmers disaggregated by gender) trained in (a) planning and implementation of techniques of sustainable land management practices, (b) entrepreneurship, business development and management, and (c) land rights and registration awareness; (iii) number of key service providers (disaggregated by gender) trained in (a) community-based watershed management, (b) cadastral surveying, rural land administration, certification and land use planning, (c) M&E, financial planning and procurement and other cross-cutting issues; (iv) number of woredas with well-equipped information centers on sustainable and climate smart/resilient land management practices as a result of the project; and (v) number of SLM related strategies developed or improved.

Sub-component 2.1 – Improvements to the NRM Policy Framework

19. This Sub-component will focus on the review, harmonization and revision of the legislative, policy and regulatory frameworks for sustainable land and water management at the federal, regional and woreda levels. The aim would be to support the establishment of the right balance between an enabling environment and the enforcement of legislation and regulations for combating land degradation and encouraging sustainable land and water management. In addition, the Sub-component will seek synergies with other initiatives including REDD+ interventions (including the project financed by Norway in the Oromia Region) such as identification and testing of effective benefit-sharing mechanisms and legal frameworks that are supportive of sustainable forest management. The review would look at the body of environmental legislation that relates to the use and management of Ethiopia's natural resources (soils, forestry, grassland, water, wildlife, etc.) – in particular the Water Resources Management Proclamation, issued in March 2000 (Proclamation No.197/2000), the Water Resources Management Regulation issued by the Council of Ministers in March 2005 (Regulation No. 115/2005), the Rural Land Administration and Land Use Proclamation (Proclamation No. 465/2005), the Community Watershed Management Guidelines, among others. The specific aim would be to identify sector specific and multi-focal gaps and develop proposals to address them, including the need for broader legal frameworks. The review will also consider the federal, regional and woreda level legislative or administrative instruments required to enable local communities and specific user groups to formulate and enforce their own local bye-laws for the utilization and management of both private and communal land and water resources. Incremental GEF resources will support the GoE in developing policy frameworks for promoting, *inter alia*, PES and certification schemes that generate biodiversity benefits. Incremental GEF/LDCF resources will also help raise awareness about the policy frameworks. Specific activities identified during project preparation include:

- Analysis of the existing legal and policy framework for sustainable land and water management, rural land administration, certification and land use planning.
- Identifying gaps in the legal and policy framework and suggesting proposals for regulatory and policy reform.
- Developing frameworks for reward and incentive schemes such as payment for ecological services (PES) at local community level.
- Developing frameworks for benefit sharing and dispute resolution relevant to SLMP objectives at the local level.
- Updating the CBPWDG, orienting and raising public awareness about, and providing training on, legal and policy instruments as well as the CBPWDG.
- Development of regulations for gender-sensitive land certification in communal, agricultural and inhabited areas as well as guidelines and models to ensure continued maintenance of land records in each of these areas.

Sub-component 2.2 - Institutional Strengthening and Capacity Development:

20. The goal of this Sub-component is to develop capacity of relevant stakeholders, including relevant public sector organizations, research and academia, rural communities and small holder farmers for successful adaptation and adoption of sustainable and climate-smart land and water management activities. Furthermore, the Sub-component will support the development of a harmonized land information system and the strengthening of the institutional and policy regimes

for geo-referenced rural land administration, land use and certification. Technical assistance will be provided to communities for the implementation of activities under Component 1, including sustainable and climate resilient land and water management, efficient renewable energy production and use, conservation crop and livestock farming practices, carbon stock sequestration in biomass and soils, participatory forest management, etc. In addition, capacity building will be provided to other stakeholders including service providers such as extension services, seed and seedling producers, marketing entities and other private entrepreneurs interested in providing services in the project area. Incremental GEF and LDCF resources will fund some of these activities, in particular, to enhance capacities in biodiversity conservation, climate change mitigation, adaptation/resilience to climate change, incentive schemes such as PES, certification, sustainable forest and land management. Specific activities under this Sub-component include:

- Identifying human capacity gaps and assessing capacity development needs at different levels (regional, woreda and community levels).
- Organizing targeted capacity building (e.g., training, induction, dissemination) in the different areas identified and required (e.g. climate-smart/resilient watershed and landscape management, payment for ecosystem services, biodiversity and ecosystem rehabilitation, participatory rural land administration and certification, participatory land use planning, ecotourism development, baseline survey, mapping, knowledge management, business development, etc.).
- Building capacity of regional Bureaus, project woredas, and the National Directorate to regulate and supervise service providers, monitor land use, and collaborate with each other and other partners for effective implementation of relevant regulations regarding land use and operation of a comprehensive, current, and cost-effective land administration system across different parts of the country.
- Studies on assessing the impact of land certification with and without complementary measures on sustainable land use and household welfare.
- Developing training/implementation manuals on topics/issues identified by project implementers and beneficiaries including soil and water conservation, water harvesting, small scale irrigation and management of woodlots/forests, participatory forest management, community protected area management, community-based ecotourism development, bee keeping and honey production, product development and value addition, product marketing and access, etc.
- Providing technical assistance (TA) to the technicians working at different levels in the project area including to Development Agents (DAs) and to farmers for the development of the Watershed Plans and identification/design of subprojects, as well as training, workshops and experience-sharing events focused on natural resource management (field days, conservation days, field schools, etc.).
- Establishing user groups and local institutions for sustainable watershed management and protection, land and water management, biodiversity conservation, payment for ecosystem services, collective management approaches, etc. “Climate Field Schools” (CFS) will also be established in targeted communities to improve farmers’ awareness of climate change and enhance their ability to use weather information for better agronomic practices. The CFS training module will aim at (i) increasing farmers’ knowledge on climate change and their ability to anticipate extreme climate events, including carbon and yield benefit relations; (ii) supporting farmers in observing climatic parameters and their use for

agricultural activities; (iii) assisting farmers in translating climate (forecast) information into coping strategies; and (iv introducing adaptation practices to address drought and other events in farming operations. Also, user groups would be assisted to develop local by-laws in a participatory way that will enable them to address various issues such as development of management plans, conflict resolution, benefit sharing arrangements, management of grazing and PES involvement, etc.

- Formation and operation of water user associations/groups for the management and use of water resources for crop production, animal husbandry and human consumption.
- Raising awareness across the larger stakeholder spectrum including the private sector about SLM, climate smart agriculture, participatory forest management, climate/crop insurance, climate resilience, etc.
- Facilitating broader stakeholder participation including private sector, NGOs, religious organizations and service providers' involvement in support of community watershed development initiatives.
- Facilitating research to improve systems for monitoring, verifying and quantifying the provisions of ecosystem services, including carbon stock monitoring. Particular attention will be given in building simplified, yet robust, monitoring systems.
- Facilitating research and extension to help land stewards in project areas to identify management practices that provide ecosystem services.

Sub-component 2.3 – Knowledge Generation and Management:

21. The objective of this Sub-component is to generate and share knowledge across the broad spectrum of project-related stakeholders to enhance knowledge and information regarding adoption of sustainable natural resource management, sustainable land and water management practices, climate-smart and conservation agricultural technologies and practices in the selected watersheds and throughout the country. Incremental GEF and LDCF financing will support some of these activities. Activities to be supported under this Sub-component will include:

- Undertake a detailed baseline survey for each watershed supported by the project (biophysical and socio-economic) and develop a comprehensive database, including maps.
- Strengthening the existing knowledge management systems: The existing Sustainable Land Management Program Knowledge Base (SLMPKB) which includes the national World Overview of Conservation Approaches and Technologies (WOCAT) in Ethiopia will be strengthened and improved to fully address its main objectives (including identification, synthesis, documentation and dissemination of SLM best practices). SLMPKB will also include the new global challenges/opportunities such as climate change and carbon finance.
- Designing and implementing an exit strategy and performance assessment system for the selected SLMP watersheds.
- Produce and disseminate complementary technical and strategic documents related to natural resources management (e.g. land use and land cover status, status of land degradation, cost-benefit analysis of land degradation and SLM practices, climate data and trends, water resources situation and trends, biodiversity status and hotspot areas) for each woreda and watershed.
- SLM forum: The MoA/SLM PSU will establish the SLM Forum that would be responsible mainly for bringing together SLM practitioners, academics, NGOs, religious organizations and community leaders to share experiences at least once a year. The Forum would also include international experts to share knowledge from around the world.

- Network centers: Strengthening of select existing center of excellence in the country to effectively share knowledge and provide a platform for networking of practitioners, research/academic institutions and NGOs.

Component 3 - Rural Land Administration, Certification and Land Use (Total: US$12.20 million of which US$7.00 million from IDA and US$5.20 million from others)

22. The objective of the Component is to enhance the tenure security of smallholder farmers in the project area in order to increase their motivation to adopt sustainable land and water management practices in individual land plots. It would expand the coverage and enhance rural land certification and administration as well as local level land use planning in project areas that are the project watersheds or kebeles. It would support the use of low-cost appropriate geo-referenced and mapping technologies aimed at assisting in cadastral surveying and delineating various rural land parcels and thus at strengthening tenure security for smallholder farmers in the project areas while stimulating investments by farmers in sustainable land and water management practices. For the creation of the spatial database for certification photogrammetric techniques supplemented by ground survey technique with emphasis on low-cost ground survey technique is determined to be the most time and cost-effective approach and thus at strengthening tenure security for smallholder farmers in the project areas while stimulating investments by farmers in sustainable land and water management practices. The advantage of this exercise is that using the data from this, the project will follow up with Activity Based Monitoring Survey and Farm Planning by Das to complement a full area based carbon monitoring in 10 watersheds, up-scaling potential to be determined during the project through watershed baselines and carbon pre-feasibilities. The Component would build on lessons and experiences emerging from the Government's own land certification activities, SLMP-1 and the Government of Finland (REILA) supported rural land certification initiatives in the Regional State of Benishangul-Gumuz and the Lake Tana sub-basin and the USAID financed ELTAP/ELAP.

23. The performance indicators for this component will include the following: (i) total targeted communal lands issued with geo-referenced map-base land certificates; (ii) individual land parcels covered with geo-referenced maps; (iii) number of households in the intervention areas issued with geo-referenced map-base land certificates (disaggregated by gender); (iv) local level participatory land use plans prepared and implemented at kebele level within the intervention areas.

24. ***Sub-component 3.1 – Rural land administration and certification:*** The objective of this Sub-component is to provide security of tenure to smallholder farmers as an incentive to increase the adoption of sustainable land and water management technologies and practices. The following activities will be supported under the project:

- Developing standards and harmonized procedures, guidelines for cadastral surveying and land registration.
- Creating awareness about standards, procedures and guidelines for cadastral surveying and land registration.
- Undertaking cadastral surveying and land registration for individual, institutional and communal land holders.
- Updating and upgrading land records.
- Issuing land certificates to smallholder farmers and communities in all intervention areas.

- Systematically resolving conflicts and inconsistencies in existing first-level certificates so as to remove obstacles for more sustainable land use.

25. ***Sub-component 3.2 – Local level participatory land use planning:*** The objective of this Sub-component is to prepare local land use plans for decision making on the best uses of the land and its resources for improved, alternative, sustainable and productive development at the grass root level. Delineating land use types at the local level should help to ensure that the choice of a particular use types offers the best scenario for ensuring sustainable use of that land piece. The expected outputs/outcome under this sub-component would be the number of kebele level land use plans prepared. Activities planned under this sub-component would include:

- Identification of kebele and micro-watersheds as a planning area.
- Undertaking participatory biophysical and socio-economic surveys.
- Undertaking evaluation of land capability and potential of the rural lands for different uses.
- Planning of rural land uses through local participatory planning approaches and the use of new tools such as participatory GIS for climate-scenario based land use planning.
- Mapping of critical habitats for protection purposes to increase ecosystem services.

Component 4 - Project Management (Total: US$4.45 million of which US$1.00 million from IDA, US$0.33 million from GEF, US$0.23 million from LDCF and US$2.89 million from others)

26. This component would partially finance the operation of the SLM Support Unit to support the Ministry of Agriculture in ensuring efficient delivery of project resources to achieve the PDO, as well as adequately monitoring and documenting progress and results. The component focuses on project management arrangements and mechanisms including support to project governance structures, coordination with other SLM partners, as well as monitoring and evaluation (M&E), preparation and supervision of implementation-related plans (including the Project Implementation Manual – PIM) and fiduciary responsibilities such as procurement, financial management and safeguard compliance.

27. In addition, the funds allocated to this component include the procurement of essential goods and equipment such as vehicles, motorcycles, field equipment, office equipment and furniture, imagery, software and other accessories for all public agencies involved in project implementation at the central, regional and district level. To strengthen project management, funds would also be available to finance selected technical assistance such as financial management specialists, procurement specialists, and monitoring and evaluation specialists at all levels. Incremental GEF and LDCF financing will support this component. The key output/outcome of this component would be the effective implementation of project activities with due diligence and integrity.

Community Contribution to the Project

28. *Communal lands, hillsides and gullies*: For interventions on communal lands, the program would finance up to 80 percent of the total costs. Such costs include farmlands which have a slope gradient greater than 30% (as described below). In addition for gullies located on farmland, the project will cover a maximum of 80% of the project cost and communities will cover at least 20% of the total cost. Regions can increase community contribution depending on local

conditions. The program would also provide technical assistance to communities to develop local by-laws to govern the use of communal lands, including grazing lands in a participatory way.

29. *Farmlands*: The project would finance 25% of the total costs (in the form of CSA-related inputs and equipment, grass seeds and cuttings, tree seedlings, and other materials beyond the capacity of farmers) and the intended beneficiaries would cover the cost of the remaining 75% in the form of labor and cash from their own resources or access the credit scheme under the Government's agricultural household extension packages or micro-finance institutions that are widely available in rural Ethiopia. On farmlands which are characterized by hillsides (greater than 30%), top soil depth of less than 10 cm, surface coarse fragment of greater than 40% and pH level of less than 5.5 the project will support 80% of the overall costs for activities/inputs related to land management.

30. *Homesteads development (livelihood improvement)*: All inputs (fruit and vegetable planting material, poultry, small ruminants, bee hives, etc.) which could not be accessible through the extension system will be provided by the project. However, the farmers are expected to pay back the loan to a revolving fund scheme or similar arrangements agreed by the Region. This ensures consistency with the extension system, the project would finance up to 40% of the total costs in the form of revolving fund as seed money and for other support. The intended beneficiaries would cover the cost of the remaining 60% in the form of labor and cash from their own resources or access the credit scheme under the Government's agricultural household extension packages or micro-finance institutions that are widely available in rural Ethiopia.

31. The project will support up to 80% of the total cost for infrastructure development to cover the costs of industrial materials and skilled labor. Land users will cover up to 20% of the cost in the form of free labor contribution.

Annex 3 (a): Implementation Arrangements

ETHIOPIA**: SUSTAINABLE LAND MANAGEMENT PROJECT (SLMP-2)**

Project Institutional and Implementation Arrangements

1. The organizational structure for the implementation of the ongoing SLMP-1 will be maintained and improved for the execution of SLMP-2, especially in terms of human resources and capacity building. Implementation will be carried out at four levels, reinforcing Ethiopia's decentralization policy – Federal, Regional (including Zonal), Woreda (District) and Kebele (Sub-district).

2. SLMP-2 will be implemented by existing GoE structures and community institutions. Implementation will be decentralized with beneficiary communities assuming primary responsibility for executing most project activities in the watersheds. As was the case in SLMP-1, the success of SLMP-2 core interventions will depend on strong community-based institutions. For this, the Project will support the strengthening of existing community structures, while building new ones in newly selected watershed areas. The necessary backstopping and coordination of technical support for activities to be implemented by communities in the watersheds will be provided by experts of the Woreda Offices of Agriculture (WOA), supported by Development Agents, project-funded community facilitators and providers of technical assistance (TA) from other development partners supporting the SLM program.

3. A Project Implementation Manual (PIM) will guide the implementation of the Project. The PIM would cover the following aspects: (i) detailed implementation arrangements by components, including institutional arrangements, roles and responsibilities; (ii) Identification and characterization of watersheds selected; (iii) the subproject cycle; (iv) detailed implementation schedule; (v) financial management and reporting; (vi) procurement; (vii) monitoring and evaluation; and (vi) procedures for the implementation of the Environmental and Social Management Framework.

Project administration mechanisms

4. Federal Level: As in the case of SLMP-1, the federal Ministry of Agriculture (MoA), working closely with other relevant sector Ministries such as the ministry of Finance and Economic Development, Ministry of Water and Energy, the Environmental Protection Authority will lead the coordination, supervision and implementation of the project. The existing institutional mechanisms already established to provide oversight and policy direction and to coordinate all projects and initiatives on SLM financed by the Government of Ethiopia and development partners will be reinvigorated. These are the Rural Economic Development and Food Security (RED&FS) Platform, National SLM Steering Committee, National SLM Technical Committee and the SLM Support Unit – all hosted at MoA.

5. *The Rural Economic Development and Food Security (RED&FS) Platform*, chaired by the Minister for Agriculture, has high level representation, including from the MoFED, MoWIE, MoEPF and development partners supporting mainstream agriculture, food security and disaster risk management. RED&FS is serviced by a secretariat comprising a MoA staff and a coordinator hired and financed by DPs. Under the RED&FS platform are three federal level committees namely the SLM Technical Committee, Agriculture Technical Committee and

Disaster Risk Management and Food Security Technical Committee. For the purpose of this project, only the SLM Technical Committee is described..

6. *The National SLM Steering Committee*, chaired by the State Minister for Natural Resources Management in MoA, comprises high level representation from MoFED, MoWIE, MoEPF and DPs. The Steering Committee is responsible for the following tasks in the SLM project: (a) providing policy guidance, oversight and overall supervision for project implementation; (b) reviewing and approval the consolidated annual work plan, budget and procurement plan; (c) reviewing and approving the annual implementation performance report, and overseeing the execution of any corrective actions that may be designed.

7. *The National SLM Technical Committee* is also chaired by the State Minister for Natural Resource Management in MoA. It is made up of senior technical staff from institutions such as MoA, MoWIE, MoFED, MoEPF, the Ethiopian Institute for Agricultural Research (EIAR), development partners supporting SLM projects or initiatives, and civil society organizations (Non-governmental organizations) actively engaged in SLM activities. Generally, this body is responsible for providing technical advice to MoA on SLM. Specific to SLMP-2, this Committee will provide technical advice on the quality of implementation performance reports and special studies such as policy and legislative drafts, financial and audit reports, documentation of best practices, and M&E reports.

8. *The SLM Support/Coordination Unit* at MoA will continue to play the role of managing and facilitating the day-to-day implementation of the project. Specific tasks will include: (a) consolidating regional annual work plans, budgets and procurement plans; (b) facilitating and supervising implementation of work plans and corrective actions, safeguards instruments including management/mitigation plans; (c) processing and procuring works, goods and services; (d) monitoring overall implementation progress, safeguards instruments (and management/mitigation plans) and evaluating project impacts; and (e) preparing progress reports. The Unit will maintain a team of experts including a National Project Coordinator, procurement and financial management specialists, M&E expert and technical experts in diverse disciplines (e.g., watershed management, soil science, forestry/agroforestry, range management, land administration/land use planning, carbon finance, etc.).

9. Regional and Zonal level: At the Regional level, the Bureau of Agriculture (BoA) will lead implementation of the project, in close collaboration with relevant public institutions. Serving as the link between the Federal, Zonal and Woreda implementation set-ups, the BoA will review and consolidate annual work plans, budgets, procurement plans submitted by the Woredas. It will also review and approve implementation progress reports (including M&E, financial, audits, safeguards, etc.) originating from the Woredas. The project will finance a project coordinator, M&E expert, accountant and procurement officer per region to assist the BoA and Woreda Office of Agriculture (WOA) to implement the project on a day-to-day basis. At the Zonal level, the Zonal Agriculture Office (ZAO) will provide technical support, extension services and M&E to a group of Woredas under its jurisdiction. The ZAOs will coordinate with the Woreda Offices of Agriculture (WOA).

10. Woreda and Kebele levels: On-the-ground planning and execution of activities under the project will be undertaken jointly by WOA, the Kebele Watershed Development Committee, Development Agents (DA) and communities. Thus, WOAs, KWDCs and DAs will be assisting communities in: (a) developing annual work plans and budgets as well as procurement plans for

submissions to the BoAs for review and endorsement and integration into a Region's annual work/development plans and budgets; (b) facilitating and mobilizing community participation in watershed planning and rehabilitation; (c) undertaking awareness campaigns and training; (d) participatory monitoring and evaluation; (e) extension service delivery and dissemination of best-fit technologies and innovations, etc. These entities, working as close partners/actors, will also be responsible for the implementation of the activities under Component 3 of the project.

Monitoring & Evaluation

9. The institutional set-up for M&E will happen at four levels that are well aligned with the SLMP-2 institutional and implementation arrangement. Overall responsibility for M&E will rest with the M&E specialist of the SLM Program Support Unit in MoA who will be supported by an MIS/IT Specialist. M&E officers at the regional level and MIS/IT specialists will report directly to the M&E specialist in the SLM PSU as well as the regional coordinator. Impact evaluation of the project, thematic studies and process monitoring will be undertaken by external consultants to be selected on a competitive basis.

Reporting *Mechanisms:* As has been the case for SLMP-1, SLMP-2 will have four levels of reporting, using simple reporting formats with a set of indicators to be tracked and reported on:

(a) Kebele level: Under close supervision by the Woreda Project Focal Person, monitoring and report preparation will be undertaken by the Woreda Watershed Development Committee and the Development Agent (DA) on monthly basis. It is the responsibility of the Woreda Project Focal Person to collate all reports covering Kebeles within the Woreda for Woreda level reporting.

(b) Woreda level: Each Woreda Project Focal Person will produce a monthly report with data on each of the project kebeles within the Woreda and on woreda-level activities. Woreda reports will aggregate kebele data/information and provide woreda-wide information on project performance (including sub-projects, safeguards compliance, finance and procurement), implementation bottlenecks, best practices and innovations, and success stories. The Woreda reports will be submitted to the Woreda Steering Committees (WSC) for decision making and submitted to the BoA for compilation and inputting into the Project's MIS at the regional level.

