

**Document of
The World Bank**

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Report No:

Draft

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF USD 20 MILLION

AND

**PROPOSED GRANT FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND**

IN THE AMOUNT OF USD 9 MILLION

TO THE

REPUBLIC OF ETHIOPIA

FOR A

SUSTAINABLE LAND MANAGEMENT PROJECT

{ PROJECT DATE }

**Environmental & Natural Resources Management
Sustainable Development Department
AFCE3
Africa Region**

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CURRENCY EQUIVALENTS

(Exchange Rate Effective {Date})

Currency Unit

= US\$1

US\$ = SDR 1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AgTVET	Agriculture Technical and Vocational Education Training
BoARD	Bureau of Agriculture and Rural Development
CAS	Country Assistance Strategy
CBA	Cost-benefit Analysis
CBPWDG	Community Based Participatory Watershed Development Guideline
CPA	Change of Productivity Approach
CIDA	Canadian International Development Agency
CPAR	Country Procurement Assessment Report
CQS	Consultants' Qualifications
CSRP	Civil Service Reform Program
DA	Development Agents
ELTAP	Ethiopia Land Tenure and Administration Program
EMCP	Expenditure and Control sub-Program
EPLAUA	Environmental Protection, Land Administration and Use Authority
EPRDF	Ethiopia People's Revolutionary Democratic Front
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
FA	Fiduciary Assessments
FAO	Food and Agricultural Organization of the United Nations
FRR	Financial Rate of Return
GDP	Growth Domestic Product
GEF	Global Environment Facility
GEO	Global Environment Objective
GoE	Government of Ethiopia
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
ICB	International Competitive Bidding
IDA	International Development Agency
IFAD	International Fund for Agricultural Development
IFRs	Interim-un-audit Financial Reports
IRR	Internal Rates of Return
JBAR	Joint Budget and Aid Review
KWDC	Kebele Watershed Development Committee
LCS	Least Cost Selection

M&E	Monitoring and Evaluation
MERET	Managing Environment Resources for Transition
MoARD	Ministry of Agriculture and Rural Development
NCB	National Competitive Bidding
NPV	Net Present Values
OFAG	Office of Federal Auditor General
PASDEP	Plan for the Accelerated and Sustained Development to End Poverty
PDO	Project Development Objective
PEFA	Public Expenditure and Financial Accountability
PFM	Public Financial Management
PRS	Poverty Reduction Strategy
PRSPs	Poverty Reduction Strategy Papers
PSCAP	Public Sector Capacity Building Project
PSNP	Productive Safety Net Project
QBS	Quality Based Selection
QCPS	Quality- and Cost-Based Selection
SBD	Standard Bidding Documents
SIDA	Swedish International Development Co-operation Agency
SIP	Strategic Investment Program
SLM	Sustainable Land Management
SNNP	Southern Nations, Nationalities, and Peoples
SUN	Sustainable Utilization of Natural Resources
SWC	Soil and Water Conservation
UNDP	United Nations Development Programme
USLE	Universal Soil Loss Equation
USAID	U.S. Agency for International Development
WFP	World Food Programme
WoA	Woreda Office of Agriculture
WOCAT	World Overview of Conservation Approaches and Technologies

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ETHIOPIA
ET-Sustainable Land Management Program (FY08)

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ETHIOPIA

SUSTAINABLE LAND MANAGEMENT PROJECT

PROJECT APPRAISAL DOCUMENT

AFRICA

AFTEN

Date: January 4, 2008 Country Director: Kenichi Ohashi Sector Manager/Director: Marjory-Anne Bromhead Project ID: P107139 Environmental Assessment: Partial Assessment Lending Instrument: Specific Investment Loan	Team Leader: Herbert Acquay Sectors: Agricultural extension and research (60%); Forestry (40%) Themes: Land administration and management (P); Climate change (S); Other environment and natural resources management (S)		
Global Supplemental ID: P090789 Lending Instrument: Specific Investment Loan Focal Area: L-Land degradation Environmental Assessment: Supplement Fully Blended?: Yes	Team Leader: Herbert Acquay Sectors: General agriculture, fishing and forestry sector (80%); General water, sanitation and flood protection sector (20%) Themes: Land administration and management (P); Other rural development (S); Other environment and natural resources management (S)		
Project Financing Data			
<input type="checkbox"/> Loan <input type="checkbox"/> Credit <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:			
For Loans/Credits/Others: Total Bank financing (US\$m.): 20.00 Proposed terms:			
Financing Plan (US\$m)			
Source	Local	Foreign	Total
BORROWER/RECIPIENT	8.79	0.00	8.79
International Development Association (IDA)	0.00	20.00	20.00
Global Environment Facility (GEF)	0.00	9.00	9.00
Financing Gap	0.00	0.00	0.00
Total:	8.79	29.00	37.79
The co-financing sources for GE supplemental are (All the amounts are in US\$ million): These amounts are not additional to the amounts shown in the Financial Plan table above			

Borrower: Federal Democratic Republic of Ethiopia

Responsible Agency: Federal Ministry of Agriculture and Rural Development

Estimated disbursements (Bank FY/US\$m)

FY	0	0	0	0	0	0	0	0	0
Annual	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

GEF Estimated disbursements (Bank FY/US\$m)

FY	0	0	0	0	0	0	0	0	0
Annual	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Project implementation period: Start July 7, 2008 End: January 7, 2013

Expected effectiveness date: July 7, 2008

Expected closing date: July 8, 2013

Does the project depart from the CAS in content or other significant respects?

[] Yes [X] No

Ref. PAD A.3

Does the project require any exceptions from Bank policies?

[] Yes [X] No

Ref. PAD D.7

Have these been approved by Bank management?

[] Yes [] No

Is approval for any policy exception sought from the Board?

[] Yes [X] No

Does the project include any critical risks rated “substantial” or “high”?

[X] Yes [] No

Ref. PAD C.5

Does the project meet the Regional criteria for readiness for implementation?

[X] Yes [] No

Ref. PAD D.7

<p>Project development objective Ref. PAD B.2, Technical Annex 3</p> <p>The development objectives of the proposed program are to reduce land degradation in agricultural landscapes and improve the agricultural productivity of smallholder farmers.</p>
<p>Global Environment objective Ref. PAD B.2, Technical Annex 3</p> <p>The global environment objective is also to reduce land degradation, leading to the protection and/or restoration of ecosystem functions and diversity in agricultural landscapes.</p>
<p>Project description. Ref. PAD B.3.a, Technical Annex 4</p> <p>The program has the following three components:</p> <p>Watershed management: It is aimed at supporting scaling up of best management practices in sustainable land management practices and technologies for smallholder farmers in the “high potential”/“food secure” areas that are increasingly becoming vulnerable to land degradation and food insecurity.</p> <p>Rural land certification and administration: The objective of this component is to expand the coverage and enhance the government’s land certification program, with the aim of strengthening land tenure security for smallholder farmers.</p> <p>Program management: The focus of this component is to provide financial and technical assistance to the Federal Ministry of Agriculture and Rural Development and local government units responsible for sustainable land management to effectively support coordination and implementation of the SLM program.</p>
<p>Which safeguard policies are triggered, if any? Ref. PAD D.6, Technical Annex 10</p> <p>Environmental Assessment</p> <p>Significant, non-standard conditions, if any, for: Ref. PAD C.7</p> <p>Board presentation:</p> <p>Loan/credit effectiveness:</p> <p>Covenants applicable to project implementation:</p>

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and Sector Issues

1. Ethiopia is one of the Sub-Saharan Africa countries most seriously affected by land degradation. Land degradation is a major cause of the country's low and declining agricultural productivity, persistent food insecurity, and rural poverty. The minimum estimated annual costs of land degradation in Ethiopia range from 2 to 3 percent of agricultural GDP. This is a significant loss for a country where agriculture accounts for nearly 50 percent of GDP, 90 percent of export revenue, and is a source of livelihood for more than 85 percent of the country's 70 million people.

2. Ethiopia's inherently fragile soils, undulating terrain, highly erosive rainfall and the environmentally destructive farming methods that many farmers practice make it highly vulnerable to soil erosion. Moreover, nearly one-third of the agricultural land is moderately to strongly acidic because of damaging farming practices. The causes of land degradation are complex and diverse. First, the heavy reliance of Ethiopia's rapidly growing population on unsustainable subsistence agricultural practices is a major cause of land degradation.

3. The farming system, particularly in the highlands, is dominated by cereal crops, which provide little ground cover when the most erosive rains fall (in June–August). This system often requires frequent working or 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.

4. Second, the very high dependence on wood and other biomass for household energy, together with rapid expansion of agriculture into forested areas, fosters a high rate of deforestation. Nearly 95 percent of the nation's energy consumption comes from biomass fuels. Deforestation ultimately strips the land of its 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.

5. Third, poor livestock management, mainly based on the free grazing system, is another major cause of land degradation. Only 25 percent of Ethiopia's high livestock population, which includes more than 35 million cattle, graze in the rangelands (i.e. the lowland areas of Afar, Somali, and Borena), while the remaining 75 percent graze in the highlands, leading to serious overgrazing in areas already under high agrarian pressure. In the highlands, the expansion of grazing beyond the land's carrying capacity occurs at the expense of the remaining natural vegetation, further accelerating land degradation. The scarcity of grazing land and livestock feed has forced the widespread use of crop residues to feed livestock. When crop residues are removed for feed and cow dung is used for fuel, the soil loses its organic matter and nutrients. This breach in the soil nutrient cycle seriously depletes soil quality, increases erosion, and eventually reduces soil productivity.

6. Finally, land tenure insecurity, which is related to policy failures of past governments, is also implicated in the growing land degradation problem in Ethiopia. It undermines land users'

incentives to invest in sustainable land management practices. Under the feudal system under the monarchy, farmers in Ethiopia were tenants or sharecroppers. Therefore, they had little or no incentive to invest in sustainable land management practices because the land belonged to absentee landlords. During the Marxist Derg regime that assumed power in 1975, all land in Ethiopia was nationalized and the government undertook a series of rural land distributions until 1991 when it was overthrown. The frequent land redistribution exacerbated tenure insecurity among farmers, further undermining the incentive for investment in sustainable land management. The Ethiopia Peoples Revolutionary Democratic Front (EPRDF) Government, which took power in 1991, has since introduced a number of policy and legal reforms aimed at improving tenure security and land management.

Government's strategy

7. The EPRDF Government's most recent strategy to address land degradation is outlined in the Plan for the Accelerated and Sustained Development to End Poverty (PASDEP) 2005/06-2009/10, the country's Poverty Reduction Strategy. The main elements of PASDEP's strategy to address land degradation are as follows: (a) strengthening tenure security by expanding the on-going land certification program; (b) building capacity in community-based approaches to watershed management; (c) scaling up successful models for watershed management; and (d) strengthening natural resource information management, specifically rigorous evaluation, synthesis, and dissemination of best management practices and innovations in sustainable land management (SLM).

8. This strategy builds on lessons learned from past and on-going work at the policy and operational levels, including the following:

- (a) Legal reforms: The EPRDF Government ushered in a new constitution in 1995, which reaffirms that all land in Ethiopia belongs to the State which holds it in trust for the people. Also, under the Constitution, the country is divided into eleven Regional States (including three special "urban states – Addis Ababa, Dire Dawa, and Harrari), in a decentralized federal system. Most responsibilities, including for land management, are decentralized to the Regional States. Decentralization was extended in 2003, further devolving many responsibilities, including natural resource management to the Woredas (districts). Thus, the Woredas and Kebeles (sub-districts) have become the 'front lines' in efforts to reverse land degradation.

In July 2005, the Federal Parliament enacted the Federal Rural Land Administration and Use Proclamation, which reaffirms ownership of rural land by the State, but confers indefinite tenure rights, rights to 'property produced on the land', rights to inter-generational tenure transfer, rights to land exchange ('to make small farm plots convenient for development'), and some rights for leasing to land users. The law makes provision for the registration and certification of tenure rights. The proclamation also specifically addresses degradation of rural land, including defining the obligations of tenure holders to sustain the land, with specific requirements depending on slope, requirements for gully rehabilitation, restrictions on free grazing, and protection of wetland biodiversity. This Proclamation also has provisions indicating that there will be

no further land redistribution, except under special circumstances. Regional States have also enacted legislation to strengthen tenure security, modeled after the federal law.