(c) Regional level: Woreda Project Focal Persons will submit project related reports from the project Woredas to the Regional M&E officer in BoA who will work closely with the Regional MIS officer to enter information into the MIS. Based on data and information received and uploaded into the MIS, the Regional M&E officer will produce quarterly regional reports that review performance of each Woreda at a particular region, document progress against plans, and identify region-wide implementation issues and best practices. Such regional reports will be submitted to the SLM PSU in MoA by the Regional Project Coordinators, and also used to provide feedback to WDCs and Woreda Project Focal Persons.

(d) Federal level: Regional Project Coordinators submit detailed regional reports to the SLM PSU on quarterly basis. The Federal MIS officer will then be responsible for entering national level information into the MIS, while the Federal M&E Officer, under the supervision of the National Project Coordinator, will prepare quarterly

and annual progress reports to be shared with MoFED, MoA and the World Bank and also be used to provide feedback to Regions, Woredas and Kebeles.

Role of Partners

10. The Technical Assistance and the overall support provided by the GIZ/SLM programme mainly for capacity development during the implementation of SLMP-1 financed by the WB/GEF as well as areas financed by KfW and CIDA has been very critical, without which the realization of the objectives of the SLMP would have been problematic. The GIZ/SLM has been the major provider of capacity development in the Natural Resources Management Directorate of the MoA. The GIZ/SLM supported the SLMP Coordination Office with the placement of three professionals on M&E, watershed management and project management. The GIZ/SLM is also supporting the development of MoA's knowledge management systems as well as improvement of the framework conditions for SLM up-scaling in the country. The GIZ/SLM regional offices support regional and woreda SLMP implementers in the planning, implementation (training, provision of manuals, training and learning materials, exchange of experience tours, coaching along project cycle processes, demand oriented advisory services, etc.), and monitoring and evaluation of SLMP interventions.

11. The GIZ/SLM was involved during the development of the SLMP-2 with its experts at federal and regional levels and is committed to further support the MoA and its NRM Directorate in line with the scaling up of SLM. It will continue to support the SLMP Coordination Office, Regional and Woreda Government structures (mainly in the three Regional States of Amhara, Oromia and Tigray) during the implementation of SLMP-2 with process oriented capacity development through advisory services, coaching and training along the project cycle including the knowledge generation and management .

12. Currently, the capacity of GIZ/SLM to support SLMP woredas financed by WB/GEF under Phase I, EU, CIDA and KfW has reached its limits with the available financial resources. The extent of support from GIZ/SLM to SLMP-2 will therefore depend on the availability of additional funds, either from the German Government or the contributors to SLMP-2. The financial resources to be provided by the Federal German Ministry to support the SLMP-2 will be determined during the Ethio-German negotiations (for the period 01/2015 – 12/2017) that will take place in June 2014. It is expected that the negotiations the Ethiopian Government will request the German Government for an adequate budget allocation to the GIZ from January 2015 onwards. Regardless of that, for the coming year 2014 the sourcing of additional financing for the GIZ/SLM will be indispensable to ensure adequate TA support to be provided to the newly incorporated woredas under SLMP-2.

Annex 3 (b): Financial Management Arrangements

1. COUNTRY ISSUES

1. The GoE has been implementing a comprehensive public financial management (PFM), with support from development partners, including the Bank. The main instrument used for Ethiopia's PFM reforms has been the Expenditure Management and Control sub-program (EMCP) of the Government's civil service reform program (CSRP). This is being supported by the IDA financed PSCAP, PBS and other Development Partner financing as well as Government own financing. These programs have focused on strengthening the basics of PFM systems: budget preparation, revenue administration, budget execution, internal controls, cash management, accounting, reporting and auditing. The reforms are still on-going. However, the Government is beginning to increase its focus on strengthening the linkages between public policy objectives and expenditure. In this context a programming/performance budgeting framework has been introduced by MoFED.

2. The latest PFM study for Ethiopia was completed in May 2011 using the Public Expenditure and Financial Accountability (PEFA) PFM performance measurement framework. The PFM assessment only covered the federal government Ministries and Agencies as well as five regions. The PFM study notes that Ethiopia has made significant progress in strengthening PFM at both federal and regional levels. Improvements have been noted in budgeting and accounting reform. The credibility of the budget improved during 2006/07-2008/09 (EFYs 1999-2001) relative to the three years covered by the first PEFA assessment (2002/03-2004/05; EFYs 1995-97). The predictability in the composition of expenditure improved sharply, the variance in excess of the aggregate deviation falling to 5.7 percent. The main reason for the improvement appears to be strengthened in-year predictability in the availability of funds for the commitment of expenditures. Improved predictability meant that budget institutions could more confidently plan ahead for execution of their budgets, thereby increasing the likelihood that their actual expenditures would reasonably closely match their originally approved budgets. The budget is reasonably realistic and is reasonably implemented as intended, and performance in this regard has improved marginally since the period covered by the first PEFA assessment.

3. Comprehensiveness and transparency improved somewhat during the period covered by the PEFA assessment completed in May 2011. Notable areas of improvement are: Increase in the amount of budgetary documentation submitted to House of Peoples' Representatives (HPR), strengthened reporting on donor projects and programs, improved transparency in inter-governmental fiscal relations, through greater timeliness in the provision of information to regional governments on the size of the budget subsidies that they will receive, and improved access by the public to key fiscal information through audit reports. A key challenge remaining to be addressed is for the Government to make available to the public information on the incomes and expenditures of extra-budgetary operations. The quality of debt management improved relative to the 2007 PEFA assessment, but the periodicity of reconciliation remains annual.

4. Due to the increased coverage of the internal audit function in terms of numbers of budget institutions, the additional experience gained by internal auditors since the previous assessment, increasing focus on systems audit, and increasing management response to audit findings. Further strengthening of the internal audit function is a key challenge for the future.

Overall controls in public procurement are satisfactory with a fair degree of justification for the use of less competitive procurement methods and the existence and functioning of a good procurement complaints mechanism. A key issue remains the insufficiency of reporting on procurement according to the numbers of contracts and the type of procurement method. Bank reconciliations continued to be carried out in a timely fashion for all Treasury-controlled accounts, as were reconciliation and clearance of suspense accounts and advances. The full roll-out of IBEX has helped to strengthen the quality of in-year budget execution reports, Annual financial statements prepared for 2006/07-2008/09 (EFYs 1999-2001) included information on revenue and expenditures, financial assets and liabilities, but excluded information on donor-financed projects and programs. A limiting factor continued to be the use of non-IPSAS compliant accounting standards; compliance with IPSAS would require disclosure of information on donor-financed projects and programs.

5. Overall performance of external audit has improved due to increased coverage (to 51 percent of 2008/09 budgetary expenditures from 23 percent of 2006/07 budgetary expenditures) and a lessening of the time needed to audit annual financial statements. Audits conducted by OFAG generally adhere to INTOSAI auditing standards and focus on significant issues. Developments being planned at the time of the 2010 PEFA assessment indicated further strengthening of external audit in terms of both dimensions and a plan to strengthen follow-up.

6. The PFM study also notes that regional performance of PFM reform varies from region to region. Additional PEFA is planned to be conducted in 2013/2014 and the outcome of which may change the above diagnosis.

2. RISK ASSESSMENT AND MITIGATION

7. The FM risk for the project was initially rated as High but is expected to reduce to Substantial when mitigation measures are implemented. Therefore, the residual risk rating for the project is Substantial. The main strength of the Project is that it is a repeater project with knowledge of the Bank operations including FM requirements. The PFM reforms underway, the country's discipline in budget preparation and compliance with the existing government regulations are also overall issues that contribute to the strength. The main weaknesses for the FM arrangements continue to be turnover and shortage of qualified accountants and auditors (mainly at Woredas), limited focus and weak or largely ineffective internal audit function. The existence of too many implementing entities (increased level of woredas water sheds) poses a number of challenges in delays in fund flows and delays in accountability reporting including audit -The long process involved in producing reports from Woredas to regions, and from regions to MoA, may cause for delay in the timely submission of financial reports to the DPs. Lessons learnt from SLMP-1 in the area of Financial Management is that while there is reasonable adequacy that the FM system in place provides the necessary reasonable assurance that Bank loan proceeds are being used for the intended purposes and that the reports being produced by the system can be relied upon to monitor project, there are certain areas which improvements are still needed. The major ones include delay in budgeting process different from government calendar, staffing problems, internal control issues, poor internal audit oversight, size of advances and weak settlement thereof.

8. Action Plans- The following actions are agreed to be performed in view of the risks and mitigation measures:

Table of Action plans

	Action	Date due by	Responsible
1	Revise the FM Manual	Within 2 months of effectiveness	MoA-SLMP Support Unit
2	Trainings 1. On the FM manual will be provided. 2. Ongoing trainings will be conducted -Budget analysis training, IFR preparation training, etc. to be offered	1. Initial training to be given within 3 month of effectiveness. 2. Once a year, training will be given to implementing entities	MoA-SLMP Support Unit
3	Streamlined budget preparation process where government budget calendar will be used to align project working budget with the budget sent to MoFED	1. PIM and FM manual be revised to address it at the manual level 2. During implementation	MoA SLMP Support Unit
4	Internal control on Advances- Strengthen/clarify and follow up of advances and settlements 1. FM Manual need to clarify the procedures to on advances and settlement procedures 2. Training on FM Manual with focus on advances and settlements thereof 3. The project will continue to prepare aging analysis on advances and take action on long outstanding advance. IFRs will include aging analysis statements. 4. The Project will refrain from releasing resources to regions that are not using and reporting on the use of resources on time	1. Within 2 months of effectiveness 2. Within 3 months after effectiveness 3. Along with each IFRs 4. On-going	MoA SLMP Support Unit
5	Staffing: Conduct and finalize recruitment of qualified financial management officers or accountants (in addition to the existing staff) 1. 1 Senior Accountant at the federal MoA Finance Directorate as per the need basis 2. 1 Chief Accountant (senior level), 1Senior Accountant and 1 Accountant at MoA SLMP Support Unit 3. 60 Accountants at regions and woredas depending on capacity assessments 4. Terms of reference of staff will be provided to the World Bank	1. As per need basis 2. Within 3 months after effectiveness 3. Within 3 months after effectiveness 4. Within one month of effectiveness	MoA and BoA
6	Support to Regions and woredas: SLMP Support Units at MoA and BoA should conduct regular field visit to support as well as monitor the performances of the WoFEDs	On-going	MoA/BoA
7	Internal Audit 1. Increased engagements of Internal Audits at all levels to identify control weaknesses early. 2. Assess gaps and conduct recruitment of Internal auditor at MoA as needed following	1. On-going 2. As required	MoA

	Action	Date due by	Responsible
	normal government recruitment processing		
8	IFR/Report issues 1. FM Manual will clarify reporting requirements. 2. Continuous training will be conducted and reviews and support will be provided on report preparation 3. MoA and BoA should undertake adequate robust reviews and checks on the reports submitted to them from Regions and Woredas respectively. MoA should take action on Woredas that delay reports. 4. IFRs will be submitted to the Bank within 60 days from the quarter 5. Explore the possibility of generating reports of the project, especially IFRs, directly from the accounting software from the system	1. Within 2 months of effectiveness 2. On-going 3. On-going 4. Within 60 days from the end quarter 5. Within 3 months of effectiveness	MoA
9	Audit issues 1. Recruitment of external Auditors at early stages of the project; 2. Project annual financial statements will be prepared on time and strict follow up on timely closure of accounts will be made. 3. Submission of annual audited financial statements and audit report including the management letter; 4. Submitting interim audit report on internal control/compliance weaknesses noted during the midyear, 5. MoA will submit the Government's response to the findings in the annual audit report to Bank and an action plan for any follow-up actions. 6. Disclosure-In accordance with Bank Policy, (a) the Bank requires that the borrower disclose the audited financial statements in a manner acceptable to the Bank; and (b) following the Bank's formal receipt of these statements from the borrower, the Bank makes them available to the public in accordance with The World Bank Policy on Access to Information.	1. Within 3 months of effectiveness 2. Within 3 months of year end 3. within 6 months of the end of each fiscal year; 4. Within 60 days of the 2nd quarter end date of January 7. 5. Within 2 months of submission of the audit report to the Bank 6. Annually	1 to 5-MoA-SLMP Support unit 6 a. MoA or MoFED 6b. WB

3. FINANCIAL MANAGEMENT IMPLEMENTING ENTITIES

9. At the Federal level, MoA through SLM Support Unit will be responsible for the overall financial management of the project. This includes but not limited to the management of the

designated and the pooled Birr account, the transferring funds to BoAs, the responsibility for producing regular financial reports and facilitating the annual audit of the project account. It will ensure that acceptable financial management systems are in place and are well documented in FM manuals. It will also be responsible for oversight and coordination of the project. It will also be responsible for the funds transferred to it.

10. At the regional level, BoA through regional focal representative and regional accountant(s) will be responsible for the management of the funds transferred to them for implementation. They are responsible for ensuring that acceptable accounting system, as documented in FM Manual, covering both regional and Woreda levels is maintained. They will collect and aggregate all financial data and information from other implementing agencies and Woredas on the Project, review and supervise the effective use of accounting procedures by Woredas, and provide technical support and assistance to them. Each region will prepare quarterly and annual reports, which will be sent to the federal level.

11. At the Woreda level, WoFED, are responsible for the funds transferred to them and for the financial management aspects of the project. At WoFED a suitable accounting system is established for the disbursement of funds for activities financed under the relevant components. The records of funds utilized will be maintained in accordance with sound accounting practices that are capable of generating accurate and timely information for verification. Among the various FM roles and responsibilities, WoFEDs ensures, as a minimum that (i) support in budget preparation and follow up on budget execution as per approved plans and activities; (ii) undertakes timely payments for eligible expenditures for the smooth implementation; (iii) exercises necessary fiduciary controls; and (iv) prepare and submits timely reports on fund utilization to Regions (BoAs).

12. It is the preference of the MoA to have this project to continue using the current arrangement which is a channel II[17] fund flow mechanism of the Government (based on which this FM arrangement is designed). However, in the interest of using full country system including the normal treasury, there was also the option of using channel I fund flow mechanism[18] for this project. This was further explored and discussed with MoFED during appraisal and it is agreed to maintain the existing arrangement until necessary readiness is achieved for MoFED to take on board such projects. In addition, existing capacities created at the MoA and BoA under SLMP-1 are key strengths that can benefit the proposed Project, and it was agreed that MoA and BoA capacities could be further augmented under the Project.

4. BUDGETING

13. ***Budget preparation in Ethiopia***: The Ethiopian budget system is reflecting the fiscal decentralization structure. The budget is processed at federal, regional, zonal (in some regions), and Woreda and municipality levels. Based on the budget manual, the BIs prepare their budgets in line with the budget ceilings and submit these to MoFED which are reviewed at first by MoFED and then by the Council of Ministers. The final recommended draft federal budget is

[17] Channel II is a fund flow mechanism whereby fund from donors is directly deposited in to the designated account held by sector ministry. The fund flow will flow to the regional sector bureaus and woreda finance offices accordingly.

[18] Channel I is a fund flow mechanism whereby fund from donors is directly deposited in to the designated account held by MoFED. Subsequent fund flows will be from MoFED to MoA at federal level and to BoA and WoFEDs through BoFED at regional level.

sent to parliament in early June and is expected to be cleared at the latest by the end of the EFY. Budget procedures are documented in the Federal Government of Ethiopia Budget Manual[19].

14. ***Detail budget preparation for the Project-SLMP:*** The project follows a decentralized and integrated approach and hence works with regions and woredas. Each Woreda will prepare its own annual work plan and will submit the same to the region. Each regional BoA will prepare a consolidated annual work plan and budget from the Woredas and other implementing agencies at the regions and will submit the same to the Regional steering committee for approval. The Federal MoA, after receiving the region's budget, will consolidate and prepare one final Annual budget and work plan for the whole project and submits it to the National SLM steering committee for approval. The Project also notifies the World Bank and seeks a "No Objection" on the annual work plan and budget. When the approval is received from the committee, it will be notified to regions. There is a difference in timeline and content of the detail budget approved by the steering committee (which is a final working budget) and the budget approved initially and sent to MoFED along with the MoA overall budget (which includes the SLMP). As such the project should aim to stream line its budgeting process in line with GoE Budget calendar to ensure timely budget preparation process and notification to the regions their final budget. Alignment to government budget calendar in timing as well as in the content (proclaimed vs. actual working budget) is thus a key action agreed with MoA at appraisal. The FM manual and PIM will be revised to include such alignment procedures in detail. The detail budget should be disseminated to all implementing agencies at all levels without delay for their proper follow up. Past lessons show that budget notifications to regions are often delayed and this should be addressed.

15. ***Budget Monitoring***: Actual expenditures should be compared to the budget on a regular basis and explanations should be sought for significant variations from the budget and remedial actions should be sought for as appropriate. A lesson learnt, from past performances, is that budget monitoring is an area that needs to be improved and as such the Project is expected to review its FM Manual and clarify/identify detail procedures that assure this. The FM Manual will be reviewed and revised to depict in detail procedure on budgets monitoring. Training will be conducted on the FM Manual within 3 months after effectiveness which includes in depth focus on budget monitoring and variance analysis.

5. ACCOUNTING

16. ***Accounting Policies & Procedures- Government Accounting System*** - The Ethiopian Government follows a double entry bookkeeping system and modified cash basis of accounting. This is documented in the Government's accounting manual[20]. The Government's accounting manual provides detailed information on the major accounting procedures and this is annexed to this report. At woreda level Pool system is in place where the WoFED is responsible for all FM aspects of woreda sector offices.

17. ***Financial Management Manual*** – SLMP has its own Financial Management Manual (FMM) depicting all accounting policies, procedures, internal control issues, financial reporting, fund flow arrangements, budgeting and external audit. However, in view of the lessons learnt under SLMP-1, the opportunities, scope and design issues of SLMP-2, the FM manual will be

[19] *Revised Federal Budget Manual*
[20] *FGE Accounting System, Volume I*

revised to improve it for the Project's need. Training will be conducted on the FM Manual within 3 months after effectiveness. The FMM needs to be reviewed by the Bank and all recommendations to be given will be incorporated. The revision of acceptable FMM is a condition of disbursement of this project.

18. ***Accounting Software***- For normal government funds, MoA uses Integrated Budget and Expenditure (IBEX) accounting system. The (IBEX) accounting system is now operational at the federal level, in regions and in most woredas. SLMP-2 will use the current accounting software– Peachtree Accounting Software. The software is installed at Federal and Regional MoA SLMP Support unit. However, the software should be used to its maximum potential including reporting capabilities to enable quick report generation including IFRs direct from the system. The project has agreed to use consultants/experts to help in this matter and report on the issue to the Bank within 3 months of effectiveness. At Woreda level, the Project (the SLMP-2) may use IBEX or manual systems to record and report project specific transactions.

19. ***Capacity Building/Training***- Focused and continued training in Financial Management is essential for the success of the project. The training responsibility for the project will be borne by the Government, i.e. the SLMP Support unit, to continuously train its accounting staff. Areas that need training include, the FMM, Peachtree accounting software, Bank policies and Procedures, documents filing mechanisms. Adequate funding should be planned for this in the project document and procurement plans.

20. ***Staffing***- A lesson drawn on staffing from SLMP-1 in general is that there continues to be challenges in the area of staff turnover. Mobile teams at regional level were deployed at the later stages of the project life as an effort to mitigate this risk. Federal level interventions to supervise and follow up regions were not adequate. Thus, it was agreed to increase capacity at federal level by recruiting one chief accountant, one senior accountant and one accountant as per the attached table below. For regions and woredas, also there were serious staffing concerns. Woreda Finance and Economic Development Office (WoFED) is responsible for the financial management activities in a woreda since a system of single-pool accounting is used at the woreda level. Although WoFEDs have structures which enable them to provide pool accounting service to all sectors and government offices within a woreda, they are understaffed. For SLMP-1, these accountants on the project at woreda level were government employees assigned to the Project who performed this role in addition to their normal duties of the woreda. While this has advantages in building capacity for government staff, there were apparent challenges as there was a tendency (because of work load) to accord lesser attention to the SLMP activities. Therefore, taking into consideration the needs and lessons of the past, it was agreed to recruit 60 new accountants for the regions (to be placed at the woreda and regional level as appropriate - the allocation between regions and woredas will be decided by regions). It was further agreed that this will be conducted based on a needs assessment, i.e. FM capacity assessment of woredas will be conducted and where serious capacity gaps are noted recruitments will be conducted to fill in those gaps. It was agreed that where there are already accountants at post hired under the Agricultural Growth Project (AGP) these accountants will be mandated to handle FM issues under SLMP-2. In such cases, there will be no need to have new accountants recruited for these woredas. Furthermore, it was also agreed that the 60 accountants that will be recruited will also be responsible for all World Bank financed projects in their respective woredas (not only SLMP-2). Term of reference of the accountants will be shared with the Bank within 1 month of effectiveness.

21. Therefore following additional staffing need is summarized:

Location	Additional staff (in addition to existing staff)	By when
At federal MoA Finance Directorate	1 Senior Accountant to be hired based on need	As required
At federal MoA SLMP Support Unit	1 Chief Accountant (senior level), 1 Senior Accountant and 1 Accountant	Within 3 months of effectiveness
At Regions (for both regional and woreda level depending on the capacity assessment)	60 Accountants	Within 3 months of effectiveness

6. INTERNAL CONTROL AND INTERNAL AUDITING

22. ***Internal control:*** Internal control comprises the whole system of control, financial or otherwise, established by management in order to ensure that funds are used for purposes intended in an efficient and effective manner. The overarching principle is that Regular government systems and procedures would be followed, including those relating to authorization, recording and custody controls. Under SLMP-1, the Project has an FM Manual that prescribes relevant internal controls which is largely in line with the government internal control procedures. This Manual will be revised to clarify and strengthen certain aspects internal controls.

23. ***Internal audit (post audit reviews)*** –It is envisaged and agreed that the project will be subject to an internal audit review at all levels. Thus federal level internal audit at MoA will review the federal level and overall project activities, the regional level internal auditors at BoA will review regional level project activities and woreda internal auditors will review woreda project activities. This is to help management to be aware of internal control and compliance issues in a systematic way and real time so that remedial actions are promptly taken on time.

24. Lessons from the SLMP-1 indicate there is a weakness in internal audit oversight. The internal audit Directorate of MoA uses the internal audit manual issued by MoFED. The Directorate continues to be severely understaffed as compared to the current work load. MoA appreciated the gaps at the Directorate and agreed to fill in the gaps through normal government recruitment processes on an ongoing basis. Our visit to Regions and woredas also revealed that there is a weakness in the internal audit aspects which will be addressed in the larger PFM reform ongoing in the country.

7. FUNDS FLOW AND DISBURSEMENT ARRANGEMENTS

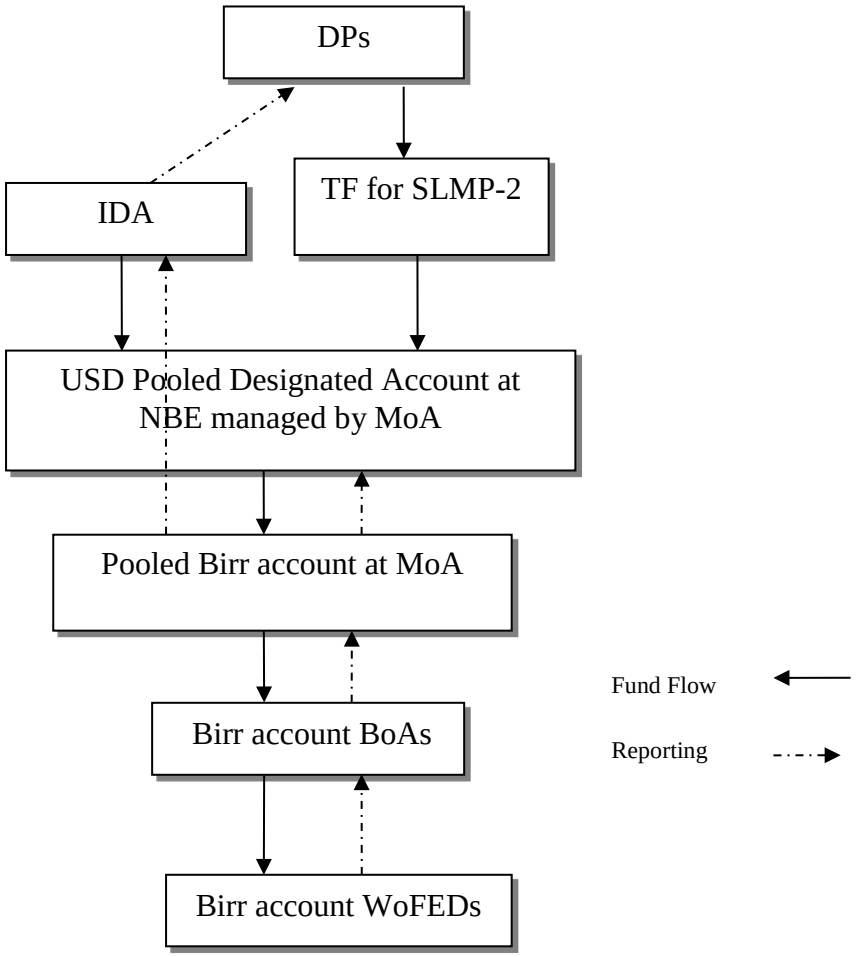
25. Development partner funds including the Bank's funds (IDA and TFs) will be deposited in to a single pooled USD currency "designated Account" at National Bank of Ethiopia on terms and conditions acceptable to IDA. Limit of the initial advance to the designated account will be stated in the Disbursement letter. Then resources will be transferred to pooled Birr account to be held by MoA. Here MoA will track the allocation among the various partners (IDA, TF, government contributions) using appropriate ledger accounts. From the pooled local currency

account, MoA will transfer funds to the separate local currency accounts to be opened by the regions and from regions to woredas as appropriate. The fund flow to each implementing entity will be made according to their respective AWP&B. Any implementing entity which does not report on utilization of advances in timely manner will not be provided with additional resources. Lessons learnt from the SLMP-1 there are weaknesses in the size of advances and the track record of regions in settling advance balances transferred to them was a persistent concern. The FM manual will indicate in detail the procedure of fund flow to each tier of implementing entity and clearly lay out fund release parameters

26. Report based disbursement would be followed i.e., based on quarterly Interim Financial Reports (IFRs). Disbursement will be made quarterly and would cover cash requirements for the next six months, based on the forecasts contained in the IFRs. Provision would also be made for direct payments, special commitments and reimbursements.

27. Financing shares of the respective partners to finance the annual work plan and budget would be agreed with definitive proportions. The World Bank Task Team Leader (TTL) will advise the World Bank's loan department of the share of financing to be disbursed by the World Bank for the project by linking it to the project cash flow.

28. Funds flow of the project to the various project institutions which will handle project funds, are presented in the diagram below.



8. FINANCIAL REPORTING

29. MoA's finance department prepares the entities or project financial statement and submits to users be it internal or external, government or donors. For this Project, after consolidating the regional reports, the MoA and its SLMP Support unit will submit Interim Financial Reports to the Bank 60 days of the end of the quarter. The existing format of the IFR of SLMP-1 has been revised for SLMP-2 by MoA, and it was agreed with IDA during project negotiation. In addition, the formats will be included in the FM Manual of the project.

30. Report should be derived from the system and the IFR will include: (a) a Statement of sources and uses of funds, opening and closing balances for the quarter and cumulative; (b) Statement of uses of fund that shows actual expenditures. These are appropriately classified by main project activities (categories, components and sub-components). They will also include an actual versus budget comparisons for the quarter and cumulative; (c) a Statement of cash forecast/ requirement- for six months (d) Notes and explanations; (e) a statement on the movement of project's Designated Account including opening and closing balances and the movements (inflows and outflows). (f) Other supporting schedules and documents. The annual financial statements will adopt the same format as the quarterly reports and may also include other issues. However, the annual financial statements do not need to include Statement of cash forecast/ requirement. The audit TOR includes the content of the project financial statement.

31. Current lessons indicate that the regions do not submit reports on time and if submitted the reports are not up to standards. Thus it is agreed that the FM Manual will clarify reporting requirements. Training will be conducted on report preparation. In addition MoA and BoA should undertake adequate robust reviews and checks on the reports submitted to them from Regions and Woredas respectively. MoA should take action on Woredas that delay reports

9. AUDITING

32. Annual audited financial statements and audit report (including Management Letter) of the project will be submitted to Bank within 6 months from the end of the fiscal year using auditors[21] acceptable to the Bank. The auditor will be appointed within 3 months of Effectiveness. To ensure rotation of auditors in line with good practice and considering the five year life span of the project, private auditors would have a maximum term of 3 years (non-renewable).

33. In accordance with the Bank's policies, the Bank requires that the borrower disclose the audited financial statements in a manner acceptable to the Bank; following the Bank's formal receipt of these statements from the borrower, the Bank makes them available to the public in accordance with The World Bank Policy on Access to Information.

34. The annual financial statements prepared in accordance with acceptable standards will be prepared within 3 months of the end of fiscal year and provided to the auditors to enable them to carry out and complete their audit on time. The auditor would express an opinion on the project financial statements. The audit will be carried out in accordance with the International Standards of Auditing (ISA) issued by the International Federation of Accountants (IFAC). The auditor will also provide a Management Letter which will inter alia outline deficiencies or weakness in

[21] The audit will be carried out by the Office of Federal Auditor General (OFAG), or a qualified auditor to be selected in collaboration of OFAG from auditors acceptable to the Bank, following agreed procurement procedures

systems and controls, recommendations for their improvement, and report on compliance with key financial covenants. The TOR for the audit has been agreed at negotiations and will be included in the FM Manual.

35. The auditor will prepare a work plan to ensure adequate coverage of the various institutions that receive project funds and cover all the major risk areas. Given the large number of institutions and to meet the timetable for completion of the annual audit, the auditor will carry out interim audit in sample implementing entities once in the middle of the year, i.e. after the 2nd quarter ends (i.e. January 7) following the audit work plan. The interim audit is not a separate exercise, but is intended to facilitate the process of the annual audit and is part and parcel of the annual audit exercise. The auditor will report internal control weaknesses and or compliance issues noted during the interim audit to MoA. MoA will then submit the report to the Bank 60 days after the end of the 2nd quarter end date. This is designed to ensure that the annual audit report is received within the specified time and to help the implementing entity take the necessary actions on the internal control weaknesses or compliance issues noted.

36. MoA and all project institutions will take the necessary follow-up actions on the audit reports. MoA will submit the Government's response to the findings in the annual audit report to Bank and an action plan for any follow-up actions within 2 months of submission of the audit report to the Bank.

10. FINANCIAL COVENANTS AND CONDITIONS

37. FM-related covenants in the Financing Agreement would include:

a. Maintenance of a satisfactory FM system for the program;
b. Submission of IFRs for the program for each fiscal quarter within 60 days of the end of the quarter;
c. Submission of annual audited financial statements and audit report within 6 months of the end of each fiscal year; and
d. Submitting interim audit report on internal control/compliance weaknesses noted during the mid-year, within 60 days of the 2nd quarter end date (January 7).

11. SUPERVISION PLAN

38. The project will be subject to FM supervision at least twice per year on the basis that the current FM risk assessment after mitigation measures. The risks will be measured and recalibrated accordingly, after completion of each supervision mission. Supervision activities will include: the compliance with the agreed up on FM arrangements, review of quarterly IFRs; review of annual audited financial statements as well as timely follow-up of issues arising; transaction review; participation in project supervision missions as appropriate; and updating the FM rating in the Implementation Status Report (ISR).

12. GOVERNANCE AND ANTI-CORRUPTION

39. Most public bodies at federal level/regional have an Anti-corruption officer who has the responsibility of acting up on suspected fraud, waste or misuse of project resources or property. Employees of the public bodies can complain to the officers on any concerns they have with

regards to governance and corruption issues. The following are key GAC risks and proposed mitigating measures:

a. For the risk of resource allocation; budgeting and budget monitoring- mitigation measure includes, the country's strength is the discipline in executing budget and compliance with the existing government regulations; the Project will clarify and improve budget monitoring aspect as well as budget transparency tools in the revised manual; there is high stakeholder involvement in the budget preparation of SLMP-2 which follows a bottom up approach up. Trainings will be conducted including budget monitoring and variance analysis. The IFR will have this format for follow up by other donors;
b. For of fund flows-Funds flow is designed by attaching the coordination unit to the sector ministry and bureaus which have strong internal control mechanisms; stringent checklists will be developed as part of the FM manual to include issues pertaining to reports from woredas to regions. Training will be provided on report preparation; All transactions between implementing entities will be made through Acceptable Banks which are all government owned banks in this case; Capacities at all levels will be increased to so that quality reports are prepared and submitted on time;
c. For Internal control risks- Capacities at all levels will be assessed and increased as appropriate to so that staffs carry out and supervise key control functions at all levels of the project; the internal audit functions are being strengthened by projects such as PBS; an internal auditor will be recruited or appointed at MoA and regions. The internal audit directorates/departments or internal auditors are expected to review the projects as per their annual program; the FM manual will include detail internal control procedures with regards to soft expenditures starting from the initiation of transactions to the approval of the expenditures and also on safeguard of assets including annual physical inspection; The scope of external audit is includes assessment of internal control area. The audit is conducted annually with an interim audit arrangement performed in the middle of the fiscal year; Complete list of assets will be kept at the Federal level at MoA SLMP support Unit;
d. For Financial Reporting risks-The external audit work is sufficient to verify consistency with underlying transactions and records. The auditors will verify that expenditures reported on IFR basis are eligible or not; SLMP-2 will have format of Quarterly reports which was agreed at negotiations; The FM manual for the project will define the time table of reporting for each implementing entity and there are efforts to roll out IBEX at lower levels;
e. For external audit risk- PFM reforms will aim to address quality issues of audit; the external auditors should be acceptable to the Bank. Audit will be conducted following ISA issued by IFAC; The ToR of the audit will be reviewed to ensure that it addresses risks which were agreed at negotiation; the main tasks of of chief accountant at MoA Federal SLMP Support Unit as well accountants at regional SLMP support unit will be to follow up in audit findings. ToR of the Finance officers will indicate the responsibility for addressing audit findings in timely manner; DPs will also follow up on action plans.

Annex 3 (c): Procurement Arrangements

Procurement Environment:

1. In Ethiopia, for Federal budgetary bodies, public procurement is regulated by the Public Procurement and Property Administration Proclamation No. 649/2009. The Proclamation establishes the Federal Public Property and Administration Agency (FPPA) as a body responsible for regulation and monitoring of Federal bodies public procurement activities. The Nine regional states and two City administrations do have their own procurement proclamations and directives which are basically drafted using the federal one as a prototype.

2. At the regional and woreda levels, public procurement is governed by proclamations enacted by the respective regional governments derived from the federal model law of 2009. Currently, all the SLMP-2 implementing regions which include Amhara, Benshangul Gumuz, Gambela, Oromia, SNNP and Tigray have issued public procurement proclamations using the procurement law of the Federal Government as a prototype. These Regions have also issued procurement directives which guide the procurement processes in the respective regions. However, the proclamations ratified by some regions have not provided for establishing independent procurement agencies (regional PPAs) and the regulatory bodies in the regions remain as a department within the respective Regional Bureaus of Finance and Economic Development (BoFEDs). The fact that the procurement proclamations in the regions have not provided for the establishment of independent oversight bodies including regulatory bodies and complaint hearing boards remains a challenge in the procurement legal and institutional framework in the regions. Moreover lack of capacity in the regulatory departments in the BoFEDs to carry out procurement audits and limitation in internal control mechanisms contribute to the high risk of the project procurement.

General Provisions

3. Procurement under SLMP2 would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated January 2011; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011; and Bank's Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants Dated October 15, 2006 and the provisions stipulated in the Legal Agreement. The general descriptions of various items under different expenditure category are described below. For each contract to be financed by the Loan/Credit, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are to be agreed between the Borrower and the Bank project team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

4. Bank standard documents shall be used for selection of all consultancy services[22] and procurement of goods and works through International Competitive Bidding (ICB). National competitive bidding will use Government standard bidding documents and procedures subject to the following exceptions: (i) The Recipient's standard bidding documents for procurement of goods and works acceptable to the Bank shall be used. At the request of the Borrower, the

[22] All consultancy services selections procedure to follow Bank's Consultant Guidelines and use Bank standard Request for Proposal (RFP) document since the Borrower did not have such RFP that have been reviewed and found acceptable by the Bank.

introduction of requirements for bidders to sign an Anti-Bribery pledge and/or statement of undertaking to observe Ethiopian Law against Fraud and Corruption and other forms that ought to be completed and signed by him/her may be included in bidding documents if the arrangements governing such undertakings are acceptable to the Bank. (ii) No margin of preference shall be granted in bid evaluation on the basis of bidder's nationality, origin of goods or services, and/or preferential programs such as but not limited to small and medium enterprises. (iii) Mandatory registration in a Supplier List shall not be used to assess bidders' qualifications. A foreign bidder shall not be required to register as a condition for submitting its bid and if recommended for contract award shall be given a reasonable opportunity to register with the reasonable cooperation of the Recipient, prior to contract signing. Invitations to bids shall be advertised in at least one newspaper of national circulation or the official gazette or on a widely used website or electronic portal with free national and international access. (iv) Bidders shall be given a minimum of thirty (30) days to submit bids from the date of availability of the bidding documents. (v) All bidding for goods and works shall be carried out through a one-envelope procedure. (vi) Evaluation of bids shall be made in strict adherence to the evaluation criteria specified in the bidding documents. Evaluation criteria other than price shall be quantified in monetary terms. Merit points shall not be used, and no minimum point or percentage value shall be assigned to the significance of price, in bid evaluation. (vii) The results of evaluation and award of contract shall be made public. All bids shall not be rejected and the procurement process shall not be cancelled, a failure of bidding declared, or new bids shall not be solicited, without the Bank's prior written concurrence. No bids shall be rejected on the basis of comparison with the cost estimates without the Bank's prior written concurrence. (viii) In accordance with para.1.16(e) of the Procurement Guidelines, each bidding document and contract financed out of the proceeds of the Financing shall provide that: (1) the bidders, suppliers, contractors and subcontractors, agents, personnel, consultants, service providers, or suppliers shall permit the Association, at its request, to inspect all accounts, records and documents relating to the bid submission and performance of the contract, and to have them audited by auditors appointed by the Association; and (2) acts intended to materially impede the exercise of the Bank's audit and inspection rights constitutes an obstructive practice as defined in the para. 1.16 a (v) of the Procurement Guidelines.

5. Procurable Items under the Project: Procurable items under the project will include works, goods and non-consulting services and consultancy services. Works procured under SLMP-2, will include: construction of small scale irrigation schemes, construction of water harvesting structures, construction and rehabilitation of community access roads, gully treatment, etc. These small works are envisaged to take the major portion of the project investment. The procurement of such small scale works, at the watershed levels, shall be carried out using the Bank's procurement procedures or following community participation in procurement to be elaborated in the Project Implementation Manual. Goods to be procured under the project will include vehicles and office equipment for central and decentralized level and irrigation and hand tools, construction materials, different types of livestock, beehives, goods and equipment for community infrastructure works, seeds and seedlings at regional and Woreda level. Non consultancy services will include mapping of critical habitats, transportation of goods and equipment. Consultancy assignments will include individual technical assistance at various levels of project implementation and advisory services to be provided by firms in various aspects of the project as described in the Project Procurement Plan.

6. Retroactive contracting and Financing: The Government has requested for retroactive financing of US$320,000 for goods, non-consulting services and consulting services to start up project implementation. These goods and services include awareness workshops, aerial mapping and consultants for updating Project Implementation Manual, Communication & Participation Strategy and Gender Strategy, among others. The Bank agreed to retroactive financing of these activities during negotiations. Procurement procedures, including advertising, shall be in accordance with the agreed procedures under the proposed Credit as detailed in this Annex in order for the eventual contracts to be eligible for financing under the Credit.

7. Procurement Methods: Works, Goods and Non-Consultancy Services will be procured through a variety of methods that will include International Competitive Bidding, National Competitive Bidding, Direct Contracting and Shopping. The choice and application of a particular method will be determined by the cost estimate, nature of the goods, availability of goods in-country and market situation. The applicable methods for works and goods and shortlists for consultants will be as follows:

<table>
<tr><td colspan="2">Contracts for</td><td colspan="2">Shortlisting of Consultants</td></tr>
<tr><td>Works</td><td>Goods and Non-Consulting services</td><td>Engineering and works supervision</td><td>All other consultancy assignments</td></tr>
<tr><td>Contract value is less than US$7,000,000</td><td>Contract value is less than US$1,000,000</td><td>Contract value is less than US$300,000</td><td>Contract value is less than US$200,000</td></tr>
<tr><td>National Competitive Bidding (NCB) is allowed</td><td>NCB is allowed</td><td>Shortlist may be made up entirely of national consultants</td><td>Shortlist may be made up entirely of national consultants</td></tr>
<tr><td>Contract value is more than US$7,000,000</td><td>Contract value is more than US$1,000,000</td><td>Contract value is more than US$300,000</td><td>Contract value is more than US$200,000</td></tr>
<tr><td>International Competitive Bidding (ICB) is required</td><td>ICB is required</td><td>Shortlist cannot be made up entirely of national consultants</td><td>Shortlist cannot be made up entirely of national consultants</td></tr>
<tr><td>Contract value is less than US$200,000</td><td>Contract value is less than US$50,000</td><td colspan="2">Individual Consultants of any value</td></tr>
<tr><td>Shopping (Request for written quotation) is allowed</td><td>Shopping (Request for written quotation) is allowed for up to US$50,000. For vehicles, it will be allowed up to US$200,000</td><td colspan="2">Comparison of at least three CVs of qualified consultants. Advertisements is not mandatory but is recommended. No Request for Proposal required</td></tr>
</table>

Consultant's selection methods may include Quality and Cost Based Selection (QCBS), Quality Based Selection (QBS), Least Cost Based Selection (LCS), Fixed Budget Selection (FBS) and Consultant Qualification as appropriate all as described in Consultant Guidelines and agreed in the Procurement Plan. Direct contracting (for goods and works) and single source selection may also be used when the implementing agency is satisfied that such method brings value for money and the conditions stipulated in paragraph 3.7 of Procurement Guidelines and paragraph

3.8 of Consultant Guidelines are fulfilled to the satisfaction of the Bank. Goods and works required under Community demand driven initiatives may be procured by shopping and or other methods under Community Participation as will be detailed in the Project Implementation Manual.

8. Use of the consultancy services of Government-owned Universities or research centers: Government-owned entities are neither legally nor financially autonomous. Thus, under ordinary circumstances they would not be eligible to participate in Bank financed projects as consultants. However, in this project, some Government - owned universities and research centers may possess the requisite expertise and accumulated local practices in land and natural resource management. Therefore, their participation is considered to be critical due to their unique local research knowledge and experience in the sector. Thus, as an exception to the eligibility in accordance with paragraph 1.11(c) of the Consultants Guidelines, these universities and research centers will be allowed to participate as consultants in this project on a case-by-case basis whenever their participation is justified that they can add better value to the achievement of the project objectives. The selection of appropriate universities and research centers will be done competitively. On the same basis, university professors or scientists from research institutions will be contracted individually under this project when the need arises.

9. Operational Costs: Expenditures made for operational costs such as fuel and stationery, cost of operation and maintenance of equipment, communication charges, transportation costs and travel allowances to carry out field supervision will follow Ethiopian Government practices that have been found acceptable to the Bank and included in the PIM.

10. Training and workshops: Training and workshops will be based on capacity-building needs. Venues for workshops and training as well as purchases of materials for training and workshops will be done on the basis of at least three quotations. The selection of institutions for specialized training will be done on the basis of quality and therefore will use the Qualifications Based Selection method. Annual training plans and budget shall be prepared and approved by the World Bank in advance of the training and workshops.