- (b) Land certification program: To improve land tenure security, the Regional States began a process of providing “simple” temporary landholding certificates, known as the first stage of Stage 1 of the certification process. Under Stage 1, farmers receive temporary certificates with no geo-referencing or mapping of land parcels. Through this process land certificates were issued to 6.3 million households out of a total of 13 million rural households in the four major Regional States – Amhara, Oromia, Tigray, and Southern Nations, Nationalities, and Peoples (SNNP). The Government’s target is to provide Stage 1 certificates to the remaining 6.7 million households and to scale up for a successful 1 million households land administration pilot issuing permanent certificates, with geo-referencing and mapping of individual land parcels. This land administrative work is referred to as the second stage or Stage 2 of the certification program.

A recent review of Ethiopia’s Stage 1 certification program concluded that¹: (a) the process is speedy and participatory; (b) low cost; and (c) transparent and unbiased. The study also identified the following areas for improvement: (a) improvement in procedures and systems for updating information; (b) registration of common property land and house plots to facilitate the creation of an integrated land administration system; and (c) a graphical record of land holdings needs to be created to minimize boundary disputes.

- (c) Scaling-up of best practices: The Ethiopia Government and its national research institutions have been working with development partners, particularly GTZ, SIDA, World Food Program, CIDA, and UNDP, to develop best management practices for sustainable land management. These efforts have led to successful models for improving sustainable land management, focusing largely on the food insecure areas. However, these pilots have had mostly localized impacts. Scaling-up has not occurred because of (a) lack of technical and financial resources; (b) some lingering doubts about tenure security because of the temporary nature of the land certificates already issued (i.e. Stage 1 certificates) and past experience with frequent land redistribution; (c) farmers’ concern about the relatively high upfront cost of adopting some of the model land management practices; and (d) weak mechanisms to deliver good management practices to farmers through the research and extension system. The IDA-financed Rural Capacity Building Project (FY2005) is already helping to address the problems associated with the extension system and research-extension-farmer linkages.

It is important that the good management practices are disseminated more widely, especially in the so-called “high potential areas” where long-term food security is under threat from land degradation. To do this will require incentives, institutional mechanisms, capacity building, and financing to facilitate wider adoption across the country.

¹ K. Deininger, D. Ali, S. Holden, and J. Zevenbergen (2007). Rural Land Certificate in Ethiopia: Process, Initial Impact, and Implications for Other African Countries.

- (d) Establishment of a coordination mechanism for SLM: As noted above, a number of interventions, including pilot activities on SLM, are being financed by the Government and its development partners across Ethiopia. To avoid duplication and promote synergies, the Government in 2006 established a mechanism to coordinate all SLM investments in Ethiopia. This mechanism comprises a national inter-agency steering committee chaired by the State Minister for the Federal Ministry of Agriculture and Rural Development (MoARD); a national technical committee that comprises representatives from government, civil society, and development agencies; and a SLM Support Unit in MoARD to provide administrative and technical support to the steering committee and the technical committee.

2. Rationale for Bank involvement

9. The World Bank and the Global Environment Facility (GEF) have a number of existing strategies and strengths that will assist Ethiopia in scaling-up more widely sustainable land management:

10. First, the Bank's Interim Country Assistance Strategy (CAS) (FY2006-2007), notes that "land degradation is at the top of the environmental agenda in Ethiopia" because of the threat it poses to sustainable agricultural growth, infrastructure, etc. Therefore, the Bank's involvement would help Ethiopia to achieve targets for sustainable land management practices in its Poverty Reduction Strategy or PASDEP.

11. Second, the proposed SLM program is fully consistent with the strategy of the Africa Action Plan to make agriculture more productive and sustainable, and to take advantage of opportunities for natural resource conservation to promote growth and poverty reduction. It is also in line with one of the Bank/GEF's Global Partnership Program, the TerrAfrica's Multi-partner Initiative, which is aimed at addressing land degradation in Africa in a systematic and coordinated way.

12. Third, successful interventions to prevent or control land degradation require integrated and cross-sectoral approaches to sustainable land management. The Bank is in a unique position to catalyze the adoption of such approaches in Ethiopia because of its strong policy dialogue with the Government and development partners, and its engagement across several sectors. The GEF, on the other hand, has the advantage of using its resources to leverage additional funds from bilateral and multilateral development agencies.

13. Fourth, this program would complement the public works component of the on-going IDA-financed Productive Safety Net Program, which focuses largely on soil and water conservation measures in the "food insecure areas". This operation, as noted above, would focus on the "food secure" areas that are beginning to face food insecurity because of the impact of land degradation on agriculture productivity.

14. Finally, both the Bank and GEF are assisting developing countries to protect critical ecological systems and mitigate climate change. Their involvement in the proposed program would help focus attention and assistance not only on promoting sustainable land management to

improve agricultural productivity, but also on helping smallholder farmers become more resilient to extreme climatic events, protecting ecologically sensitive landscapes, and increasing sequestration of carbon in soils and biomass.

3. Higher level objectives to which the project contributes

15. The higher-level objective of the proposed SLM program is to provide assistance to smallholder farmers to adopt sustainable land management practices on a wider scale to (a) reverse land degradation in agricultural landscapes; (b) increase agricultural productivity and income growth; (c) protect ecosystem integrity and functions.

B. PROJECT DESCRIPTION

1. Lending instrument

16. The proposed Sustainable Land Management Program would be financed with US\$37.79 million for 35 watersheds over a period of five years. The sources of financing are a US\$20 million Sector Investment Loan from IDA, US\$9 million of GEF grant, and [US\$8.79 million from the Government of Ethiopia. The program is designed in a way that additional financing can be accommodated to increase the number of watersheds under the program. For example, negotiations are expected to begin in April 2008 for the German Development Cooperation to provide up to US\$25 million in additional financing and technical assistance over a five year period.