11. Margin of preference for domestic goods: In accordance with paragraphs 2.55 and 2.56 of the Procurement Guidelines, the Borrower may grant a maximum of margin of preference up to 15 percent for goods manufactured in the Borrower country and maximum of 7.5 percent for eligible local contractors in the evaluation of bids under ICB procedures, when compared to bids offering such goods produced elsewhere and foreign contractors.

Assessment of the agency's capacity to implement procurement

12. Procurement of the SLMP-2 shall be carried out in a decentralized manner in six national regional states of Ethiopia in 45 existing and 90 new watersheds. At the central level, the Project Coordination Unit in the Ministry of Agriculture (MoA) is the focal organization for implementation of the SLMP-2. The six regional states which are the beneficiaries of the SLMP include Amhara, Tigray, Oromiya, SNNP, Gambela and Benshangul Gumuz National Regional States. The Bureaus of Agriculture and/or Pastoral Development Agencies and the Woreda Agricultural Development Offices shall serve as the implementing organizations of SLMP-2 in the respective regions. SLMP-2 is a land and watershed management project and the

implementation of the SLMP-2 is carried out in the existing and new watersheds in the beneficiary Woredas.

13. In MoA, the SLMP-2 project coordination unit shall serve as the focal organ for the implementation of the project. The pooled procurement of SLMP-2 such as vehicles, motorcycles, IT and office equipment shall be handled by the procurement unit of the Federal project coordination unit. In the regions, under the current SLMP-1 project there are no regional procurement coordinators and procurement at this level is carried out by the regional BoFED which is considered as a shortcoming for the smooth processing of procurement to be carried out at regional level. In the Woredas, procurement is handled through a pooled procurement system in the Finance and Economic Development Offices of the respective woredas.

14. An assessment of the capacity of the implementing agencies responsible for the implementation of procurement activities for the SLMP-2 has been carried out by a procurement specialist in the Country Office in May 2013. The assessment carried out reviewed the organizational structure for implementing the SLMP-2 and the staff responsible for procurement at the Federal coordination unit, Regions, and Woredas. The assessment also looked into the legal aspects and procurement practices; procurement cycle management; organization and functions; record keeping; and the procurement environment. Moreover the assessment recognizes the fact that there are a substantial number (90) of new Woredas which are to be included under SLMP-2 and which do not have the experience of implementing Bank financed projects.

15. The assessment has revealed that efforts have been made to institutionalize procurement at Federal level, the regions, and Woredas which have been included under SLMP-1. However, there are still key issues and risks which need to be addressed for implementation of the procurement aspects of SLMP-2. There is also recognition of the fact that there are Woredas which are new to Bank financed projects under SLMP-2. The key issues and risks for implementation of procurement under the SLMP include: (i) lack of qualified procurement staff particularly in the Regions and Woredas; (ii) poor record keeping; (iii) lack of continuous skill development schemes particularly in the regions and woredas; (iv) the level of pay scale for procurement personnel which is too low to attract qualified procurement personnel; (v) high level of staff turnover; (vi) lack of procurement planning and follow-up at Woreda level, and (vii) the highly decentralized and remoteness circumstances of project procurement environment for implementation of projects.

16. A summary of the risks to procurement under SLMP-2, as well as the proposed procurement capacity-enhancement measures to mitigate the risks, is presented in the following Table. The table also includes an assessment of the procurement environment of the country and the regions, capacities of the Federal SLMP Coordination Unit, the Regional and Woreda Finance and Economic Development Offices which have formed the basis for the action plans that have been agreed between the Government and the Bank as measures to mitigate the procurement risk under SLMP-2.

Table A8.1: Summary of Findings and Actions (Risk Mitigation Matrix)

No.	Major findings/issues	Actions proposed	Responsibility	Targeted date
1.	Weak procurement oversight bodies at regional level	1. Conduct annual independent procurement reviews of the project	SLMP-2 Federal Project Support Unit	Annually following the end of each FY
2.	Lack of qualified procurement staff to handle procurement in the Regions and to support procurement staff in the woredas	1. Employ qualified procurement staff in the four regions of Amhara, Oromiya, SNNP & Tigray. The Federal SLMP-PSU will support procurement activities of the remaining two regions namely Gambela and Benshangul Gumz, in addition to their full responsibility for the entire project implementation.	RPSUs	One month after project effectiveness
3.	Lack of qualified procurement staff and high procurement staff turnover at SLMP-2 Woredas	1. Provide periodic procurement clinics to Woreda procurement staff, finance staff, tender committee members, and officials making procurement decisions in the Regions and Woredas. 2. Provide basic procurement training in Management of Procurement of Goods and Equipment offered at EMI to Regional Procurement Coordinators 3. Provide procurement staff with the necessary facilities to create conducive working environment and mobility to support the communities. 4. the Borrower to practice different incentive mechanisms including improving the working environment, consideration of salary scales improvements and provision of further training opportunities for staffs who are committed to serve the project for longer period of time.	FPSU/RPSUs /	Initial stage of implementation and periodically during project implementation

No.	Major findings/issues	Actions proposed	Responsibility	Targeted date
4.	Inadequate procurement planning at Woreda level	1. Make procurement planning a requirement as part of work plans and budget preparation at all levels; 2. Each procurement entity shall prepare satisfactory annual Procurement Plan. At Woreda level simplified procurement plan shall be used to prepare and monitor procurement of SLMP-2 at community level; 3. 3. Train procurement staff to train other staff in procurement planning.	FPSU/RPSUs/ WoFEDs	Initial stage of implementation.
5.	Need for well descriptive procurement manual of the SLMP-2 Project & Community Participation in Project Implementation Manual	1. Prepare a procurement manual of the SLMP-2 project which shall also include community participation in procurement. The manual needs to clearly define: (i) procurement responsibilities (procurement decision matrix); (ii) the procurement items to be eligible under the project; (iii) The manual has to be able to define the necessary steps and procedures for different procurement methods; (iv) provide templates and standard documents to guide the staff on different procurement actions/process; (v) outline the procedures and circumstances under which community participation in procurement is feasible. 2. Disseminate the procurement manual to all implementing agencies	FPSU	Before project effectiveness
6.	Lack of capacity for satisfactory data management and maintenance of procurement audit trail	1. Training on procurement record-keeping to be provided to all regional and woreda procurement and finance staff of SLMP-2 implementing agencies 2. 2. Establish satisfactory procurement data management system.	FPSU/RPSUs/ Woredas	Three months after project effectiveness

Assessment of risk

17. The overall risk for procurement under SLMP-2 is rated **HIGH**, and the thresholds for prior review for international competitive bidding (ICB), including the maximum contract value for which the shortlist may comprise exclusively Ethiopian firms in the selection of consultants, are presented in Table A8.2 for purposes of the initial Procurement Plan. The procurement capacity of the SLMP-2 implementing agencies would be reviewed annually and the thresholds revised according to the improvements or deterioration in procurement capacity.

Table A8.2: Thresholds

Category	Prior Review Threshold (US$)	ICB Threshold (US$)	National Shortlist Maximum Value (US$)
Works	≥5,000,000	≥7,000,000	NA
Goods	≥500,000	≥1,000,000	NA
Consultants (Firms)	≥200,000	NA	<200,000
Consultants (Individuals)	≥100,000	NA	NA

18. All ICB contracts shall be subject to IDA prior review. All single source and direct contracts above US$1,000 will require Bank prior review except for such procurements under community participation where the allowable threshold without Bank prior review will be US$5,000 equivalent per contract as per SLMP I. A higher threshold for direct contracting has been provided for under community participation because of the nature of goods to be procured such as seedlings which are not competitively produced and the geographical location of the work sites.

Procurement Plan

19. A Procurement Plan was developed for project implementation which provides the basis for the procurement methods. This plan was reviewed and agreed on during project appraisal and will be available in the Project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Bank annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

Frequency of Procurement Supervision

20. In addition to the prior review supervision to be carried out from Bank offices, annual supervision missions to visit the field to carry out post review of procurement actions will be conducted.

Annex 3 (d): Safeguards

Environmental Safeguards

1. The SLMP-2 has been assigned the environmental category "Category B". Generally impacts of SLMP-2 implementation are expected to be positive contributing to improving the rehabilitation of degraded areas and improving productivity the agricultural landscape. However, site specific and less sensitive localized environmental and social impacts (e.g., pollution from agrochemicals, erosion, biodiversity loss, salinity, habitat destruction) may occur in the implementation areas. As a result, the Project triggers seven of the World Bank Safeguards Policies, requiring compliance with appropriate environmental assessment procedures and steps to address all possible negative impacts. In view of this, an ESMF document has been prepared in order to manage and avoid the negative environmental and social impacts that may arise from the implementation of sub-projects to be financed under some of the project components in the SLMP-2. The environmental and socio-economic milieu of the intervention areas are characterized by high production potential but with significant limitations due to severe land degradation, high agro-ecological variability and diverse farming systems, high population density and land fragmentation.

2. The main objectives of the ESMF are: i) to establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the program; ii) to specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to program investments; and iii) to determine the training and capacity building needs of the implementing institutions. Certain social impacts and risks are addressed in a separate parallel Social Assessment (SA) study prepared to meet the requirements of OP 4.10 in which the main social impacts are identified and mitigation measures are proposed. A Resettlement Policy Framework (RPF) has also been prepared, consulted upon, and disclosed, as there may be possible involuntary resettlement and/or restrictions of access to resources or livelihoods as a result of the project activities; Resettlement Action Plans RAPs) will be prepared as and when necessary during project implementation. The ESMF will be implemented along with the social safeguard instruments. The SA objectives include assessing socio-economic factors that require due consideration, identifying vulnerable and underserved groups that may be excluded from the project and affected by the project, assessing the potential social impacts, risks and the mitigation measures.

3. This ESMF has been prepared by collecting primary and secondary data as well as compiling information through extensive review of project documents, environmental policies, laws, regulations, proclamations and guidelines at the Federal and Regional levels, consultative discussions with project team members of the project support unit (PSU) at the Ministry of Agriculture, consultations with legal experts, monitoring and evaluation experts at the former Federal Environmental Protection Authority, and environmental regulatory experts at representative regional environmental protection agency. In depth discussions were held with the SLMP regional coordinators of Tigray, Amhara, Oromia, Southern Nations and Nationalities Peoples, Gambela and Benshangul Gumuz. In addition, consultations with Woreda focal persons and local communities were held during a field visit to selected Woredas and watersheds. The

draft ESMF, as per the requirement of OP 4.01, has been consulted with stakeholders drawn from governmental and non-governmental organizations and feedback obtained from the consultation has been incorporated.

4. The Project has four major components. Component 1: Integrated Watershed and Landscape Management Component 2: Institutional Strengthening, Capacity Development and Knowledge Generation and Management; Component 3: Rural Land Administration, Certification and Land use; and Component 4: Project Management (component 4). Component 1 and 2 have a range of activities such as construction of small scale irrigation schemes, community access road construction, water harvesting structures, small or micro-dams, degraded forest rehabilitation and reforestation, gully rehabilitation, land mapping and registration, most of which may involve manipulation of landscapes and resources, and or affect the use rights (tenure rights) of people and/or their access rights to resources. These activities may cause some unforeseen negative environmental and social impacts. These impacts may include biodiversity loss, natural habitat and cultural resources destruction, soil erosion and sedimentation, restriction of access to resources, flooding, involuntary loss of land and displacement of people, pollution and diseases. Component 3 and 4 are focused on capacity building and knowledge management, monitoring and evaluation, safeguard implementation, etc. and may not have any adverse environmental and social risks.

5. The ESMF outlines the relevant national and regional administrative and environmental policies, laws, proclamations, guidelines and procedures to be followed during the screening of sub-projects against any potential environmental and social impacts. It includes measures for addressing broader environmental and social impacts and impacts on natural habitats and forests, an Integrated Pest Management Plan, and, on Dam Safety, refers to the FAO Manual on "Small Earth Dams: A guide to sitting, design and construction" as well including a summary of the Ministry of Agriculture's guidelines on the construction of small dams.

6. The environmental and social management process starts with the sub-project planning process in the SLMP-2 during the identification of sub-projects by local communities based on their needs and priorities through a participatory watershed planning process guided by the Community Based Participatory Watershed Development Guidelines (CBPWDG), technical support from development agents (DAs) and Woreda experts. The DAs at the Kebele level will screen eligibility of sub-projects against pre-set eligibility criteria. The project support unit will ensure and document such procedures are properly followed. The project design/plan will then be sent to the Woreda Agriculture Office and the Watershed Technical Committee. The Technical Committee including experts from the Woreda Environmental Protection, Land Use and Administration Unit (EPLAUA), will screen the sub-projects. This Committee passes recommendations if any design modifications are required. The Woreda Council will then approve plans based on the recommendations of the Technical Committee. After approval, the plan document is referred to the regional Bureau of Agriculture (BoA) with all the accompanying environmental and social screening documents/files. If sub-projects of any significant environmental concerns are included, then the plan document will be directed to the attention of the Regional Environmental Protection and Land Administration Agency/ Bureau (REPLA/B). The REPLA/B will make decisions if an Environmental and Social Impact Assessment (ESIA) is required for those projects. Based on ESIA outcomes, REPLA/B will recommend modifying the

design, preparing environmental and social management plan to mitigate negative impacts or reject/disapprove the project.

7. During preparation of the ESMF, consultations with regional SLMP coordinators, Woreda focal persons and local communities revealed that there were two major gaps in implementing the ESMF that was prepared under SLMP-1. These were limited technical capacity at the Kebele and Woreda levels in screening sub-projects and absence of appropriate reporting formats; and absence of budget for the implementation of the ESMP and mitigation measures. In order to address these gaps under SLMP-2, capacity building in the form of training and skills upgrade on watershed management, environmental management, safeguard policies, project screening, monitoring and evaluation skills, participatory planning, and environmental and social audit are proposed to be provided to Woreda and regional experts, Technical Committee members and Steering Committee members. In addition, monitoring of the ESMF implementation and backstopping support on technical issues would be provided by the PSU. The implementation of the ESMF (plus SA and RPF recommendations) including capacity building and implementation of mitigation measures may require an estimated budget of US$1.60 million for the coming five years.

Social Safeguards

8. The project's minor rehabilitation, civil works, treatment of gully sites and community infrastructure may cause temporary economic or physical displacement triggering OP 4.12 and as a precautionary measure, a Resettlement Policy Framework has been prepared, consulted upon and disclosed before appraisal. The Bank's OP 4.10 is triggered, predicated on the screening conducted by the World Bank and the constitution of Ethiopia which indicate that majority of the target population identify themselves as having the characteristics associated with population defined under OP4.10 in varying degrees: (a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; (b) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories; (c) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and (d) an indigenous language, often different from the official language of the country or region. Therefore, the Social Assessment (SA) and enhanced consultation were conducted to complement the RPF. The SA assessed key socio-economic factors that require consideration; identified vulnerable and historically underserved groups (e.g. Majenger, Anuak, Nuer, Gumz, Mao-Komo, among others) that may be excluded from the project and be adversely affected as a result; and recommends appropriate mitigation measures towards addressing the World Bank's requirements on social safeguards triggered by the project (OP/BP 4.10 and OP/BP 4.12). Culturally appropriate (and in-depth) consultations were conducted in good faith to seek broad community support for the project.

9. Social Assessment: The results of the SA indicate that SLMP1 project promoted community level infrastructure and income generating activities in the wider context of integrated watershed and landscape management, resulting in reducing land degradation at the community level. While these activities will continue to be supported, SLMP2 will in addition support community mobilization and communication to sensitize the affected communities on how they will work together with the engineers to reduce water flow from the upper watershed and how they can

organize into user groups, to manage the watershed and monitor the treated communal land and gullies. The experience of the SLMP-1 shows that livelihood improvement activities are critical to sustainable land management, particularly for those living in vicinity of the affected degraded land. The proposed SLMP-2 will incorporate these lessons and proactively link livelihood activities to local conditions of participating communities and would assist them in developing income generating activities in environmentally friendly, culturally appropriate and socially sustainable manner. Further, findings of the social assessment indicate that the project is responsive to social development concerns, particularly in targeting benefits to the poor and underserved people, and using participatory methods to develop and implement programs that best match local needs and demand. The social assessment findings also include gender sensitivity recommendations to improve the gender focus of the project and particularly taking into consideration women's role in rural land management.

10. *Stakeholder consultation and disclosure of safeguards document:* In accordance with the World Bank's operational policies, stakeholder consultation in the field with project beneficiaries and project affected peoples, including identified vulnerable and historically underserved groups, meeting the OP 4.10 criteria were done to seek broad support for the project from these groups (as part of the social assessment and RPF formulation). Stakeholder workshops have been carried out to discuss all aspects of the project prior to appraisal. These consultations were aimed at listening to all key stakeholder groups, particularly project affected persons/communities; seeking feedback and consensus from them and incorporating comments, suggestions and remediation proposals into the various safeguards instruments. The feedback from the consultation indicates strong demand from historically underserved areas, including other beneficiaries, and development partners of their support for the project. They equally would like the project to be extended to relevant communities regardless of their ethnic background, sex, age, and health status and that gender issues be considered and actualize in the form of gender action plans. The Government has responded and is developing a gender strategy and action plan in SLMP2 that will clearly indicate the role of men and women in SLM scaling up and which will foster a much needed measureable gender equity outcomes in identified activities/subprojects to be undertaken by the project. They suggested that the project should avoid the tendency on the part of *woreda* and *kebele* administrations not to give emphasis to the use of traditional dispute settlement mechanisms such as the *yegelegel shemagele* in Amhara *and jaarsumma* in Oromia.

11. Grievance redress mechanism (GRM): the project has taken the following preventive measures to remediate any potential risks including incorporating the findings of the Social Assessment and consultation into the design including ensuring the establishment of grievance redress mechanism, capacity building of local staff on cultural sensitivity of community members. Specifically, the project will strengthen the existing traditional conflict resolution mechanism and where it is not possible; will establish an independent GRM that explains how local implementers are addressing any citizen's complain or grievance in a formalized, transparent, cost-effective and time bound manner. This may be set up through Local Authorities or through community leaders. All Project-Affected People (PAPs) will be informed about how to register grievances or complaints, including specific concerns about land certification program or other subproject activities. Resolution of different types of grievances will be attempted at different levels: (i) Solutions to grievances related to subproject activities and impacts should be

pursued at the community level with facilitation by kebele team together with community in order to find solutions that avoid or further minimize the need for conflict; (ii) Solutions to grievances related to land certification and cultural impacts should likewise be attempted at the community level with facilitation by Subproject team (iii) Solutions to grievances related to violence against women and abuse should be pursued directly by the designated team through liaison with the relevant actors (iv) Arbitration by appropriate local institutions such as Local Authorities or community leaders should be encouraged and the project will tap into the PBS III existing regional **GRM** offices in Ethiopia, and build on the successes of those regional offices that reach international standards. The Ethiopian Institute of Ombudsman (EIO), which reports directly to parliament and is independent of government agencies, now implementing the GRM (v) Where satisfactory solutions to grievances cannot be achieved, the aggrieved party may take the matter before the courts.

12. Benefit Sharing Mechanism: This project will not invest in civil works or explore natural resources of the participating communities, but will mainly enhance the land quality through input support and rehabilitation of degraded land. Therefore, benefit sharing will be operationalized through distributing project benefits appropriately among different stakeholders through greater social inclusive process and in socially sustainable manner to provide a large number of development benefits to local communities, particularly for the historically underserved.

13. Potential Implementation risks and challenges: The table below provides the summary of potential risks/challenges associated with the implementation of the four components of SLMP-2 and mitigation measures that will be undertaken by the project.

Component	**Potential risks and Challenges**	**Mitigation Measures**
Component 1: Integrated Watershed and Landscape Management	▪ Focuses on supporting smallholder farmers to scale up and adopt best-fit sustainable land and water management technologies and practices. Hence, there is a possible risk/challenge of not properly addressing the circumstances of groups such as hunters and gatherers, who peruse peculiar livelihood systems and natural resource management strategies. ▪ The creation of benefit streams through markets and other market-based instruments like results-based payments involve the risk/challenge of not properly taking into account the circumstances of	➢ Devise a mechanism to include hunters and gatherers' livelihood strategies into the SLMP program. One example is their traditional beekeeping, which largely takes the form of wild honey collection, but can be integrated into the SLMP activities, with an injection of modern beekeeping technology as the latter is more productive, sustainable and environmentally friendly. ➢ The project, through consultation with the beneficiary communities, will devise possible mechanisms on how to make the old, the sick and disabled benefit from the project even when they might not afford to contribute either labour or cash to the project implementation. For example, the elderly people can be used as advisors, the disabled as timekeepers, etc.

	the elderly, disabled, and poor members of the community. ➢ Watershed community saving is part of the project activities that helps *Users' Groups* who voluntarily organize themselves to engage in IGA suitable to their respective environment. In principle membership is open to all members, but the minimum cash contribution and active participation requirement to run the IGA leaves out some members of the community. This involves the risk of further marginalizing the vulnerable groups. ➢ Female household heads may face the risk of not benefiting from the Project in equal measure with male counterparts because of not being able to balance their domestic responsibilities with their project-related role in the treatment of communal lands.	➢ The project will devise a mechanism (e.g., interest free loan) by which watershed community members who are likely to be left out due to the inability to meet the minimum membership requirement can also benefit from the scheme. ➢ Special support needs to be provided to women playing the dual role of mothers and household heads, and active participation in the Project with male community members. Arrangements may be made in consultation with watershed committees in this respect. Suggested ways to help them balance their competing responsibilities may be allowing them to a certain number of hours or days off from the minimum required time of labour contribution to the Project.
Component 2: Institutional Strengthening, Capacity Development and Knowledge Generation and Management	➢ Lessons learned from SLMP-1 show that inadequate attention to the use of locally available social capital such as indigenous knowledge systems, time-tested adaptation strategies, and community based traditional institutions constitutes a risk that can undermine the potential positive roles the latter might play as grievance redress mechanisms during the implementation of SLMP activities.	➢ Traditional institutions of self-help and dispute settlement mechanism are well embedded into the social fabric of the Ethiopian society. It is expected that locally available social capital, which takes the form of traditional institutions of self-help and dispute settlement mechanisms, be used as community mobilization and grievance redress mechanisms to facilitate and speed up the implementation of relevant project components and sub-components.
Component 3: Rural Land Administration, Certification	➢ The implementation of the '*Rural Land Administration and Certification*' sub-component should not be	Care needs to be exercised to make sure that the '*Rural Land Administration and Certification'* sub-component of the Project is not implemented on a wholesale basis in

and Land Use	based on wholesale or universal application in all Project *woredas*. This is because population groups in the historically underserved project *woredas*/watersheds exercise livelihood strategies that require peculiar landholding and land use arrangements from those of smallholder farming communities. However, implementing the sub-component without due regard for these peculiarities may entail a risk that interferes with smooth project implementation. ➢ As previous experience shows, there is also the risk of female household heads losing their land that they have leased to sharecroppers, who can register the plots in their name for certification against the terms of the sharecropping agreements.	all Project *woredas*/watersheds, and instead takes into account the unique landholding and land use characteristics of the historically underserved population groups in the developing regional states (DRS). The Project will work on consolidating grassroots institutions such as rural land dispute adjudication and grievance redress structures. Strengthening such establishments plays an important role in making sure that women who lease their land in sharecropping arrangements will not unfairly lose their landholding rights as a result of the breach of agreements in the land registration and certification process.
Component 4: Project Management	➢ Inadequate project implementation capacity was reported in the *woredas/*watersheds visited for this social assessment. The capacity-related problems resulted from the shortage or absence of human resource. In many *woredas*/watersheds, only one project focal person was assigned to coordinate the Project, resulting in hard pressure of work. In addition, it was observed that members of the steering committees drawn from different sector offices showed the tendency of regarding their role in the project as secondary to their	The project will aim at staffing the project implementing units with the right mix of experts at all levels. This may be done by hiring professionals and introducing an incentive mechanism to motivate and retain the personnel from different sector offices assigned to support the Project as Steering Committee members. Lack of facilities such as field vehicles and motorcycles is reported to have adversely affected the conduct of regular watershed site visits and on-site observation and follow-up of project implementation. Proper attention will

	regular job commitments. ➢ Moreover, in some of the project *woreda*s/watersheds, constraints related to facilities (shortage of vehicles and motorcycles) and delay in the release of project budget were reported to have negatively affected the process of project implementation.	therefore be given to providing regional and *woreda* Project staff with the necessary facilities to enable theme regularly visit watershed sites and effectively monitor project execution.

Annex 4: Operational Risk Assessment Framework (ORAF)

Ethiopia: Sustainable Land Management Project-II (P133133)

<table>
<tr><td colspan="7">Project Stakeholder Risks</td></tr>
<tr><td>Stakeholder Risk</td><td>Rating</td><td colspan="5">Substantial</td></tr>
<tr><td rowspan="2">Risk Description:

Mobilization for SLM has been mostly voluntary. Often times, mobilization for SLM is seen by some Ethiopians to occur when political pressure is put on rural communities.

- Climate smart/resilient SLM attracts a lot of donor attention at present. This is leading to increased expectations on the part of the Government, civil society organizations and even the private sector. On the other hand, poor rural farmers may be skeptical about any unique technologies and resist change of farming systems that may be perceived to result in reduction in yields and productivity.

- Ethiopia has embarked on the preparation of a Climate Resilient Green Economy (CRGE) strategy (the Green Economy strategy was launched in December 2011 in Durban during COP 17 of the UNFCCC) that is proposing a carbon neutral economy by 2025. There could be backlash if Ethiopia is not able to push this agenda in the medium-term.</td><td colspan="6">Risk Management:

Risk Management:
- Project team will maintain close communication with all stakeholders especially rural communities. There will be bottom-up project planning process that will empower communities to take decisions that affect their lives and bio-physical environment.

- Strategies and action plans for effective participation, consultation and communication for the project are being prepared and will be implemented once the project becomes effective.

- Project funds will be used to establish and strengthen local institutions and user groups for delivery on the project and to ensure institutional sustainability.

- Project team will ensure to manage expectations throughout project implementation.</td></tr>
<tr><td>Resp:
Both</td><td>Status:
Not Yet Due</td><td>Stage:
Both</td><td>Recurrent:
☑</td><td>Due Date:</td><td>Frequency:
Quarterly</td></tr>
<tr><td colspan="7">Implementing Agency (IA) Risks (including Fiduciary Risks)</td></tr>
<tr><td>Capacity</td><td>Rating</td><td colspan="5">Substantial</td></tr>
<tr><td>Risk Description:

Description :
- SLM is at the frontier of environmental discussions. It requires strong capacities on different domains: cross-sectoral planning, project/programs</td><td colspan="6">Risk Management:

Risk Management: Aside focusing on actual on-the-ground physical and biological rehabilitation of degraded landscapes, the Project will focus on capacity building at various levels and domains (development and use of geographic information system, planning, monitoring, data management, financial management, communication and stakeholder</td></tr>
</table>

managements on the ground, management of multi-stakeholder engagement, capacity to monitor and report on progress, outputs and outcomes, modeling of future development, etc. - Although implementing agencies are supported by project staff, the ongoing SLMP-1 has had difficulties to retain staff. High turn-over in project staff may affect project delivery, including delivery of quality financial reports in a timely manner for the Project as well as financial management and procurement arrangements. Due to the remoteness of the woredas of the Project, close supervision and monitoring could be difficult leading to weak internal controls.	engagement, etc.) for improved land management, climate smart/resilient agricultural practices and technologies and resilience building, etc. - Continued efforts in assessing and developing capacity needs including local institutions to adopt sustainable agro-ecological farming models, build expertise in climate change-oriented agricultural research, advisory and extension services, improve climate change-related policy and institutional frameworks, etc. and proactively responding throughout the project period. - Provision of potential support from other DPs on technical aspects (e.g. agroforestry, zero tillage, carbon estimations in soil, modeling, etc.). - SLMP-2 will furthermore explore such measures as (i) entering into arrangements with a capacity building and monitoring agent (firm) to provide systematic and regular training and capacity building activities, particularly on the Project's fiduciary aspects, to all woredas as well as to undertake regular supervision and monitoring to ensure that irregularities and challenges with regards to financial management and procurement are identified and addressed in a timely manner; and, (ii) strengthening mobile support teams so that they have the capacity to mentor and coach woreda staff and can ensure that timely financial and activity reports are being produced. - To mitigate potential staff turnover, trainings will be rolled out continuously, and far-reaching incentive and reward systems (e.g. better remuneration, training, exchange visits, awards, etc.) instituted for hardworking project staff.

Resp:	Status:	Stage:	Recurrent:	Due Date:	Frequency:
Client	Not Yet Due	Preparation	☑		Quarterly

Governance	**Rating**	**Moderate**
Risk Description: Description : SLMP-2 may experience political and bureaucratic interference with attempts at elite capture, particularly at the sub-national levels. - The lack of procurement legal framework in Ethiopia will not allow the GoE to have compliance monitoring and procurement audits that are needed to enforce the	**Risk Management:** Risk Management: - SLMP-1 was designed to reduce this risk and this has largely worked effectively in the past. To reinforce existing practices, SLMP-2 will continue to establish and strengthen mobile support teams that support proper compliance of communities and local government officials with project rules and safeguard interest of the poor. - The Project will support the functioning of the various SLM platforms at federal, regional, woreda and kebele levels so that they will support the achievement of project objectives.	

creation and maintenance of the structures required to implement transparent, fair, efficient, accountable and value for money procurement. Further, the oversight arrangements do not satisfactorily address bidder complaints, which may discourage bidders from participating in MoA contracts thereby reducing competition.	- One plausible measure will be to develop and enact a procurement law that covers public enterprises in Ethiopia. This is a long-term action that would involve GoE actors including MoA. The lead agency for implementing this measure is MoFED. However, this mitigation measure to check fiduciary non-compliance will be outside the scope of the Project.

Resp:	Status:	Stage:	Recurrent:	Due Date:	Frequency:
Client	In Progress	Both	☑		Yearly

Risk Management:

Risk Management: The Bank continues to focus on fostering improved governance. The Country Partnership Strategy (2013-2016) emphasizes this issue. The multi-donor supported Protection of Basic Services Program and Public Sector Capacity Building Project present opportunities for citizens to engage more actively in development related decisions as well as to ensure greater transparency and accountability. The Bank continues to look for elements that can help promote more accurate and accessible information that expands the space for citizen engagement and private initiatives.

- At the local level in its areas of operation, SLMP-2 will support increased accountability and transparency through its community driven approaches.

Resp:	Status:	Stage:	Recurrent:	Due Date:	Frequency:
Client	In Progress	Implementation	☑		Yearly

Project Risks

Design	**Rating**	**Moderate**
Risk Description: Description : The design of the project has been kept simple. However, few new and innovative technologies may be introduced that will be strange to farmers. Therefore adoption may happen at a slower pace.	**Risk Management:** Risk Management: - The team will provide continued support to MoA during preparation phase. - A lot more comprehensive awareness and sensitization campaigns will be mounted. New and innovative technologies and approaches will be introduced to farmers on pilot basis and scaled up when adoption by farmers is seen to be influenced more by farmers' own conviction.	

Resp:	Status:	Stage:	Recurrent:	Due Date:	Frequency:
Both	In Progress	Both	☑		Monthly

<table>
<tr><td>Social and Environmental</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td rowspan="3">Risk Description:

Description:
The project could lead to exclusion of underserved communities and people from deriving benefits, accessing the forests and other assets, particularly when communally-owned lands may be put under enclosures. Unguarded implementation of certain activities under the project could result in negative impacts on the biophysical environment, albeit ephemeral and cost-effectively manageable.</td><td colspan="6">Risk Management:

Risk Management:
- An Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (RPF) and Social Assessment (SA) have been prepared to assess the scope and severity of potential environmental risks and social threats of the Project. These instruments have proposed sound preventive and mitigation measures for preventing and remedying any potential risks and threats that are likely to occur.
-The World Band will closely work with the MoA to implement the safeguards instruments, carry out additional studies, if needed, and provide tailor-made capacity building opportunities, e.g. training and skills upgrading for MoA staff and other relevant implementers, stakeholders and beneficiaries.

- Indicators to monitor environmental and social issues will be included in the results framework to ensure that environmental and social issues are monitored and addressed.</td></tr>
<tr><td>Resp:</td><td>Status:</td><td>Stage:</td><td>Recurrent:</td><td>Due Date:</td><td>Frequency:</td></tr>
<tr><td>Client</td><td>In Progress</td><td>Both</td><td>☑</td><td></td><td>Quarterly</td></tr>
<tr><td>Program and Donor</td><td>Rating</td><td colspan="5">Low</td></tr>
<tr><td rowspan="3">Risk Description:

Description:
- Various DPs, including German Development Cooperation (GIZ and KfW), CIDA, European Union, the Government of Norway through NoRAD, and the Nordic Development Fund (NDF) have either committed or notionally indicated their willingness to provide support to Ethiopia’s SLM program. The Government of Norway funds will be administered by WB through a trust fund arrangement. Coordinating with other donor-supported operations that would operate outside the SLMP-2 could be a challenge.</td><td colspan="6">Risk Management:

Risk Management:
- The existing oversight Steering and Technical Committees established under SLMP-1 and the RED/FS Platforms will be further strengthened and used for coordinating donor support.

- Under SLMP-1 joint planning and monitoring missions including support missions were encouraged. These will be further enhanced and strengthened under SLMP-2.</td></tr>
<tr><td>Resp:</td><td>Status:</td><td>Stage:</td><td>Recurrent:</td><td>Due Date:</td><td>Frequency:</td></tr>
<tr><td>Both</td><td>In Progress</td><td>Both</td><td>☑</td><td></td><td>Quarterly</td></tr>
<tr><td>Delivery Monitoring and Sustainability</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td>Risk Description:</td><td colspan="6">Risk Management:</td></tr>
</table>

Description: - Lack of a strengthened institutional oversight function at both federal and lower administrative levels might prevent the GoE from sustaining its effort in implementing sustainable and climate smart/resilient SLM initiatives. However, it would take time to establish capacities of those institutions.	Risk Management: - The SLMP implementation will require substantive expertise, given the incorporation of new intervention areas. Funding will be allocated for expertise to be brought in to assist in the implementation of technical activities.					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
	Client	In Progress	Both	☑		Quarterly
Other (Optional)	**Rating**					
Risk Description:	**Risk Management:**					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
				☐		
Other (Optional)	**Rating**					
Risk Description:	**Risk Management:**					
	Resp:	**Status:**	**Stage:**	**Recurrent:**	**Due Date:**	**Frequency:**
				☐		

Overall Risk

Overall Implementation Risk:	**Rating**	**Substantial**

Risk Description:

Generally, the current capacity within the agricultural and natural resource management sectors is limited, albeit with regional differentiations. Unattended to, this low capacity could negatively impact on effective and efficient implementation of project activities, fiduciary compliance and safeguards due diligence in in the project areas. The client proposes to appoint and/or hire specialists for project planning and M&E, financial management, procurement, safeguards, forestry and biodiversity, carbon finance, watershed and landscape management, gender, communication and participation, etc. Apart from the usual implementation support (at least twice per annum) provided by the World Bank, the portion of the Government of Norway grant that will be executed by the Bank (the Bank-executed Trust Fund) will also be used to provide technical assistance support towards implementation of the project. Also, the project will provide specialized tailor-made training to key project implementers, coordinators and facilitators, and decision makers and other beneficiaries throughout the life of the project.

Annex 5 (a): Implementation Support Plan

ETHIOPIA**: Sustainable Land Management Project (SLMP-2)**

Strategy and Approach for Implementation Support

1. The Implementation Support Plan (ISP) describes how the Bank and other Development Partners will support the implementation of the risk mitigation measures identified in the risk matrix and provide the technical advice necessary to facilitate in the implementation of project activities in achieving the project development objective. The ISP also identifies the minimum requirements to meet the Bank's fiduciary obligations.

2. The ISP is consistent with the implementation arrangement detailed in Annex 3. Furthermore, it is also consistent with the required and expected procedures and activities designed to mitigate risks as outline in Annex 4. The ISP is further detailed in the Project Implementation Plan (PIM). The PIM will be discussed during project appraisal and will be required for declaring the project effective.

3. Effective collaboration with the GoE in particular with the Ministry of Agriculture at the federal level as well as at the regional, woredas and kebeles is critical for efficient and effective implementation of the project. Furthermore, collaboration with other key stakeholders is also important including development partners supporting the SLM program, community organizations, private sector and academic/research institutions. During project preparation an effective participatory collaboration among all these stakeholders was successfully carried out which enriched the design of the project. The same collaborative approach will be adopted and further strengthened during project implementation.

4. The main areas of focus and skills requirements for implementation support to be provided by or through the Bank are as summarized in the following table.

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	• Staffing and building basic capacity • Initiating critical procurements • Establishing M&E and reporting systems • FM, Procurement • Safeguards	A variety of technical skills such as watershed management, climate smart agriculture, forest and water resource management, biodiversity conservation, land management, procurement, FM, safeguards, M&E/ project planning	US$150,000 (SPN) US$1,000,000 (BE MDTF)	Participation in meetings for improved development partner coordination; Through Norway support as part of Bank Executed MDTF, technical experts will be contracted by the Bank to support the GoE.
13-60 months	• NRM and climate smart agriculture measures • Homestead development • Livelihood and community infrastructure • Systematic training programs • NRM policy framework	A variety of technical skills such as watershed management, climate smart agriculture, forest and water resource management, biodiversity	US$150,000/year (SPN) US$4,840,000 (BE MDTF)	Participation in meetings for improved development partner coordination; Through Norway support as part of

	• Knowledge generation and dissemination • Rural land administration and certification • FM, Procurement • Safeguards • Reporting	conservation, land management, procurement, FM, safeguards, M&E/ project planning		Bank Executed MDTF, technical experts will be contracted by the Bank to support the GoE.

Implementation Support Plan

5. Joint implementation support missions will be carried out twice a year with the World Bank, GoE, the Government of Norway and other development partners during the life of the project. A mid-term review will be carried out to assess the project progress, achievement of the key indicators, risks and mitigation measures and relevance of activities. The Ministry of Agriculture will undertake an independent evaluation at the mid-term and project closing. Furthermore, an impact evaluation will be designed to assess the project outcomes as part of the M&E system.

6. The table below shows the estimated input requirements for key personnel to carry out the implementation support for the project.

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Team Leads	10+10 per year	2/year	TTL and Co-TTL (HQ/Ethiopia), overall implementation support and components 2, 3 and 4
Sustainable Land Management Specialist	44/year	Local trips	Local ETC with expertise in land management and land degradation issues in Ethiopia
Land Administration Expert	12/year	2/year	HQ STC with expertise in land administration and certification
Natural Resource Management Specialist	6/year	2/year	HQ staff with expertise in overall NRM issues for component 1
Institutional Development Expert	12/year	2/year	HQ STC with expertise in institutional development
Lawyer	6/year	2/year	HQ staff with expertise in environmental law
Climate Smart Agriculture Expert	44/year	Local trips	Local ETC with expertise in climate change, adaptation and agriculture
Watershed Management Expert	44/year	Local trips	Local ETC with expertise in catchment management, watershed management and associated livelihoods activities
Ecosystem Management Expert	44/year	Local trips	Local ETC with expertise in protected area management, biodiversity conservation
Forestry Expert	44/year	Local trips	Local ETC with expertise in forest conservation, woodlots and community forestry
Operational Specialist	8/year	2/year	HQ Staff with operational and overall NRM expertise
Agriculture Specialist	8/year	Local trips	Local based staff with expertise in agriculture extension,

			agronomy, rural development
M&E Specialist	8/year	2/year	HQ STC with expertise in M&E indicator tracking, refinement, use
Impact Evaluation Expert	10/year (for years 1, 3&5)	2/year (for years 1, 3&5)	HQ STC with expertise in M&E, impact assessment, survey design and analysis
Environmental Specialist	6/year	Local trips	Local based staff with expertise in environmental aspects and safeguards
Social Development Specialist	6/year	Local trips	Local based staff with expertise in social aspects and safeguards
Procurement Specialist	6/year	Local trips	Procurement aspects, procurement plan revision and implementation monitoring, procurement audits
Financial Management Specialist	6/year	Local trips	FM aspects, fund flow, FM audits
Lawyer	1/year	No trips	Legal aspects
Communication Specialist	10/year (for years 1, 3&5)	2/year (for years 1, 3&5)	HQ STC with expertise in communication and outreach
Participatory Rural Development Specialist	12/year	Local trips	Community Livelihood activities
Team Assistance	4 HQ+6 Ethiopia	1	Team support

7. It is planned that a significant part of the expertise can be mobilized locally in the Country Office, including team leadership. A mission based approach will not suffice in being able to adequately and timely respond to coordination and implementation issues. Therefore, a significant part of the task team is decentralized including hiring of extended term consultants and this will continue to enhance implementation support. Fiduciary and safeguards supports are also provided at the country office. In addition to missions and on-call support the task team proposes pro-active monthly or quarterly implementation support meetings, including with team members/experts based outside of Ethiopia connected by audio/video connection. This approach has proven to be effective in other projects in Ethiopia and in other countries.

Annex 5 (b): Criteria for Watershed Selection

ETHIOPIA**: Sustainable Land Management Project (SLMP-2)**

Detailed Criteria for Watershed Selection

Criterion	
Rural relatively "food secure" and in the margin of food insecure area.	The project would focus on the rural "food secure" areas as a complement to extensive investments already made in sustainable land management in the "food insecure" areas.
Agro ecological representativeness	Agro ecological variability and associated diverse farming systems are considered beneficial in terms of offering demonstration of responses in a variety of situations.
Land Degradation	Sites in the "food secure" areas that are beginning to show signs of extensive land degradation and in marginal areas to food Insecurity.
Vulnerability to Climate Change	Sites those are vulnerable to climate change. This criterion is particularly relevant to the 90 new watersheds as the 45 existing watersheds have on-going activities supported under SLMP-1.
Population density	High population density tends to indicate land fragmentation, a problem for sustainable land management. Conversely, labor is required for implementation of the various physical and biological works required to address land degradation. High population areas are also often associated with poverty and the need for improved management systems to increase food security. Taken together, areas with moderate population density – limited fragmentation and sufficient labor – are prioritized.
Accessibility	Accessibility is fundamental to access to markets, both for movement of goods to markets and for movement of inputs from market/supply centers to farmers. Thus, the sites selected to demonstrate best management practices in sustainable land management must have access to markets so that the expected surplus agricultural production can be sold.
Availability or potential for surface and ground water	An important benefit previously seen from watershed management in Ethiopia is availability of surface water and aquifer recharge. Availability of water, including spring recovery and/or shallow wells, contributes significantly to rapid and visible benefits for agricultural productivity.
Proximity to existing SLMP woredas	Proximity to existing SLMP woredas has the advantage to provide technical support from the region or zone with little additional time and logistic requirements. The new woredas can also learn from adjacent woredas.

Zones not covered so far	It is appropriate to include woredas in zones which are not covered by SLMP so far provided they are not far from existing SLMP woredas.
Watersheds contributing to reduction of sediment load	SLM interventions have a big contribution to reduction of sediment load on dams built for irrigation or hydroelectric power. That adds value to the benefits of watershed development.
Implementation capacity	Slow implementation pace was observed in some woredas during the start of the SLMP. Efforts must be made to select woredas with proven readiness for the implementation of the SLMP.

Annex 6: Economic and Financial Analysis

ETHIOPIA**: SUSTAINABLE LAND MANAGEMENT PROJECT (SLMP-2)**

A. Introduction

1. The overall outcomes of the project comprise both quantifiable and non-quantifiable benefits that will accrue to the intended beneficiaries and the Ethiopian economy as a whole. Such benefits would include increased agricultural productivity, reduced soil erosion, improved biodiversity, and increased carbon sequestration, but some of them are difficult to quantify. Therefore, the economic and financial analyses for the SLM project cover only the quantifiable benefit and cost streams.

2. The financial and economic analyses were carried out to determine the viability of the proposed project. The financial analysis is based on representative crop and farm budgets for the various farming systems that are characteristic of the proposed project areas. The economic analysis, which aims at accounting for distortions and externalities, aggregates from the farm budgets to the overall area covered by the project, by applying relevant conversion factors from financial to economic prices.