2. Project global and development objective and key indicators

17. The development objectives of the proposed program are to reduce land degradation in agricultural landscapes and improve the agricultural productivity of smallholder farmers. The global environment objective is also to reduce land degradation, leading to the protection and/or restoration of ecosystem functions and diversity in agricultural landscapes.

18. Below are the key performance indicators. (See Annex 3 for details.)

- Percentage increase in area under sustainable land management practices in the targeted watersheds.
- Percentage increase in agricultural productivity (for dominant crops and livestock).
- Percentage increase in the amount of carbon sequestered.
- Percentage of Development Agents and Woreda experts using information on best management practices in sustainable land management from MoARD's knowledge management system.
- Percentage increase in the number of beneficiary farmers with a sense of tenure security compared with non-beneficiaries.

3. Program sites and components

19. The program would be implemented in 35 watersheds in six Regional States in Ethiopia (i.e. Amhara, Oromiya, Tigray, SNNP, Beneshangul Gumuz, and Gambela) (See Annex 4 for details on the site selection criteria). These watersheds, with an average size of about 8,500 ha, comprise 15 to 20 sub-watersheds. The program is expected to cover a total area of about 320,000 ha, benefiting about 400,000 households. The program would not include the urban Regional States (Addis Ababa, Dire Dawa, and Harari) and pastoral areas in the arid and semi-arid areas of Ethiopia, mainly in Somali and Afar Regional States, because Federal and Regional policies on land use for pastoral areas have not yet been developed. This is important because the land tenure and use system in the pastoral areas is communal compared with individual parcels in the “settled” areas.

20. The proposed SLM program would have the following three components: (a) Watershed management; (b) Rural land certification and administration and (c) Program management. It is designed to combine the benefits of land tenure security and sustainable land and water management practices in watersheds.

Component 1: Watershed Management (US\$21.77 million)²

21. The objective of the Watershed Management Component is to support scaling up of best management practices in sustainable land management practices and technologies for smallholder farmers in the “high potential”/“food secure” areas that are increasingly becoming vulnerable to land degradation and food insecurity. This objective responds directly to the priorities outlined in the PASDEP, namely building capacity in community-based approaches to watershed management, scaling up successful models for watershed management, and strengthening natural resource information management to disseminate more widely best management practices and innovations in sustainable land management. Implementation of watershed management interventions would be phased-in, according to the capacity of the government agencies and local communities.

22. Under this component there will be five inter-related sub-components: (a) Capacity building; (b) Communal land and gully rehabilitation; (c) Farmland and homestead development; (d) Community infrastructure; and (e) Knowledge management. While these sub-components would be implemented in an integrated and participatory manner, they offer different degrees of private and public environmental benefits. Therefore, the relative contribution of program funds would vary, ranging from 25% to 100%. Farmers would provide mostly in-kind contribution in the form of labor, with some cash contribution under the farmland and homestead development and the community infrastructure sub-components.

23. The expected outcomes of interventions under the watershed component are: (a) environmentally sustainable increases in agricultural productivity; (b) reforestation of degraded land; (c) improved management of grazing land; (d) improved resilience of farmers to extreme

² The component costs do not include the physical and price contingencies.

climatic events or climatic risk management ability through improved soil fertility and moisture management; (e) protection of ecologically critical habitats such as stream banks and wetlands; and (f) increased sequestration of carbon.

24. Sub-component 1: Capacity Building: The objective of this sub-component is to provide technical assistance and training to support the preparation of participatory community-based watershed management plans for land use in each of the selected sub-watersheds. The program would finance training, farmer exchange visits, equipment, etc. to enhance the capacity of MoARD, Regional Bureau of Agriculture and Rural Development (BoARD), Woreda Office of Agriculture (WoA), Development Agents (DAs) (i.e. extension staff), and local communities in community-based approaches to watershed planning and management, using MoARD's widely accepted Community-Based Watershed Management Guideline.

25. Special attention would be given to sub-watersheds areas that are adversely affected by acid soils. In such Woredas, additional funds would be available under the SLM program for collaborative work in involving research institutions, Woreda experts, and Development Agents to develop on-farm demonstration sites to train farmers in best practices to reclaim and improve the productivity of acidic soils.

26. Sub-component 2: Communal Land and Gully Rehabilitation: The objective of this sub-component is to stabilize hillsides, degraded communal lands, and gullies through locally appropriate physical and biological measures. Degraded communal lands and hillsides would be treated through a broad range of management practices and technologies that have proven to be financially, ecologically, and socially viable under local conditions. The program would finance measures such as terraces, forage contour bunds, reforestation/afforestation, deep-trenching, and interventions to ameliorate acidic or saline-sodic soils, etc.

27. Similarly, the program would finance the treatment of gullies through a broad range of measures, including building of check dams, reshaping and cultivation with multi-purpose perennial trees, shrubs and grasses. These activities require investments that have significant public benefits, including benefits to the local community, downstream communities, and the environment. Therefore, the program would finance up to 80 percent of the total costs (in the form of technical advisory services, hand tools, seeds, seedlings, fencing materials, etc). The remainder is expected to be in-kind contribution from the beneficiary communities in the form of labor. The program would also provide technical assistance and forums for communities to develop, in a participatory way, local by-laws to govern the use of communal lands, including grazing land.

28. Sub-component 3: Farmland and Homestead Development: The objective of this sub-component is to reduce soil erosion and improve agricultural productivity on individual farmland and homesteads. This objective would be achieved through measures such as applying physical and biological soil and water conservation measures, introducing high value crop varieties (horticulture and orchard development, forage and grassland development, etc.), restoring and sustaining soil fertility, improving water use efficiency in smallholder farming systems, and establishing woodlots.

29. While considered an essential part of the overall watershed management, these measures would have mostly private benefits and some public environmental benefits. Therefore, the program would finance 25% of the total costs (in the form of seeds, seedlings, technical advisory services) and the intended beneficiaries would cover the cost of the remaining 75% (in the form of labor and cash from their own resources or accessed through the credit scheme under the Government's agricultural household extension packages or micro-finance institutions that are widely available in rural Ethiopia.

30. In addition, the program would also finance 30 percent of the costs of energy-saving stoves provided to households on a demand-driven basis to reduce deforestation, which is largely caused by unsustainable collection of fuelwood.

31. Sub-component 4: Community Infrastructure: The objective of this sub-component is to build on the benefits of natural resource rehabilitation to be implemented under the above sub-components to further improve community development. The program would finance small-scale community-based infrastructure such as water harvesting systems (i.e. farm ponds, storage tanks, roadside flood harvesting, etc.) and drinking water supply systems. The communities would provide in-kind contribution in the form of labor.

32. Sub-component 5: Knowledge Management: The objective of this sub-component is to assist the MoARD in facilitating the systematic synthesis, quality management, dissemination and use of best management practices and technologies in soil and water conservation. Currently, soil and water conservation efforts in Ethiopia are informed by the Community Based Participatory Watershed Development Guidelines. While providing a solid foundation, some of the soil and water conservation (SWC) technologies are works in progress that will have to be continuously reviewed and updated as best practice technologies emerge and further develop. MOARD has adapted the World Overview of Conservation Approaches and Technologies (WOCAT) tool as a framework for capturing, assessing and sharing lessons learned and worldwide experiences on successful examples of soil and water management.

33. The program would also finance upgrading the information management system for WOCAT in the Federal Ministry of Agriculture and Rural Development and associated training expert participation in the process of selecting best management practices; and production and dissemination of different kinds of information products (i.e. technical publications, policy papers, brochures, posters, CDs/DVDs, etc. in various local languages) for policy makers, extension workers, and a variety of other stakeholders. It would also finance public awareness activities aimed at highlighting the importance of sustainable land management using a variety of information products, including drama, posters, newspaper articles, and radio programs.

Component 2: Rural Land Certification and Administration (US\$3.43 million)

34. The objective of this component is to expand the coverage and enhance the government's land certification program, with the aim of strengthening land tenure security for smallholder farmers. This objective is consistent with the priority of expanding the land certification program outlined in Ethiopia's PASDEP because of the important role that tenure security plays to stimulate greater investment by farmers in sustainable land management practices. Assistance

under this component also seeks to rectify the weaknesses in Ethiopia's Stage 1 land certification process identified in various reviews, particularly the need to geo-reference and map individual parcels to avoid or minimize boundary disputes.

35. The program would scale up an enhanced land certification (i.e. Stage 2) process that has emerged from experiences from the Government's land certification activities under two pilot projects financed by SIDA and USAID. The program would specifically finance training, equipment, and technical assistance to upgrade the organizational, technical, and managerial capacity of existing institutions/units responsible for land administration at the Federal, Regional and Woreda levels and the Judiciary.

36. The SLM program would also finance in all the Woredas participating in the watershed management activities land certification interventions, including cadastral surveying, parcel-based land registration, and developing registries for rural land. Such interventions would facilitate timely processing and issuance of land certificates, with important features such as geo-referencing and mapping of household and farm plots, communal lands, etc. It would also facilitate the continuous updating of land registration records.

Component 3: Program management (US\$1.60 million)

37. The focus of this component is to provide financial and technical assistance to MoARD and the Regional, Woreda, and Kebele agencies responsible for sustainable land management to effectively support coordination and implementation of the SLM program. Support for coordination would include financing tasks assigned to the SLM Support Unit, MoARD by the National SLM Steering Committee to facilitate a coordinated and harmonized approach to SLM investments in Ethiopia. To strengthen program management, funds would be available to finance selected technical assistance and training such as in financial management, procurement, and monitoring and evaluation.

38. The organizational structure for the implementation of the program would comprise four levels, reinforcing the country's decentralization program – Federal, Regional, Woreda, and Kebele. A full time national program coordinator and a deputy for the SLM Unit will be appointed by the Federal MoARD to oversee the implementation of the program. Regional and Woreda coordinators will also be appointed by the BoARDS and WoAs.

4. Lessons learned and reflected in the project design

39. Based on a review of lessons from several sustainable land management initiatives in Ethiopia and other parts of the world, the following design features have been incorporated into the program to effectively address land degradation:

40. Strong country ownership and a shared vision. In the PASDEP, its country framework for economic growth and poverty alleviation, Ethiopia has identified land degradation as one of the major constraints to growth in the agricultural sector that needs urgent attention. Therefore, the interventions to be implemented under this program are based on the investment framework for SLM outlined in the PASDEP.

41. Government leadership in program development: MoARD, with assistance from other agencies provided leadership for the preparation of this operation through the National SLM Steering Committee and the National SLM Support Unit of MoARD. It also led or co-led analytical work that underpinned the design of this program.

42. Holistic approach: Because the problem of land degradation is multi-faceted, a multi-disciplinary and integrated approach to sustainable land management was adopted in the design of this operation.

43. Building on existing knowledge and practices: The design builds on existing knowledge and lessons from past and on-going projects, some of which have been highlighted above.

44. Stakeholder participation: The design emphasizes interactions among the relevant stakeholders, including governments at federal, regional, and district levels, development partners, local communities, etc. The design particularly recognizes the need for active participation of the intended beneficiaries in program design and implementation, going beyond 'consultation' to facilitate ownership and decision-making.

45. Harmonization and alignment: The design of the operation is program-based, with features consistent with the Paris Declaration on Aid Effectiveness, which the World Bank and other development partners and governments, including the Government of Ethiopia, adopted in March 2005. This approach is consistent with the guidelines for the GEF's Strategic Investment Program on Sustainable Land Management. Under the Paris Declaration, program-based approaches share the following features: (a) leadership by the host country or organisation; (b) a single comprehensive program and budget framework; (c) a formalized process for donor coordination and harmonization of donor procedures for reporting, budgeting, financial management and procurement; and (d) efforts to increase the use of local systems for program design and implementation, financial management, and monitoring and evaluation.