B. Methodology

3. The nature of the benefit pathways from this project accrue from the productivity and environmental gains achieved from improved land management. Although the problem of land degradation covers other forms of land uses, this analysis only covers cultivated land because data are not available to quantify the benefits and costs of soil erosion associated with other forms of land use. The analysis uses the conventional cost-benefit analysis (CBA) to compute the economic and financial returns for the project.

4. In projects of this nature, there are often some key methodological challenges associated with the valuation of costs and benefit streams attributable to project interventions. A sample of related Food and Agricultural Organization (FAO) and Bank analyses highlight three approaches that are commonly used to quantify and value project interventions: (i) replacement of lost nutrients due to soil erosion, (ii) actual physical loss of land due to erosion (expressed in hectares of land), and (iii) on-farm agricultural productivity effects. Due to numerous challenges associated with methods (i) (ii) and (iii) were used for this analysis.

5. Theoretically, benefits from an SLM Project derive from a number of pathways, depending on the project components. In this particular case where certification of land use rights is coupled with watershed management interventions, the likely benefit streams would accrue from (i) security tenure effect, which positively influences the levels of investment at the farm level; (ii) collateral effect, which facilitates access to institutional finance; and (iii) efficiency or transaction effect, in market which a functional land-use rights regime reduces the transactions costs and opens the investment potential for the land. Depending on the economic environment in a specific country context, all or none of these benefit streams may or may not be obtained. In the case of Ethiopia, only the tenure security effect applies because current government policy does not provide for the appropriation of the collateral and market transactional benefits[23]. A number of studies in Ethiopia had reported various benefits of the land certification program

[23] According to the current policy, there are no collateral effects as the laws do not permit use of land as collateral; there are extremely limited efficiency/transactions effects because the laws do not permit buying and selling of land; rental is only permitted in a few Regions and the rental market is undeveloped.

including reduction in land disputes, increased land market activity and increased on-farm investment and thereby increased productivity (Holden et. al., 2007, 2009, 2011; Deininger et. al., 2006, 2008, 2009, 2011; World Bank, 2012; Byamugisha, 2013). Furthermore, a simulation of the implied productivity effects of such investments suggests that, under fairly conservative assumptions, the increased output related to such investment effects in the first year after certification would be sufficient to defray the costs of certification, which average US$3.2 per ha (Deininger et. al., 2011).

6. Other direct benefits, albeit difficult to quantify due to lack of data, include expansion of cultivated area due to gully reclamation, and improved quality and quantity of woody biomass. A recent cost-benefit analysis on area closure ("exclosure") in a specific case study in Tigray demonstrated that establishing exclosures in highly degraded lands generate a large positive net present value of ETB 5620 per hectare, but putting productive agricultural land under exclosures yields a negative net present value (Balana et. al., 2012).

7. To establish the linkage between reduction in soil erosion, as a result of the adoption of SWC technologies, a Universal Soil Loss Equation (USLE), adapted to Ethiopian conditions, was used to model soil loss associated with each of the technologies. The USLE relates soil loss from a field to local climatic conditions, soil type, topography, and land and crop management variables. Annual soil loss is given as a function of the rainfall erosivity of a given soil type, the slope length, crop cover factor, and the conservation practice on the land.

8. Using the data from experimental stations, Hurni (1987)[24] estimated each of the USLE parameters for different agro-ecologies in Ethiopia. Based on these parameters, the field observations in the selected watersheds, and some expert consultations, annual soil loss for each watershed and the associated productivity effect was computed (see Table 1). It is the associated productivity effect that is used to compute the project benefit stream attributable to reduced soil erosion due to SWC technologies. If continuous and proper maintenances are undertaken, soil and water conservation structures are expected to increase productivity overtime, especially at a later stage of investment period. A recent farm and plot level study by the International Food Policy Research Institute (IFPRI) on 1810 households in the Nile basin reported that productivity had increased by 15-20% after year 7 only in plots that received proper and continuous maintenance after installation (Schmidt and Tadesse, 2012)[25]. Soil and water conservation structures—such as terraces, bunds, and check dams—would begin to slow soil erosion and degradation processes in the initial years of installations, but nutrient build-up, moisture retention, and other services may take more time to show significant results on productivity. In our analysis, we assumed a 15% increment in productivity for moisture stressed watersheds after year7.

[24] Hurni, H. 1987. Erosion productivity conservation systems in Ethiopia. In Pla Sentis (ed.) Soil Conservation and Productivity. Proceedings of the 4th International Conference on Soil Conservation. Maracay, Venezuela.

[25] Another micro-level study in the Nile basin on 1000 households also found a 31-35% difference in productivity between adopters and non-adopters of SWC structures (Di Falco, Verenesi and Yesuf, 2011). Unlike the study by Schmidt and Tadesse (2012), this study did not conduct yield projection overtime.

Table 1: Estimated Soil loss (tons per year) and Saved Productivity (in 2013 ETB)

R_NAME	Z_NAME	W_NAME	Watershed	Current level of erosion (net) (tons/ha/year),	Annual productivity saving (in 2013 ETB) of cultivated land in each watershed
Amhara	East Gojjam	Bibugn	Arefa	133.824462	883618.8342
Amhara	North Gondar	Jan Amora	Asratemaryam	167.6397601	964129.7883
Amhara	North Shewa	Ensaro	Jemma	145.364995	1044058.565
Amhara	North Wollo	Delanta Wereda	Zhita	92.3863294	981161.9422
Amhara	North Wollo	Guba Lafto	Kokor Amba	140.746402	675649.625
Amhara	North Wollo	Meqet	Leta Temetmat	113.11687	387267.7306
Amhara	Wag Himra	Sekota	Deba	73.27076	371579.9102
Benishangul Gumuz	Kamashi	Blo Jiganifado	Assosa Sefer	114.091724	921153.7612
Benishangul Gumuz	Maokomo Special	Maokomo	Harodima	75.206108	636311.3592
Benishangul Gumuz	Metekel	Wenbera	Alelitu	143.744123	880754.7402
Gambella	Etang Sp.	Etang	Wanki	10.4626918	45667.03403
Gambella	Mejenger	Mengesh	Fundi	135.9613	558529.0204
Oromia	East Hararge	Qersa	Upper diredawa 1	29.83318462	172696.1016
Oromia	East Wellega	Sibu Sire	Dormu	112.095316	368832.823
Oromia	Horo Gudru Wellega	Amuru	Hida	67.8537613	332905.2094
Oromia	Ilu Aba Bora	Gechi	Tesa	120.923128	574016.2843
Oromia	Jimma	Mana	Guya	108.569332	567727.2767
Oromia	North Shewa	Kuyu	Dance	113.8907305	666093.1263
Oromia	Qeleme Wellega	Seyo	Bego	113.444777	427700.0823
Oromia	South West Shewa	Wonchi	Tiliku Ameya	43.1866352	184561.7132
Oromia	West Shewa	Adea Berga	Kerisa	106.3876115	568614.6546

Oromia	West Wellega	Boji Dermeji	Finchea	161.0465995	703029.9266
SNNP	Bench Maji	Semen Bench	Moyakelana Kasha	331.830874	1835024.733
SNNP	Dawuro	Loma	Mawla	217.169866	1369082.269
SNNP	Gamo Gofa	Geze Gofa	Mito	225.1608805	1493811.849
SNNP	Hadiya	Soro	Ajacho	42.060988	293737.1158
SNNP	Kefa	Gesha	Yoga	144.346276	957881.8875
SNNP	Kembata Timbaro	Tibaro	Lamo	98.780266	437003.8968
SNNP	Sheka	Masha	Meneshi	148.901932	1185735.865
SNNP	Sidama	Awasa Zuriya	Jara-enesa	46.202356	189799.2784
SNNP	Siliti	Mirab Azernet Berbere	Degosa	39.8592136	185154.019
SNNP	YEM	Yem Special	Kora	162.63127	899350.9231
Tigray	Central Tigray	Adwa	Adisaharti watershed	39.92319932	237007.0071
Tigray	Central Tigray	Ahiferom	Adizata - watershed	41.99488124	341191.4861
Tigray	Central Tigray	Degua Temben	Gereb golia -watershed	44.58306992	287541.1844
Tigray	Eastern Tigray	Atsbi Wonberta	Endamichel sedah	49.08468704	394962.1431
Tigray	Eastern Tigray	Ganta Afeshum	Guehgot - watershed	64.1169986	411781.4533
Tigray	South Tigray	Seharti Samre	Tsesewe - watershed	48.54414704	309075.0744

Note: Only 38 Woredas in 6 regions have been considered in the analysis due to data availability, but it should be noted that the project area spans beyond these 38 Woredas.

9. The major costs considered in the CBA analysis include investments in labor and SWC technology inputs, in addition to maintenance costs as well as associated support, as determined in the project costing. The investment costs largely comprise labor inputs used for construction and maintenance of the SWC technologies. The average person days needed to construct and maintain the SWC technologies are shown in Table 2.

Soil bund construction	150	16
Stone bund construction	250	16
Fanyajuu construction	200	16
Grass strips	30	0

10. The actual person days required for constructing and maintaining these SWC technologies depend on the slope, soil type and agro-ecological factors. In general, construction and maintenance costs are higher in the drier watersheds and can be explained by the increased effort required to build and maintain bunds on shallow soils. According to soil experts, when grasses are planted on the physical structures, the maintenance costs will be reduced by 75% as the grasses help to stabilize the physical structures (Nkonya et al. 2006)[26]. Thus, assuming that the structures will stabilize after 3 years of construction, the costs of maintenance are reduced by 75% as of year 4 in all watersheds where grass (fodder) plantations on top of structures are recommended.

C. Project economic and financial returns

11. The benefits/costs of SWC intervention are assessed from two different perspectives. First is the private benefit and cost streams that accrue to an individual farmer and second are the benefits and costs that accrue to society as a whole. Costs to society include off-site impacts for which data is not readily available, and hence offsite impacts are analyzed only qualitatively. Furthermore, it should be noted that this analysis only considers the financial and economic feasibility of the interventions.

12. The financial and economic net present values (NPV) and internal rates of return (IRR) are computed for the medium-term (25 years) planning horizon. The overall financial stream of benefits and costa and the corresponding financial and economic returns are presented in Table 3 and Table 4, respectively. Also, note that three investment scenarios are considered. The first scenario considers investments in SWC in the form of physical structures (stone bund, soil bund, fanyajuu, and grass strips). The second scenario considers the case where high value fodder is planted on the structures. The third scenario considers a more integrated approach where physical structures are combined with high-value fodder on bunds, and fertility management measure through intercropping. All scenarios are evaluated under conventional tillage. Conservation agriculture is not considered due to lack of availability of data.

[26] Nkonya, E., Gicheru, P., Woelcke, J., Okoba, B., Kilambya, D., and Gachimbi, N. L. 2006. Economic and Financial Analysis of the Agricultural Productivity and Sustainable Land Management Project, Kenya. Progress report submitted to the Coordinator of the Kenya Agricultural Productivity and Sustainable Land Management (KAP-SLM) Project, Kenya Agricultural Research Institute (KARI).

Table 3: Flows of Overall Financial Net Benefits for Our Selected Watersheds (in Million ETB)

Year	Scenario I	Scenario II	Scenario III
1	-1,628.5	-1,673.5	-1,176.9
2	-211.4	-256.5	240.1
3	-177.9	-222.9	273.7
4	-144.3	305.4	802.0
5	-110.7	339.0	835.5
6	-77.1	372.6	869.1
7	-35.6	414.1	910.7
8	8.6	458.3	954.9
9	55.9	505.6	1,002.1
10	106.7	556.3	1,052.9
11	161.5	611.1	1,107.7
12	220.9	670.6	1,167.2
13	285.7	735.4	1,232.0
14	356.6	806.3	1,302.9
15	434.6	884.3	1,380.9
16	520.7	970.4	1,467.0
17	616.2	1,065.9	1,562.4
18	722.4	1,172.0	1,668.6
19	840.9	1,290.6	1,787.1
20	973.6	1,423.3	1,919.9
21	1,122.7	1,572.4	2,068.9
22	1.290.5	1,740.2	2,236.8
23	1,480.0	1,929.7	2,426.2
24	1,694.3	2,143.9	2,640.5
25	1,937.1	2,386.8	2,883.3
Total in PV	-567.3	1,771.4	5,666.0

13. The overall Economic Rate of Return (ERR) is about 13% , 24%, and 75% in Scenarios I, II and III, respectively, indicating notable differences in returns between the incomplete package (scenario I) and a more integrated SWC package (scenario III). This implies that to achieve higher returns, farmers should be encouraged to adopt a more integrated approach.

Table 4: Summary of Economic and Financial Rates of Return (Economic NPV/Financial NPV) for Scenarios I, II, and III.

Scenario	ERR[27]	FRR	(ETB million)	(ETB million)
I	13%	10%	744.6	(-567.3)
II	24%	19%	3,146.3	1,771.4
III	75%	47%	6,313.5	5,666.0

14. It is also important to note that the net returns may have been understated because the analysis does not take into account the other added benefits associated with the lower risk to vulnerability as a result of farmers diversifying their cropping patterns, and the improved resilience of the landscape given the adoption of the SWC technologies[28]. Moreover, there are

[27] The ERR were computed based on a conversion factor of 50% for labor used by a recent study by IFPRI (Schmidt and Tadesse, 2012). The numbers could be slightly smaller if the national conversion factor generated by MoFED (which are not frequently updated) were used.

[28] Characteristics of each of these conservation measures and requirements for success are presented in a separate annex in the full report prepared by the consultant.

other global environmental benefits in terms of ecosystem services that will accrue from sustainable production

D. Sensitivity analysis

15. These economic and financial performance indicators for the project have been calculated using fairly conservative assumptions, coupled with actual data from the field assessments. Therefore, these results should be quite robust. However, the robustness of these results has to be tested to assess how sensitive they are to some of the key variables that define the magnitude and direction of the results. In this section, we present the sensitivity analysis results for the economic performance indicators of the II scenario. In that regard, six kinds of sensitivity analyses are conducted.

16. The following are the results of the sensitivity analysis (also in Table 5):

- If the overall project costs are increased by 5%, the ERR is reduced only by 1 percentage points to 23% from the base level of 24%, and the NPV declines by 134.2 million Birr to 3,012.1 million Birr from the base value of 3,146.3 million birr;
- If the overall project benefits are increased by 5%, then the ERR increases by 2 percentage points to 26%, and NPV increases to 3,437.8 million Birr;
- When both costs and benefits are increased simultaneously by 5%, the ERR remains unchanged, and NPV increases by 157.3 million Birr;
- When the cost is increased by 10% or benefit reduced by 10%, ERR declines by 2% percentage points to 22%.
- A relatively significant change in ERR and NPV is observed only when both the costs and benefits are reduced simultaneously by 10%. In that case, the ERR is reduced by 4 percentage points, and overall NPV declines by 851.5 million Birr.

Table4: Sensitivity Analysis over a 25-Year Period

Scenarios	ERR (%)	NPV (in million Birr)
Base case	24%	3,146.3
Cost increased by 5%	23%	3,012.1
Benefit increased by 5%	26%	3,437.8
Combined effect of cost and Benefit increment by 5%	24%	3,303.6
Cost increased by 10%	22%	2,877.9
Benefit reduced by 10%	22%	2,563.3
Combined effect of cost Increment by 10% and benefit Reduction by 10%	20%	2,294.8

E. Conclusions

17. The results from the sensitivity analysis imply that the project is quite robust because the economic rates of return, especially under scenario II and III are well above the opportunity cost of capital, given the other assumptions inherent in the analysis. Moreover, given that the benefit streams are understated because of the valuation challenges, the project investments are economically and financially justifiable.

18. Furthermore, the results from the analysis indicate that physical soil and water management interventions are more feasible when they are integrated at least with improved fodder. The results are even stronger in areas currently exhibiting high soil erosion rates such as some watersheds in Amhara, Oromia and SNNP or in areas where cheaper conservation measure (such as grass strips) are recommended.

F. Key assumptions in the analysis

19. In conducting this analysis, the following basic assumptions were made:

- Market prices are used to estimate financial (private) profitability, whereas shadow prices are used to estimate economic (social) profitability. Financial values are converted into economic values using a conversion factor of 0.5 for rural labor used by IFPRI on a study at Nile Basin (Schmidt and Tadesse, 2012). The conversion factor generated by MoFED is outdated and revised less frequently, and hence not used in this analysis. The ERR would be slightly lower if the old conversion factors generated by MoFED were used.
- Constant prices are used. It is assumed that additional crop yield is unlikely to substantially influence prices.
- The benefits from agricultural productivity are expressed as expected values, calculated by taking into account a 50% probability of good and bad rainfall at each watershed throughout the planning horizon. Constant rate of soil erosion rate is assumed.
- Labor is the most significant input item used for the establishment and maintenance of conservation structures. The value of unskilled labor for construction of SWC is based on the most recent average labor wage (Birr 20/person day as of July 2013);
- In the cost-benefit analysis it is assumed that in each watershed where soil bunds are recommended, farm households' plant improved forage legumes on bunds. We also assumed that farmers in the watershed intercrop cereals with forage legumes on at least 10% of their cropland;
- If continuous and proper maintenances are undertaken, soil and water conservation structures are expected to increase productivity overtime depending on agro-ecological and rainfall conditions. The benefits are usually higher in moisture stressed areas due to moisture rentention capacities of soil conservation structures. Thus, we impute productivity gains only for drier watersheds with less than or equal to 900 mm annual rainfall. The productivity gains are assumed to be 15% as of year 7 (Schmidt, and Tadesse, 2012) though increment in agricultural productivity upto 30% are reported in some studies (see for example, Di Falco, Veronesi and Yesuf, 2011). al terrace formation;
- Harvesting of improved fodder grown on bunds is assumed to begin in year 4;

- There is no statistically significant cereal grain yield difference when cereals are grown alone or intercropped with forage legumes (Zewdu et al., 2002)[29];
- In most rural areas market for fodder is thin and/or does not exist at all. To value fodder produced on bunds or intercropped, we divided an average value of a representative ox for ploughing by the average annual dry matter consumption to get an average fodder value of ETB 3.84/kg.
- The nitrogen fixed due to legumes is valued using Urea price taken from Amhara region (ETB 10 per kg)
- A time horizon of 25 years is assumed to capture the benefits of SWC both in the medium and long term; and
- A discount rate of 10% is assumed in calculating the economic and financial rates of return because these rates are consistent with the opportunity cost of capital in public sector lending institution.

[29] Zewdu, T., Assefa, G., and Mengistu, A,, 2002. The role of forages and pastures for increased and sustainable livestock production. Research procedure, past achievements and future directions in North-Western Ethiopia. Research Report. Adet Agricultural Research centre, Ethiopia, 96 pp.

Annex 7: Incremental and Additional Cost Analyses

ETHIOPIA: SUSTAINABLE LAND MANAGEMENT PROJECT (SLMP-2)

I. BACKGROUND:

1. With a land area of about 1.13 million km^2, Ethiopia is diverse in terms of its bio-physical environment and its cultural and ethnic composition. Its diverse relief formation (massive highlands, deep gorges, flat topped plateaus), truncated by the Great Rift Valley, and surrounded by lowlands and semi-deserts, has resulted in a variety of different ecosystems characterized by significant differences in micro-climate, soil properties, vegetation types, agricultural potential, biodiversity and water resources.

2. Services provided by natural resources including agriculture and livestock play a critical role for the livelihood of a large majority of the population. Given the predominant geo-climatic conditions, inherent fragile soils, undulating terrain and, highly erosive rainfall, Ethiopia has continually faced challenges in conserving its soil fertility. Coupled with natural constraints, the environmentally destructive farming methods that many farmers practice make the country highly vulnerable to soil erosion. Moreover, about one-third of the agricultural land is moderately to strongly acidic because of long neglect in soil conservation and destructive farming practices. Gully formation and sedimentation at the river banks, dams and irrigation channels are wide-spread. Studies have shown that by the mid1980s some 27 million ha or almost 50 percent of the Ethiopian highlands (makes up about 45 percent of the total land area) was considered to be significantly eroded, of which 14 million ha was seriously eroded and over 2 million ha beyond reclamation. It is estimated that some 30,000 ha are lost annually as a result of soil erosion, representing over 1.5 billion tons of soil that is removed annually by a variety of land degradation processes.

3. The causes of land degradation are complex and diverse including poor agriculture practices, rapid depletion of vegetation cover, poor livestock management and insecure land tenure system. Key drivers of land and forest degradation in Ethiopia have traditionally been short term destructive agriculture practices. With the loss of forest and vegetation cover, the risk to biodiversity and soil fertility was significant. For example, the forest cover of the country reduced from 35 percent of the country's land area in the early twentieth century to only 2.4 percent today (Ethiopian Forest Action Programme (1994); and Ethiopian R-PP (2012)).

4. The National Biodiversity Strategy and Action Plan (NBSAP, 2005) highlights the country's diverse biological diversity and endemic species[30]. Due to the variation in climate, topography and vegetation, Ethiopia has a very diverse set of ecosystems ranging from humid forest and extensive wetlands to the desert of the Afar depression. Ethiopia is one of the twelve known ancient countries for crop plant diversities in the world and has valuable reserves of crop genetic diversity, of which 11 cultivated crops have their center of diversity in the country. The extensive and unique conditions in the highlands of the country have contributed to the presence of a large number of endemic species. The flora of Ethiopia is very diverse with an estimated number between 6,500 and 7,000 species of higher plants, of which about 15 per cent are

[30] The NBSAP classifies the country's ecosystem as: Afroalpine and Sub-Afroalpine, Dry Evergreen Montane Forest and Grassland Complex, Moist Evergreen Montane Forest, Acacia-Commiphora Woodland, Combretum-Terminalia Woodland, Lowland Semi-evergreen Forest, Desert and SemiDesert Scrubland, and Inland Waters. Each ecosystem consists of diverse species of flora and fauna including several endemic species such as Walia Ibex, Mountain Nyala, Starck's Hare, Ethiopian Wolf and Gelada Baboon.

endemic. In terms of fauna, About 277 species of mammals, 861 species of birds (and 69 Important Bird Areas (IBAs)), 201 reptile species, 145 species of freshwater fish, 324 butterflies and 63 species of amphibians are known from Ethiopia. The larger mammals are mainly concentrated in the south and southwest border and adjacent areas of the country. The mountain areas in the north are also home to many endemic species of mammals, particularly the Walia Ibex, Semien Fox and Gelada Baboon. However, the country's biodiversity tremendous threat. One of the key threats identified in NBSAP is unsustainable agricultural practices including livestock management.