5. Alternatives considered and reasons for rejection

46. The task team had considered two program design options that were rejected. The first option was to address sustainable land management within the context of a rural development operation. The benefits of this approach is that it would have enabled the intended beneficiaries to address the soil and water degradation problems they are facing as well as the development of off-farm livelihoods to diversify the local economy away from sole reliance on agriculture and reduce pressure on natural resources. This option was rejected because the capacity of local institutions is too weak to effectively manage such a complex multi-sectoral design.

47. The second option was to develop small pilot projects on sustainable land management across most of the 177 priority watersheds identified by the Ministry of Agriculture and Rural Development. This option was rejected because it will spread the limited financing so thinly that there would be minimum positive impacts on the ground. Moreover, there are already several pilot projects on sustainable land management, which have helped to develop significant experience at the Federal level and, to a large extent, in the Regions targeted for the SLM program. Finally, the Government had begun to move beyond piloting, signaling in the country's current Poverty Reduction Strategy that scaling up of sustainable land management interventions is a priority for the next five years. Therefore, the task team concluded that appropriate political support, enabling environment, and organizational readiness exist for scaling up of best management practices in sustainable land and water management.

The SLM Program and the GEF Strategic Investment Framework

48. The objectives of the proposed SLM program is consistent with the strategic objectives for the GEF's Land Degradation Focal Areas Strategy in the following ways:

49. The Focal Area's strategic objective 1 is to create an enabling environment that will place SLM in the mainstream of development policy and practice at regional, national and local levels. This objective would be achieved under the SLM program because it would finance interventions to promote sustainable land management as part of the overall development agenda for Woredas, based on the watershed approach. It is also expected to provide an incentive for smallholder farmers to adopt sustainable land management practices by issuing them land certificates in a timely manner.

50. The Focal Area's strategic objective 2 is to generate mutual benefits for the global environment and local livelihoods through up-scaling of SLM investments. The specific objectives of the Watershed component of the SLM program are to support the scaling-up of economically and socially viable land and water management practices and technologies to improve land productivity and to achieve global benefits such as restoration and/or protection of ecosystem functions and diversity in agricultural landscapes, increases in the net stock of soil and biomass carbon, improved resilience of smallholder farmers to climate change, and increased agricultural productivity.

51. The global environment and development objectives of the proposed SLM program are also consistent with the vision of the GEF's TerrAfrica framework and its Strategic Investment

Program (SIP) for Sustainable Land Management in Sub-Saharan Africa. The SIP is aimed at financing interventions to prevent or reduce the impact of land degradation on ecosystem services. Furthermore, the objectives of the SLM operation are in line with the TerrAfrica Business Planning Framework, especially interventions to assist countries to align and harmonize SLM investments.

52. Specific interventions promoted under TerrAfrica and SIP that are in line with activities to be financed under the SLM program include the following: (a) supporting on-the-ground activities for scaling up SLM, including the identification of best entry points to scale up, capacity building for implementers of SLM interventions and associated institutions, and implementation of SLM pilots with mechanisms for scaling up; (b) creating a conducive enabling environment for SLM, including integration of SLM into national and sectoral planning frameworks such as the PRSPs; (c) improving the incentive framework for facilitating SLM, such as strengthening tenure security; and (d) developing effective SLM knowledge management systems, including sharing of knowledge and innovation, and dissemination of best practices and lessons learned.

53. Under the TerrAfrica Framework and SIP, the SLM program is one of the complementary financing vehicles to address land degradation in Ethiopia. The three GEF agencies involved in sustainable land management in Ethiopia -- UNDP, IFAD, and the World Bank -- have adopted a harmonized and coordinated approach, based on each agency's comparative advantages. The UNDP would lead an operation aimed at strengthening the institutional capacity for sustainable land management at national and regional levels and improve awareness about best management practices in SLM, especially in the drier parts of Ethiopia where there is little capacity to address land degradation.

54. IFAD would be the lead agency to implement an integrated watershed management operation in the Lake Tana Basin. The World Bank is taking the lead in this large investment operation and the large-scale Tana Beles Integrated Water Resources Development Project.

C. IMPLEMENTATION

1. Partnership arrangements

55. The proposed SLM program was designed through a process led by the Government of Ethiopia, with support from the World Bank and GTZ. One of the outcomes of this process is the establishment of an institutional mechanism for coordination, which is already providing leadership at the federal level for the development and implementation of this program and other SLM interventions in Ethiopia.

56. To promote synergies and avoid duplication of efforts in support of sustainable land management in Ethiopia, the Government has established an institutional mechanism for coordination, which comprises the national SLM Steering Committee, National Technical Committee, and the SLM Support Unit in the Federal Ministry of Agriculture and Rural Development.

57. This SLM coordination mechanism complements other existing mechanisms such as the Coalition for Food Security, a partnership involving government, non-government, and development partner stakeholders. The Coalition, chaired by the Deputy Prime Minister, is, among other tasks, responsible for mobilizing financial and technical resources in a coordinated way to address food insecurity in Ethiopia, including one of its main causes, land degradation. In addition, the development partners have agreed to coordinate their work on SLM through the Natural Resources Sub-Working Group of the Development Assistance Group.

58. Consistent with the harmonized design, the arrangements for the flow of funds for the SLM program are designed in a flexible way, using government systems, to allow the German Development Cooperation and other development partners to provide additional financing at a later date to increase the geographic coverage of the program. During implementation it is expected that the Government and its program partners would undertake joint implementation support missions and use common procurement, financial management, and monitoring and evaluation, and reporting requirements.