5. In terms of climate change, Ethiopia is already experiencing changes in its climate. Between 1960 and 2005, mean annual temperature has increased by 1.3 degrees Celsius. Unusually hot weather has also increased, with a 20% increase in the number of "hot" days during the same period. A study conducted by the University of Oxford projected increases in temperature of 1.1 to 3.1 degrees Celsius by 2050. The 2007 National Adaptation Program of Action (NAPA) identified 11 priority adaptation activities, including small scale irrigation and water harvesting systems, enhanced early warning systems for droughts and floods, and improved management of rangelands and wetlands. In terms of climate change mitigation, Ethiopia contributes relatively low CO_2 emission levels (0.1ton per capita), of which agriculture and forestry account for 85% of total emissions. The latest National Communication[31] to the United National Framework Convention on Climate Change (UNFCCC) that was submitted in 2001 to the UNFCCC Secretariat highlights the importance of four key sectors for mitigating emissions – Energy; Land-Use Change and Forestry; Agriculture; and Waste. However, given high rates of economic growth and GoE target of becoming a middle income country by 2025, emissions could rise considerably in a "business as usual" scenario. In order to address this potential situation, Ethiopia has developed an unusual position among low income countries by setting ambitious plans for mitigating its emissions and moving to a green, carbon-neutral, economic model.

6. With the already daunting condition, the projected climate change creates an unprecedented challenge, especially to the rural poor who rely on the natural base for their livelihood. The NAPA indicates that the most vulnerable sectors to climate change are among others, agriculture and water. It indicates that smallholder rain-fed farmers and pastoralists are found to be the most vulnerable in terms of livelihood, in particular, due to extreme events of drought and rain. Therefore, internalizing the climatic variability and risks at the farm level is critical. Decisions by farmers whether it is regarding livestock or agricultural production must incorporate climate resilience technologies such as climate smart agriculture.

7. To address these complex and diverse constraints to sustainable development, the Government of Ethiopia (GoE) introduced a series of policies and institutional reforms including the Growth and Transformation Plan (GTP), the Climate Resilient Green Economy (CRGE) Strategy, the Strategic Investment Framework for Sustainable Land Management (ESIF), the Agricultural Sector Policy and Investment Framework (PIF) and REDD+ Initiative. Within the context of these policy-related initiatives, in particular the ESIF and PIF, the Sustainable Land Management (SLM) Program was established. The proposed project contributes to the SLM Program.

[31] http://unfccc.int/resource/docs/natc/ethnc1.pdf

8. By introducing sustainable land and water management practices, the project also contributes to the GoE's CRGE Strategy by reducing GHG emission from land use change and increasing carbon stocks in biomass and organic soil. The project will support government and other stakeholders including extension workers, community groups and NGOs with additional skills and training to promote climate smart agriculture, integrated land management practices that internalize climate induced risks, and conservation of forest, biodiversity and soil.

II. FIT WITH THE GEF AND LDCF STRATEGIES:

9. GEF: The SLMP-2 is consistent with the GEF's Biodiversity, Climate Change and Land Degradation focal area strategies. It would also contribute to the Sustainable Forest Management and Adaptation strategies. The project contributes to the GEF LD-SP3 objective – reducing pressures on natural resources from competing land uses in the wider landscape. Project support would enhance cross-sectoral coordination in integrated landscape management. Furthermore, it would support farmers in adopting integrated land management practices. The project would also contribute to the objectives of GEF BD-SP2 – mainstreaming biodiversity conservation and sustainable use into production landscapes and sectors, the objectives of GEF CC-SP5 – promoting conservation and enhancement of carbon stocks through sustainable management of land use, land-use change, and forestry. Incremental GEF financing will generate biodiversity benefits thorough setting aside areas which will be managed by communities as protected areas. Incremental GEF financing will support adoption of best-fit technologies and practices including both physical and biological measures that will put forest and non-forest land under good management regimes to generate CCM benefits. The incremental GEF financing will also promote reforestation activities generating important CCM benefits. The project also contributes to the GEF-SFM objective of reducing pressures on forest resources and generating sustainable flows of forest ecosystem services through adoption of good forest and water management practices by the participating farmers.

10. LDCF: The SLMP-2 would also contribute to both objectives of Climate Change Adaptation: CCA-1 and CCA-2. It will address some of the causes for vulnerability to climate variability and change identified in Ethiopia's NAPA, such as the very high dependence on rain-fed agriculture, under-development of water resources, low adaptive capacity, and lack of awareness. Through the project support, especially, components 1 and 2, the climate induced risks are expected to be internalized by farmers. Furthermore, climate smart agricultural practices and tools will be supported under component 1 that would ensure resilience to climatic variability. Technical assistance will be provided to farmers, government entities and other institutions. Since project intervention are based on community/farmers' demand, specific project interventions at the watershed level will not be known a priory. However, specific project intervention will be based on detailed site level bio-physical analysis being carried out in project year 1. Additional financing from the LDCF will specifically target sites that enhance climate resilience of investments supported under the Project.

11. The following table lists the GEF and LDCF objectives and outputs the Project contributes to:

Project Indicators relevant to GEF/LDCF Objectives/Outcomes*	**GEF Focal Area/LDCF Objectives**	**GEF Expected Focal Area/LDCF Outcomes**	**GEF Expected Focal Area/LDCF Outputs**
Project Indicator 1. Total incremental	LD- 3: Integrated	Outcome 3.2: Integrated	Output 3.1: Integrated

land area brought under sustainable and climate-smart/resilient land management practices Project Indicator 1.1. Total number of land users (households) adopting at least three additional sustainable and climate-smart/resilient land management practices on individual lands disaggregated by gender Project Indicator 1. 5 New technologies (sustainable and climate smart/resilient practices) applied on a large scale in the project intervention areas	Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape	landscape management practices adopted by local communities	land management plans developed and implemented
Project Indicator 1. Total incremental land area brought under sustainable and climate-smart/resilient land management practices Project Indicator 1.2 Total land area in hectares (individual and communal) brought under a catchment system as a result of the project	BD – 2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Output 2.2. National and sub-national land-use plans (number) that incorporate biodiversity and ecosystem services valuation
Project Indicator 2. Total area of restored or reforested/afforested on both individual and communal land Project Indicator 3. Increase in the amount of biomass in the intervention areas Project Indicator 1.2 Total land area in hectares (individual and communal) brought under a catchment system as a result of the project Project Indicator 1. 5 New technologies (sustainable and climate smart/resilient practices) applied on a large scale in the project intervention areas	CCM-5: LULUCF: Promote conservation and enhancement of carbon stocks through sustainable management of land use, land-use change, and forestry	Outcome 5.1: Good management practices in LULUCF adopted both within the forest land and in the wider landscape	Output 5.2: Forests and non-forest lands under good management practices
Project Indicator 2. Total area of restored or reforested/afforested on both individual and communal land Project Indicator 1.2 Total land area in hectares (individual and communal) brought under a catchment system as a result of the project	SFM-1: Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services	Outcome 1.3: Good management practices adopted by relevant economic actors.	Output: Forest area (hectares) under sustainable management, separated by forest type
Project Indicator 1. 5 New technologies (sustainable and climate smart/resilient practices) applied on a large scale in the project intervention areas Project Indicator 1.4 Increase in per cent of households adopting and applying	CCA-1: Reducing Vulnerability: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional,	Outcome 1.2: Reduced vulnerability to climate change in development sectors	Output 1.2.1: Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability.

backyard livestock management practice in the targeted watersheds	and global levels		
		Outcome 1.3: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	Output 1.3.1: Targeted individuals and community livelihood strategies strengthened in relation to climate change impacts, including variability.
Project Indicator 2.7 Number of land users (small holder farmers disaggregated by gender) trained in (a) planning and implementation of techniques of sustainable and climate-smart/resilient land management practices; (b) entrepreneurship, business development / management; and (c) land rights and registration awareness. Project Indicator 2. 8 Number of woredas with well-equipped information centers on sustainable and climate-smart/resilient land management practices as a result of the project Project Indicator 2. 10 Number of key service providers (disaggregated by gender) trained in (a) community–based watershed management; (b) cadastral surveying, rural land administration, certification and land use planning; (c) M&E; and financial planning / management and procurement and other cross-cutting issues.	CCA-2: Increasing Adaptive Capacity: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional, and global levels.	Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at the local level.	Output 2.3.1: Targeted population groups participating in adaptation and risk reduction awareness activities.

* Some of the Project indicators such as capacity building are relevant to several GEF and LDCF objectives, and have not been reflected.

12. Link with the Sahel and West Africa Program in support of the Great Green Wall Initiative: SLMP-2 is part of the Sahel and West Africa World Bank/GEF Program in Support of the Great Green Wall Initiative approved by the GEF and LDCF/ SCCF Councils in May 2011. The Program addresses major issues related to land degradation, including food security, climate change mitigation and adaptation, to support sustainable development in 12 countries: Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Benin, Togo, and Ghana. The project is directly contributing to the following key performance indicators (KPI):

- KPI 1. Increase in land area with sustainable land and water management (SLWM) practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, protected areas);
- KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (hectares);

- KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and response to climate variability, compared to baseline (#)
- KP4. Change in Carbon accumulation rates in biomass and soil compared to baseline (tc/ha).

III. PROJECT DESIGN AND APPROACH:

Baseline Scenario

13. To address the food security issue in the short to medium term, the GoE has introduced policy and regulatory interventions, and devised investment programs. The World Bank has contributed to these programs though investments and technical assistance projects including:

- Agriculture Growth Project (US$150M IDA). The objective of AGP is to increase agricultural productivity and market access for key crop and livestock products in targeted woredas with increased participation of women and youth. There are three components to the project: (i) Agricultural production and commercialization; (ii) small-scale rural infrastructure development and management; and, (iii) AGP management and monitoring and evaluation (M&E).
- Productive Safety Net Project (PSNP) APL III (US$450M IDA). The PSNP was designed to contribute to the GoE's Food Security Program (FSP). The overall development objective of the PSNP is to contribute to improving the productivity and efficiency of transfers to food insecure households, reducing household vulnerability, improving resilience to shocks and promoting sustainable community development. The objective of the third phase is to improve the effectiveness and efficiency of the PSNP and related Household Asset Building Program (HABP) for chronically food insecure households in rural Ethiopia. There are four components: (i) safety net grants will provide cash and in-kind transfers to chronically food insecure households through: labor intensive public works that provide transfers to able-bodied households and direct support that provides transfers to labor-poor households; (ii) drought risk financing, which aims to provide timely resources for transitory food insecurity in response to shocks within the existing program areas; (ii) institutional support for the PSNP; and, (iv) support to the HABP.
- Pastoral Community Development Project (US$56 M IDA). The objective of PCDP is to contribute to: (i) increasing the resilience of Ethiopian pastoralists to external shocks; and (ii) improving the livelihoods of beneficiary communities, and thereby to contribute to overall poverty alleviation in Ethiopia. There are four components to the project: (i) sustainable livelihoods enhancement; (ii) pastoral risk management to improve the existing pastoral early warning system; (iii) participatory learning and knowledge management; and (iv) project management.
- REDD+ Initiative (US$3.6 M FCPF Grant). The objective of REDD+ initiative is to strengthen the capacity of Ethiopia's institutions dealing with forests to develop a national REDD+ strategy and its implementation framework to reduce emissions from deforestation and forest degradation. The objective will be achieved through key activities grouped under components: (i) Support to the national readiness management arrangements; (ii) Support to the design of a national REDD+ Strategy; and (iii) Preparation of the national implementation framework for REDD+.
- Sustainable Land Management Project Second Phase (US$50 M IDA). The objective of SLMP-2 is to reduce land degradation and improve land productivity in selected

watersheds in six regions in Ethiopia. There are four components to the project: (i) Integrated Watershed and Landscape Management; (ii) Institutional Strengthening, Capacity Development and Knowledge Generation and Management; (iii) Rural Land Administration, Certification and Land Use; and (iv) Project Management.

14. In addition to the World Bank support, other Development Partners have also supported the GoE including:

- Co- and/or parallel financing to the Agriculture Growth Project by CIDA (US$15 M) and USAID (US$80 M).
- Agriculture Sector Support Project (US$5.7 M) financed by the AfDB.
- Participatory Small Scale Irrigation Development Program (US$40 M) financed by IFAD.
- Parallel financing to the Sustainable Land Management Program by KfW and GIZ (approx. US$15.5 M).

15. The total cost of baseline scenario is US$865.8 million. In the baseline scenario, investments and capacity development activities focused on enhancing agricultural productivity for the short and medium term for ensuring food security. The baseline scenario expected to increase local governance, participation of local stakeholders in planning and implementation of local development activities primarily for enhancing food security. Although there have been activities that generated global environment benefits, the GEF/LDCF Alternative is envisaged to enhance the global environment benefits while strengthening long term ecosystem services and internalizing climate induced risks.

16. In addition, there are other projects such as UNDP-LDCF supported "Strengthening Climate Information and Early Warning Systems to Support Climate Resilient Development and Adaptation to Climate Change" and "Promoting Autonomous Adaptation at the community level in Ethiopia". SLMP-2 will also coordinate with these projects to ensure synergy. Given the reliance of the economy on agriculture, the GoE has established an overall coordination and oversight mechanism at MoA, the Rural Economic Development and Food Security (RED/FS) Platform that brings together public sector institutions, research and academia and donors supporting programs related to agriculture, small scale irrigation, natural resource management (water, forestry and sustainable land management, land administration, etc.), climate change (mitigation and adaptation), disaster risk management (DRM), early warning and food security. Below the RED/FS are 3 coordination entities or technical committees that also coordinate and oversee the 3 pillars of SLM, Agriculture, DRM and food security. Also, the MoA has established a Climate Resilient Green Economy (CRGE) Case Team that is responsible for developing the so-called Sectoral Reduction Mechanisms (SRM) and CRGE investment plans that include the activities spelled out in the NAPA and EPACC.

GEF/LDCF Alternative

17. The goal of GEF and LDCF support will be to strengthen sustainable management of natural resources to enhance ecosystem services through investment and technical assistance proposed under the Sustainable Land Management Project-2. The Project's Development and Global Environment Objective of the SLMP-2 is to reduce land degradation and improve land productivity in selected watersheds in targeted regions in Ethiopia. The objective would be achieved through the provision of capital investments, technical assistance and capacity building

for small holder farmers in the watersheds and government institutions at national and sub-national levels. The Project would be implemented in 135 watersheds/woredas covering 937 kebeles (90 new watersheds and 45 watersheds that were partially supported by SLMP-1). Direct and indirect beneficiaries of the Project include an estimated 1,850,000 people.

18. The proposed PDO/GEO level results indicators include:

- Total land area (incremental) brought under sustainable and climate-smart/resilient land and water management practices (ha);
- Total area restored or reforested/afforested on both individual and communal land (ha); and
- Increase in the amount of biomass in the intervention areas (ton/ha)

19. The GoE has recognized the importance of integrating biodiversity conservation priorities and needs as a means of creating synergies in the woredas. This will be assured at start of the Project by identifying important overlaps between the targeted woredas and important sites for biodiversity conservation. In addition to the participatory methods involving all relevant stakeholders, the Project will use high quality data sources such as the Integrated Biodiversity Assessment Tool (IBAT) in identifying priority sites for biodiversity. The IBAT is a widely used tool for project assessment and planning process to integrated biodiversity priorities, which helps decision-makers and stakeholders on appropriate actions for conservation on the ground. The IBAT is available through a web-based mapping platform which provides the location of biodiversity sensitive sites at different scales. The established priorities will serve as basis for justifying biodiversity investments, including the development of plans for enclosures in the woredas.

20. It is envisaged that the process will contribute directly to integrating biodiversity priorities in the 40,000 ha of enclosed areas in selected woredas. This strategy of using enclosures has been successfully tested under the SLMP1 and well-appreciated by communities for generating multiple benefits. Hence the participatory selection of sites for enclosures is also an appropriate measure to address the main drivers of degradation of in watersheds (deforestation, overgrazing, poor agricultural practices). The approach is consistent with the Conservation Strategy of Ethiopia, and notably the objectives related to: (i) soil husbandry and sustainable agriculture; (ii) forest, woodland and tree resources: (iii) genetic, species and ecosystem diversity, as well as the cross-sectoral issues related to: (i) community participation and the environment; (ii) land use planning; and (iii) environmental education and awareness.

21. Incremental GEF resources from biodiversity focal area will contribute in integrating biodiversity priorities into existing PES mechanisms, which currently focus largely on carbon. Ethiopia is already very well advanced with PES mechanism based on Carbon, such as through Humbo Natural Regeneration project that has rehabilitated about 2800 ha of degraded lands in Southern Ethiopia. The mechanism includes a formal process for payments directly to local communities, and will be expanded under the proposed project co-financing from the Biocarbon fund and Norway. GoE will specifically use GEF resources to include ecosystem and biodiversity services in the scheme. Analytical work, assessment, training, awareness will be implemented linking the BD community in Ethiopia with the SLMP2 team. The main outcome will be a complement to the PES policy framework.

22. This framework will also be complemented by new national certification standards to mainstream biodiversity issues into selected commodities (e.g., coffee, plant extracts, honey).

These activities are in application of the Ethiopia Conservation Strategy and its objectives related to environmental economics. The recommendations will complete the incentive tools that the GoE will be able to consider in the future, and mainstream biodiversity conservation into economic activities developed by local communities.

23. With regards to climate change mitigation, the Project will use three methodologies to estimate GHG benefits:

- Sustainable Agriculture and Land Management (VM-0017) methodology developed by the WB BioCF and certified by the Verified Carbon Standard: It helps calculate soil carbon and below- and above-ground carbon absorption from agricultural practices. This methodology uses the Roth-C Model to quantify changes in soil C, hence direct measurements of soil C pool are not required, allowing for an activity-based monitoring to get the model inputs. An in-depth analysis of how to mainstream carbon finance in to the project is currently ongoing. It has assessed the baseline of five watersheds representing a wide range of agro-ecological conditions in the country. As a next step, the study will calculate the emissions reduction potential in these areas through the adoption of climate-smart agriculture techniques. It is expected that a Program of Activity for Climate Smart Agriculture will be prepared as a result of the above-mentioned study;
- CDM A/R large scale methodology AR-ACM 0003 "Afforestation and Reforestation of lands except wetlands. Assisted Natural Regeneration methodology: It helps calculate the carbon absorption from reforestation activities, including through assisted natural regeneration, generally on communal lands. This methodology has been successfully used in calculating carbon absorption under the CDM Humbo Assisted Natural Regeneration Project in Ethiopia. Baseline data collection is ongoing in five watersheds at present. The baseline data will be calculated the baseline default method as stipulated in the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities". This methodology assesses the carbon biomass intake on above- and below-ground biomass resulting from efforts to allow and expedite assisted natural regeneration in degraded lands. It is expected that a Program of Activity for Assisted Natural Regeneration will be prepared as a result of the above-mentioned study; and
- The FCPF Carbon Fund Methodological Framework for calculating Emissions Reductions from REDD+ activities. This Framework is currently being finalized by the FCPF and is applicable to REDD+ Programs over a large jurisdictional area, which is the case of the Oromia REDD+ Program. It should be noted that the application of this methodology, including the design of a Reference Emissions Level and the development of a Monitoring, Reporting and Verification system at the Program level, will be supported by resources beyond SLMP 2. The link to SLMP 2 is that SLMP activities are expected to have an indirect impact on existing forest stocks.

24. **Preliminary CO_2eq Estimation**: As per preliminary estimations[32], SLMP-2 is expected to lead to 14,612,550 tons of sequestered CO_2 over the lifetime of the project (five years), and to 29,225,100 14,612,550 tons of sequestered CO_2 post-project, over 20 years. This carbon mitigation figures come from the promotion of basically two activities: promotion of soil organic carbon through climate-smart agriculture (CSA) practices and reforestation through Assisted

[32] Estimated calculations based on the SFM and the CC-LULUCF GEF Tracking Tools completed for the project.

Natural Regeneration (ANR) in community enclosed areas. CSA is expected to be promoted over 610,000 hectares; while ANR is expected to be promoted over 195,000 hectares.

25. The value for the Soil Organic Carbon from CSA techniques was calculated using the "Tools for Estimation of Changes in Soil Carbon Stocks associated with Management Changes in Croplands and Grazing Lands based on IPCC Default Data". This tool is a database implementation which combines the default reference values with the change coefficients by country[33]. As the SLMP-2 project sites are scattered over different agro ecological zones the most conservative IPCC tier 1 approach for the lowest increment zone was used. The model is therefore parameterized for Ethiopia on warm temperate dry lands and sandy soil. This gives the most conservative start and SOC change values for potential sites. The baseline agricultural system is long-term cultivated soils with low inputs and full tillage (start value 14.3 MgC/ha). The target system is reduced tillage and high inputs with manure (end value after 20 years is 21.5 MgC/ha). The annual carbon stock change is conservatively estimated at 0.35 MgC/ha. This value was converted to tCO_2e/ha using the ratio of molecular weight of carbon dioxide to carbon.

26. The estimates of CO_2 in above-ground biomass for ANR was calculated based on the Humbo ANR project's parameters. As growth rates are only available as average figures for all forests of this type (naturally regenerated tropical montane dry forests) in Africa, the expert input of Dr. Deribe Gurmu (Ethiopian Forestry Department), an expert in Ethiopian forestry, was used, together with consultation of other forestry professionals. As a result of this consultative process, a mean annual increment of 6 tons of dry matter/ha/year was considered to be appropriate. This mean annual increment of 6 tons of dry matter /ha/year was used to estimate the biomass increment over the project period. For the tool we then calculated the tC/ha/yr from tons of dry matter/ha/year which uses a carbon fraction of 0.5 giving 3 tons C/ha/year as ex ante carbon potential per year. Subsequently this value was converted to tCO_2e/ha using the ratio of molecular weight of carbon dioxide to carbon (3.66).