2. Implementation arrangements

59. The organizational structure for the implementation of the SLM program would comprise four levels, reinforcing the country's decentralization program – Federal, Regional, Woreda (District), and Kebele (Sub-District). (See Annex 6 for details on the implementation arrangements)

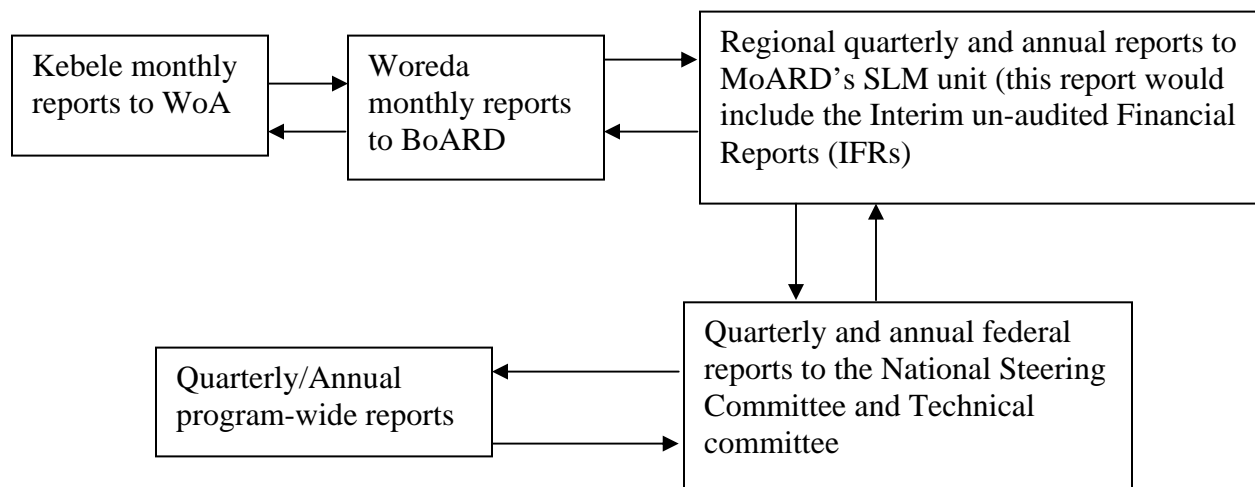
3. Monitoring and evaluation of outcomes/results

60. The objectives of the monitoring and evaluation (M&E) for the SLM program are to (a) assess and document timely progress towards outputs, outcomes, and impacts, as agreed in the annual work plans; (b) identify implementation gaps for proactive corrective actions; and (c) document and incorporate lessons learned into program implementation.

61. The M&E system is based on the Results Framework (see Annex 3 for details) and the outputs and outcome indicators associated with the annual work plans and budgets for program interventions to be developed and implemented at the Kebele, Woreda, Regional State, and Federal levels.

62. Using existing government systems, the Regional Bureaus of Agriculture and Rural Development would prepare quarterly and annual progress reports, based on monthly reports it receives from the Woreda Office of Agriculture, to the Federal Ministry of Agriculture and Rural Development. The National Steering Committee and the National Technical Committee would review the reports quarterly.

Figure 1 : Flow of M&E Reports



4. Sustainability and Replicability

63. The progress expected to be achieved under the proposed SLM program is highly likely to be sustained beyond its five-year implementation period because of the following reasons:

64. First, as noted above, sustainable land management is one of the priorities outlined in Ethiopia's most recent PRS or PASDEP. The Government is committed to strengthening tenure security through a land certification program, and it has already made a commitment to issue land certificates for 1 million ha of land, with geo-referencing and mapping of plots. It is also committed to scaling up successful models of community-based approaches to sustainable land management.

65. Second, the SLM program is designed to address not only environmental management issues, but also the productivity and income issues associated with land management. Therefore, the intended beneficiaries would have the financial and other incentives, such as land tenure security, to maintain management practices and technologies introduced under the program. Experience in other parts of the world indicates that where there is tenure security, farmers are more likely to make additional environmentally sound investments to further improve land productivity and their incomes.

66. Finally, technical support to the intended program beneficiaries would be provided through the existing government extension system whose capacity in community-based watershed management would be strengthened under the SLM program. Therefore, it is expected that the extension system would continue to provide demand-driven services beyond the lifespan of the SLM program.

67. In terms of replication, since the SLM program would cover only 35 of the 177 priority watersheds that need improved land use and management, it is expected that the MoARD and the Regional States, based on their experience and results under this program, would help to catalyze replication of activities in other watersheds.

5. Critical risks and possible controversial aspects

68. The risks associated with the program are summarized in the table below. They would be systematically monitored under the M&E arrangements for the SLM operation. There are no possible controversial aspects of the SLM program.

Table 1 Critical Risks and Possible Mitigation Measures

<i>Risk factors</i>	<i>Description of risk</i>	<i>Rating of risk</i>	<i>Mitigation measures</i>
Limited implementation capacity	Insufficient organizational capacity at the Regional and Woreda (District) level (i.e. the Bureau of Agriculture and Rural Development and the Woreda Office of Agriculture) to effectively implement program interventions.	Substantial	<p>(a) Implementation under this program will be guided by the widely accepted Community Based Watershed Management Guideline for program planning and development because the Woreda Offices of Agriculture have experience in effectively using it.</p> <p>(b) There is a capacity building sub-component under this program to strengthen the relevant government agencies and local communities in participatory watershed management.</p> <p>(c) The number of watersheds/sub-watershed to be covered per year has been designed in a way that it increases as the capacity of the implementing agencies and local communities is strengthened. Also, targeted technical assistance and training would be provided to support implementation.</p>
Weak accounting and auditing capacity	A fiduciary assessment undertaken in 2005 noted that the Regional State and Woreda agencies were experiencing delays in audit reporting because of high staff turnover and shortage of accountants. This situation has not changed because of the low remuneration in the public sector compared with the private sector or civil society.	Substantial	<p>(a) Hiring of a project accountant for each Region.</p> <p>(b) The Office of the Federal Auditor General will audit the project accounts or contract it out to a private firm.</p> <p>(c) Training for Federal, Regional, and Woreda finance officers in the World Bank's financial management requirements.</p> <p>(d) Adequate IDA -FM supervision during project implementation.</p> <p>(e) Adequate supervision and quality assurance of the program by the oversight bodies - National and Regional Steering Committees.</p>

6. Loan/credit conditions and covenants

D. APPRAISAL SUMMARY

1. Economic and financial analyses

69. The economic and financial analysis of the SLM program indicates that the proposed interventions are economically and financially feasible. The overall Economic Rate of Return (ERR) is 10-17% and the Financial Rate of Return (FRR) is 8-11% over a 25 year period, without taking into account other environmental benefits that are difficult to quantify in monetary terms, such as reduced soil erosion and improved biodiversity.