27. The GEF tracking Tool for Climate Change Mitigation tool was filled using two main parameters concerning area: for CSA in respect to conservation and enhancement of carbon in non-forest lands, with 610,000 ha. For area enclosure on communal land cited in the PAD of 165,000 ha the figure was used to fill the tool in Afforestation/reforestation. Subsequently the figures were multiplied by the carbon potential in tC/ha/yr of the respective activities (ANR 3tC/ha/yr and SOC 0.35tC/ha/yr) and again multiplied by the molecular ratio for tC to tCO_2 (3.66) and 20 years project lifetime[34].

28. Currently an in-depth study is conducted to improve on the global carbon values used and replace them by regional and project site values, which will increase certainty and spatial resolution. This is particularly important as there are areas with a higher carbon sequestration potential in the highlands of Ethiopia. This study will help to justify higher sequestration estimations than the very conservative IPCC tier 1 estimates. This study is expected to be completed by the end of 2013.

[33] http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/annex4a1.html

[34] The World Bank and the GEF Secretariat will have regular discussions on: (i) the concrete activities supported through incremental GEF financing for carbon stock enhancement or avoiding deforestation; (ii) the estimation of the GHG impact of these activities; and (iii) how the project ensures/monitors that project activities do not lead to additional non-CO2 GHG emissions.

29. The LDCF resources will also be used for covering some of the additional costs to improve the climate resilience of the baseline projects including the small-scale rural infrastructure and public works, and climate smart agriculture practices promoted. This will also complement and add value to the pastoral early warning system established in the Pastoral CDP. The resources will be consistent to some of the priorities identified in the National Action Plan for Adaptation (NAPA) including: strengthening/enhancing drought and flood early warning systems; development of small scale irrigation and water harvesting schemes in arid, semi-arid, and dry sub-humid areas; improving/enhancing rangeland resource management practices in the pastoral areas; and promotion of on farm and homestead forestry and agroforestry practices in arid, semiarid and dry sub-humid parts of Ethiopia.

IV. INCREMENTAL & ADDITIONAL VALUE ADDED BY GEF & LDCF FUNDING:

30. The GEF and LDCF funding will be blended with US$50M IDA funding. Furthermore, the Government of Norway will provide addition US$42.65 M to co-finance the project. The Project would be implemented through four components: (i) Integrated Watershed and Landscape Management; (ii) Institutional Strengthening, Capacity Development and Knowledge Generation and Management; (iii) Rural Land Administration, Certification and Land Use; and (iv) Project Management. The main features of individual project components are summarized below:

Component 1 – Integrated Watershed and Landscape Management (Total: US$73.98 million of which US$6.00 million from GEF and US$3.40 million from LDCF)

31. The objective of this component is to support scaling up and adoption of appropriate sustainable land and water management technologies and practices by smallholder farmers and communities in selected watersheds/woredas in the country. The component objective would be achieved through the introduction of tested watershed management practices including land and water conservation, afforestation/reforestation, rehabilitation of degraded areas, protection of ecologically critical ecosystems, conservation agriculture such as no-/low tillage, agroforestry, climate-smart agriculture, and pasture management. Suitable interventions in each watershed (or micro-watersheds within a watershed) would be identified based on the particular agro-ecological conditions (topography, rainfall patterns, existing degradation levels, etc.) and included in a Watershed Management Plan, developed through a highly participatory process involving the entire watershed population, utilizing the procedures established in the existing Community Based Participatory Watershed Development Guidelines (CBPWDG) developed by the Ministry of Agriculture (MoA)and applied for the implementation of SLMP-1. Ninety major watersheds have been selected to be treated under SLMP-2 spread over five main agro-ecological zones.

32. The GoE recognizes the importance of identifying and integrating biodiversity conservation priorities and needs as means of creating synergies with investments to address Sustainable Land Management, Sustainable Forest Management, and Climate Change Mitigation and Adaptation in the woredas. This will be assured at start of the project by identifying important overlaps between the targeted woredas and important sites for biodiversity conservation. The identification of sites will be done by combining GIS based information on species and habitat distribution with participatory methods involving relevant stakeholders. First, the project will use high spatially explicit data sources such as the Integrated Biodiversity Assessment Tool IBAT (https://www.ibat-alliance.org/ibat-conservation/login). The IBAT is a

widely used tool for project assessment and planning process to identify biodiversity priorities, which helps decision-makers and stakeholders on appropriate actions for conservation on the ground. Second, the participatory selection of sites is an appropriate measure to address the main drivers of environmental degradation in watersheds (deforestation, overgrazing, poor agricultural practices). The approach is consistent with the Conservation Strategy of Ethiopia, and notably the objectives related to: (i) soil husbandry and sustainable agriculture; (ii) forest, woodland and tree resources; and (iii) genetic, species and ecosystem diversity. Furthermore, it is consistent with the cross-sectoral issues related to: (i) community participation and the environment; (ii) land use planning; and (iii) environmental education and awareness. These priority biodiversity areas will serve as inputs for the establishment and management of "Community Conservation Areas" (CCAs) in the target woredas. The incremental GEF financing will also support the creation of at least 40,000 ha of CCAs in some of the 135 target woredas (90 new and 45 existing woreads). The CCAs will preferably be located adjacent to one of the existing officially gazetted protected areas including National Parks, National Forest Priority Areas, Wildlife Reserves, Sanctuaries, Controlled Hunting Areas and World Heritage Sites. This strategy of using Community Conservation Areas has been successfully tested in Ethiopia and well-appreciated by communities for generating multiple environmental benefits.

33. Furthermore, per agro-ecological site the Project will finance the establishment of 10 community gene/seed banks. At least one main nursery and five satellite nurseries will be rehabilitated or established per major watershed.

34. LDCF funding will specifically support the investment activities by communities and small holder farmers to internalize climate induced risks to enhance resilience. The LDCF funding will also be used to promote climate smart agricultural practices and tools. It will also promote construction of rainfall harvesting structures and physical and biological measure to reduce erosion and stabilize gullies.

Component 2 – Institutional Strengthening, Capacity Development and Knowledge Generation and Management (Total: US$16.98 million of which US$2.00 million from GEF and US$1.00 million from LDCF)

35. The goal of this component is to complement the on-the-ground activities to be implemented under Component 1 by strengthening and enhancing capacity at the institutional level and building relevant skills and knowledge of key stakeholders, including government agencies, research organizations and academia involved in the sustainable management of natural resources, as well as the private sector, community leaders and small holder farmers. This would be achieved through the revision of existing policies, legislation and regulations related to (i) watershed management and protection such as the CBPWDG, (ii) reward and incentive schemes for market-based instruments such as carbon finance, (iii) payments for ecosystem services (PES), and (iv) policies on rural land use planning, benefit sharing, mechanisms for dispute resolution, etc.. In addition, this component would support a comprehensive training program that will include regular training events and exchange programs to enhance the capacity of local communities and institutions at national and sub-national levels in: (a) climate smart watershed and landscape management/protection; (b) biodiversity and ecosystem protection; (c) participatory rural land administration and certification; (d) participatory land use planning; and (e) participatory resource assessment. Under this Component, project funds would also be used

to facilitate private sector involvement, for example, in supplying marketing and extension services such as veterinary shops, bull station service, private nurseries, etc. in the project areas.

36. Incremental GEF financing will specifically address capacity constraints in promoting, adopting and/or monitoring investment activities supported under component 1 that will generate global environment benefits. In particular, incremental GEF financing will support in:

- Organizing targeted capacity building (e.g., training, induction, dissemination) in the different areas identified and required including climate-smart/resilient watershed and landscape management, payment for ecosystem services, certification, biodiversity and ecosystem rehabilitation, ecotourism development, baseline survey, mapping, and knowledge management.
- Providing technical assistance (TA) to the experts working at different levels including to Development Agents (DAs) and farmers through trainings, workshops and experience sharing events as field days, conservation days, field schools focusing on conservation measures.
- Raising awareness across the larger stakeholder spectrum including the private sector about SLM, climate smart agriculture, participatory forest management, biodiversity conservation, PES, certification, etc.
- The GoE will also use BD resources to work on the integration of BD into existing PES mechanisms, which currently focus largely on carbon. Ethiopia is already well advanced with PES mechanism based on C, such as through Humbo Natural Regeneration project that has rehabilitated about 2800 ha of degraded lands in Southern Ethiopia. The mechanism includes a formal process for payments directly to local communities, and will be expanded through co-financing from the Biocarbon fund and Norway. The incremental GEF resources will support the inclusion of ecosystem and biodiversity services in the scheme. GIS based information on species and habitat distribution will complement REDD investments (like Assisted Natural Regeneration projects) to priority, highly threatened biodiversity areas. GEF resources will be used to procure Global Environmental Benefits as co-financier of a PES scheme for carbon and bio-diversity; a unique opportunity to design and implement a PES scheme bundling multiple services (i.e. carbon and biodiversity).
- Facilitating research to improve systems for monitoring, verifying and quantifying the provisions of ecosystem services, including carbon stock monitoring. Particular attention will be given in building simplified, yet robust, monitoring systems.
- Producing and disseminating complementary technical and strategic documents related to natural resources management (e.g. land use and land cover status, status of land degradation, cost-benefit analysis of land degradation and SLM practices, climate data and trends, water resources situation and trends, biodiversity status and hotspot areas) for each woreda and watershed.
- Establishing an SLM Forum that would be responsible mainly for bringing together SLM practitioners, academics, NGOs, religious organizations and community leaders to share experiences at least once a year. The Forum would also include international experts to share knowledge from around the world.
- Strengthening existing center of excellences in the country to effectively share knowledge and provide platform for networking of practitioners, research/academic institutions and NGOs.

37. LDCF funding will specifically address capacity constraints in promoting, adopting and/or monitoring investment activities supported under component 1 that will enhance climate resilience, in particular:

- Organizing targeted capacity building (e.g., training, induction, dissemination) in the different areas identified and required such as climate-smart/resilient watershed and landscape management, weather/crop insurance, etc.
- Developing training/implementation manuals on salient topics/issues identified by project implementers and beneficiaries including rain water harvesting, small scale irrigation, etc.
- Establishing "Climate Field Schools" in targeted communities to improve farmers' awareness of climate change and enhance their ability to use weather information for better agronomic practices and adoption of adaptation practices to address drought and other events in farming operations.
- Raising awareness across the larger stakeholder spectrum including the private sector about climate smart agriculture and climate resilience.

Component 3 - Rural Land Administration, Certification and Land Use (Total: US$12.20 million)

38. The objective of the component is to enhance the tenure security of smallholder farmers in order to increase their motivation to adopt sustainable land management practices on communal and individual land. It would support an ongoing national program providing land certificates to all landholders, by enhancing rural land certification and administration as well as local level land use planning at watersheds or kebeles assisted by the project. It would support the use of low-cost appropriate geo-referenced mapping technologies including hybrids of technologies aimed at assisting in cadastral surveying and delineating various rural land parcels and thus at strengthening tenure security for smallholder farmers in the project areas while stimulating investments by farmers in sustainable land and water management practices.

39. No GEF nor LDCF funds will co-finance this component activities.

Component 4 - Project Management (Total: US$4.45 million of which US$0.33 million from GEF and US$0.23 million from LDCF)

40. This component would partially finance the operation of the SLM Support Unit to support the Ministry of Agriculture in ensuring efficient delivery of project resources to achieve the PDO, as well as adequately documenting progress and results. The component focuses on project management arrangements and mechanisms including support to project governance structures, coordination with other SLM partners, as well as monitoring and evaluation (M&E), preparation of implementation-related plans and fiduciary responsibilities such as procurement, financial management and safeguard compliance.

41. Incremental GEF and LDCF funds will support this component in particular for ensuring efficient and effective implementation of GEF and LDCF activities, M&E associated with GEF/LDCF financed activities and drawing lessons for replication and sharing.

42. Furthermore, an addition financing of US$5.865 million is being provided by the Government of Norway to enhance capacity in the country.

Incremental/Additional Cost

43. The total cost of the GEF/LDCF Alternative scenario is US$929.28 million. In the GEF/LDCF Alternative scenario, investments and capacity development activities will augment the baseline by incorporating additional activities to generate global environment and climate resilience benefits. The GEF/LDCF Alternative is envisaged to enhance the global environment benefits while strengthening long term ecosystem services and internalizing climate induced risks.

44. The total incremental/additional cost is US$63.48 of which US$12.96 is being financed by the GEF/LDCF.

Incremental/Additional Cost Matrix

Table 1: Incremental Cost Matrix

Component	Category	Estimated Expenditures (US$ million)	Local Benefit	Global Benefit
1. **Integrated Watershed and Landscape Management**	Baseline scenario	$418.81	Implementation of investment activities including sub-projects to enhance agriculture productivity, and therefore, increase food security; Increased weather/climate variability information and adaptation benefits	Limited soil and water conservation benefits
	GEF/LDCF alternative	$463.23	Implementation of investment activities related to sustainable management of land and water resources, land-use change, forestry, ecosystem services sustaining the livelihoods of local communities are supported. Implementation of climate smart agriculture that will improve food security. Implementation of adaptation activities to internalize climate induced risk in community infrastructure.	Increased global environment benefits including conservation of soil and water; Increased area under SLM practices; Degraded areas with increased vegetation and forest cover due to reforestation activities; Restoration and/or protection of ecologically sensitive areas; and Forest and biodiversity conservation.

	Increment/Additional	$44.42		
	Baseline scenario	$438.10	The capacities of participating government institutions at federal, regional, woreda and kebele level increased especially for agriculture practices. Communities and farmers getting knowledge and skills to increase agriculture product.	Limited capacity improvement in conserving soil and water.
2. **Institutional Strengthening, Capacity Development and Knowledge Generation and Management**	GEF/LDCF alternative	$451.60	Greater participation of local stakeholders in planning & implementing local development plans, integration of social and environmental sustainability in various investment activities. Increased community knowledge for natural resource management. The capacities of participating government institutions at federal, regional, woreda and kebele level to support planning and implementation of natural resources management. Increased capacity to internalize climate induced risk in planning and implementation of projects.	Greater participation of local stakeholders in planning & implementing local development plans, integration of social and environmental sustainability in various investment activities. Increased community knowledge for natural resource management, soil and water conservation, biodiversity and protected area conservation, forest management. The capacities of participating government institutions at federal, regional, woreda and kebele level to support planning and implementation of natural resources management. Increased capacity to internalize climate induced risk in planning and implementation of projects.

	Increment/Additional	$13.50		
3**. Rural Land Administration, Certification and Land Use**	Baseline scenario	$5.00	Increased use rights and tenure security.	Limited global benefits.
	GEF/LDCF alternative	$10.00	Increased use rights and tenure security.	Increase in tenure security and increased investment planning for long term and intergeneration benefits to sustain land productivity. Increased soil and water conservation measures to sustain land productivity.
	Increment/Additional	$5.00		
4. **Project Management**	Baseline scenario	$3.89	Improved project management for project implementation and monitoring of results indicators.	No significant global environmental benefit.
	GEF/LDCF alternative	$4.45	Project monitoring and knowledge sharing activities address environmental sustainability. Better monitoring of SLM issues.	Improved availability of and access to knowledge on sustainable land management practices. Tools and systems for monitoring, evaluating, and targeting of SLM interventions established.
	Increment/Additional	$0.56		
Total	**Baseline scenario**	$865.60		
	GEF/LDCF Alternative	$929.28		
	Increment/Additional	$63.48 of which $8.33 (GEF) and $4.63 (LDCF)		

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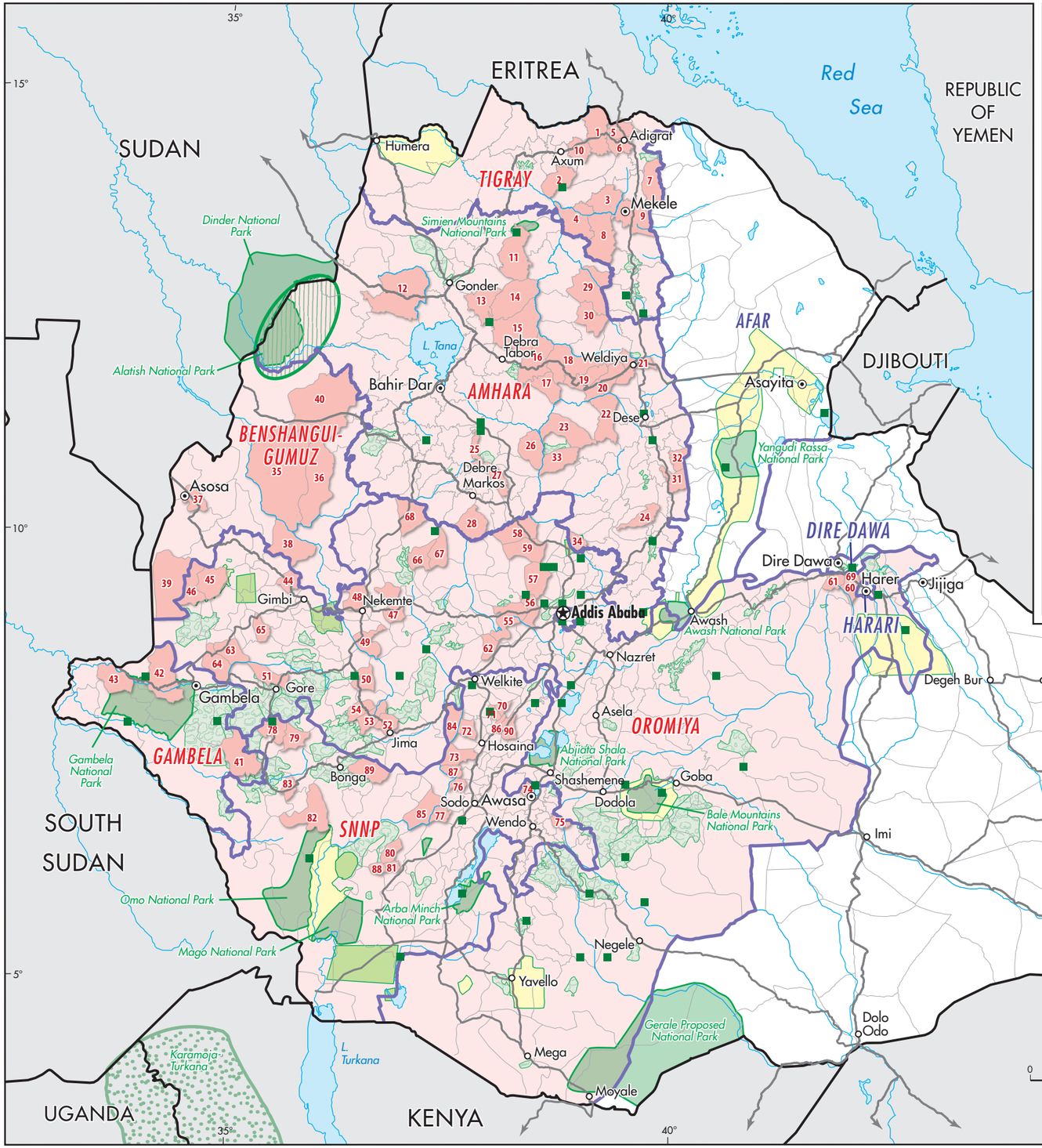

PROJECT WOREDAS:

TIGRAY
1 Ahferom
2 Nader Adet
3 Degua Temben
4 Tanqua Abergele
5 Gulo Meheda
6 Ganta Afeshum
7 Atsbi Wonberta
8 Seharti Samre
9 Enderta
10 Adwa Town

AHMARA
11 Jan Amora
12 Chilga
13 Merab Belesa
14 Misrak Belesa
15 Ebinat
16 Lay Gayint
17 Tach Gayint
18 Meket
19 Wadis
20 Delanta Wereda
21 Guba Lafto
22 Tenta
23 Sayint
24 Menze Mama Midir
25 Bibugn
26 Enebise Sar Midir
27 Debay Tilatgin
28 Basso Liben
29 Sekota
30 Gazg Bila
31 Artuma Fursi
32 Dewe Harewa
33 Debresina
34 Ensaro

BENISHANGUL GUMUZ
35 Wenbera
36 Bulen
37 Homosha
38 Agelometi
39 Maokomo
40 Mabuk Dangur

GAMBELA
41 Mengesh
42 Itang
43 Jikawo

OROMIYA
44 Boji Demeji
45 Kundala
46 BBGI
47 Sibu Sire
48 Sasiga
49 Jimma Arjo
50 Gechi
51 Metu
52 Mana
53 Gomma
54 Guma
55 Dendi
56 Ejere
57 Adea Berga
58 Were Jaso
59 Kuyu
60 Haromaya
61 Kersa
62 Wonchi
63 Hawa Gelan
64 Seyo
65 Laloquile
66 Hoto
67 Abay Chomen
68 Amuru
69 Haromaya

SNNP
70 Gumer
71 Geta
72 Gibe
73 Soro
74 Awasa Zuriya
75 Arb Egonia
76 Bolosso Bonibe
77 Kindo Didaye
78 Mesha
79 Gesha
80 Geze Gofa
81 Oyida
82 Meanit Goldiiya
83 Semen Bench
84 Yeme Special
85 Loma
86 West Azerenet Bebe
87 Tibaro
88 Gelila
89 Menjiwo
90 Wilbareg

ETHIOPIA
SUSTAINABLE LAND MANAGEMENT PROJECT 2

- PROJECT REGIONS/STATES
- 1 PROJECT WOREDAS
- TRANSBOUNDARY ENVIRONMENTAL CONSERVATION ACTIVITIES
- WILDLIFE AREA/POTENTIAL PROTECTED AREA
- IBA SITES
- NATIONAL PARKS
- PROTECTED AREAS
- SANCTUARIES
- FOREST PRIORITY AREAS
- MAIN ROADS
- SELECTED CITIES AND TOWNS
- REGION/STATE CAPITALS
- NATIONAL CAPITAL
- WOREDA BOUNDARIES
- REGION/STATE BOUNDARIES
- INTERNATIONAL BOUNDARIES

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OCTOBER 2013