70. From the farmers' point of view, participation in the project is quite attractive compared to alternative opportunities, as it would generate them a financial rate of return of 8-11%. On the part of 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, are not amenable for taxation but they are captured and enjoyed by society as a whole. Notwithstanding the fact that the environmental benefits are not captured in the 10-17% ERR, sensitivity analysis done around the ERR 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 9.)

71. These results are consistent with those from the first phase of the World Food Program-funded Managing Environment Resources for Transition (MERET), whose interventions are similar to those of the SLM program. An ex-post economic and financial analysis of the MERET project, which was implemented in moisture-deficit areas of Ethiopia indicated an ERR of 13.5-13.8 % for 25 years.

2. Technical

72. The technical design for the proposed SLM program is based on successful watershed management and land certification pilot projects in Ethiopia. The design of the watershed component is based largely on: (a) the MERET program being implemented in the "food insecure" areas of Ethiopia; and (c) the German-financed Sustainable Utilization of Natural Resources (SUN) project. Both projects are successful because they emphasize strong ownership and participation by the intended beneficiaries and other local stakeholders in project design, implementation, and monitoring.

73. Lessons from MERET, SUN, and similar projects were used to develop the MoARD's widely accepted Community-Based Participatory Watershed Guidelines. This publication, which provides detailed guidelines on the design and implementation of community-based watershed management interventions, would be used initially for watershed management planning and implementation under the SLM program. Based on the implementation experience with this and other SLM operations, it is expected that the Guideline would be refined.

74. Similarly, the design of land certification and administration activities to be implemented under the SLM program is based on successful pilot projects in Ethiopia, particularly the USAID-financed Ethiopia Land Tenure and Administration Program (ELTAP), SIDA-financed Land Tenure project, and the Government's own land certification initiatives. As noted above, 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.

75. The design of the SLM program adequately takes into account the improvements to the Stage 1 certification process identified by Deininger et al. (2007), namely: (a) procedures and systems for updating information; (b) registration of common property land and house plots to facilitate the creation of an integrated land administration system; and (c) graphical records of land holdings need to be created to minimize boundary disputes.

3. Fiduciary

76. Financial management: The financial management assessment was carried out at MoARD in October 2007 in accordance with guidelines issued by the FM board. The assessment also draws on the following reviews: (i) Country Joint Budget and Aid Review (JBAR) and the Fiduciary Assessment; and (ii) financial management performance of the other IDA financed projects implemented by the MoARD. The assessment is summarized below and presented in greater detail in Annex 7.

77. The Government's financial management system would be used for financial management and reporting under the SLM program. The accounting system will include some additional chart of accounts to allow for Interim-un-audited reporting according to IDA requirements. The Federal Ministry of Agriculture and Rural Development's Project Finance Division will have overall responsibility for financial management. Qualified project Accountants will be hired to support the project financial activities at regional level. A well-designed and focused financial management training will be provided by Project Finance division unit at MoARD prior to effectiveness to all staff involved in project financial management, and annually thereafter because of the high possibility of government staff turnover. The project includes a capacity building component to strengthen the implementation capacity of regions and Woredas involved in project implementation. The overall project financial management risk is assessed as significant.

78. The recently completed Joint Budget and Aid Review (JBAR) and the Fiduciary Assessment indicated that Ethiopia has made significant progress in strengthening public financial management. However, some challenges remain and they include delays in financial reporting (both in –year and annual), inadequate capacity of accountants at Regional and Woreda level, and inadequate capacity of the Federal Office of the Auditors General to discharge its responsibilities, and weakness in legislative scrutiny of audited financial reports. The Government is taking steps strengthening Ethiopia's public financial management system through the Expenditure and Control Sub-Program of its Civil Service Reform Program.

79. The overall country public financial management system is assessed as substantial. (see Annex 7 for details on the financial management assessment and risk mitigation measures).

80. **Procurement.** Procurement capacity assessment has been commenced with visits to the federal project coordination office and to the MOARD, but it will only be completed after visiting a sample of at least two Woredas. As there will be community participation in procurement, it is imperative that the definition of a ‘Community’ is explicit to include the administrative structure of the Community and the mechanism for handling funds and procurement at the community level.

81. Several studies in various areas of procurement have been or are being undertaken in support of the procurement reforms. Currently, a manual for public procurement is in draft form, and an assessment of the actions needed to professionalize the public procurement function is in advanced stages. These activities, which are supported by various development partners like DfID, CIDA, as well as the Bank through the Public Sector Capacity Building Project (PSCAP), are all geared to fill the enormous capacity gap in the public procurement function.

82. The Country Procurement Assessment Report (CPAR) done in 1998 and updated in 2002 had identified procurement capacity as one of the major weaknesses in public sector procurement. The GoE has taken measures to rectify the weaknesses noted in the CPAR and a new procurement law was enacted in January 2005 and is applicable at the federal government level. Standard Bidding Documents have been prepared and issued by the government to be used for all procurements financed by the federal government budget. The autonomous regional governments are expected to adopt the *Determining Procedures of Public Procurement and establishing its Supervisory Agency Proclamation No. 430/2005* and the *Federal, Public Government Procurement Directive* to govern public procurement at the region.

83. Tigray, Amhara, Oromia, Southern Nations and Nationalities Peoples (SNNP), Somalia, and Gambela Regions, as well as the city of Addis Ababa, have adopted the public procurement law. Currently, the Benishangul Gumuz Region is in the process of adopting the procurement law, but the Afar and Harar Regions as well as the city of Dire Dawa are yet to adopt the law. The SLM program will be implemented in 35 Woredas in six regions: Amhara (10 Woredas); Oromia (10 Woredas); SNNP (7 Woredas); Beneshangul Gumuz (2 Woredas); Gambela (3 Woredas); and Tigray (3 Woredas). Therefore public procurement is, or will soon be, governed by the public procurement law in all the regions that will be implementing the SLM program.

84. Inadequate capacity to implement public procurement under contracts financed by the Bank is a widespread problem across Ethiopia. Therefore, under the SLM program: (i) staff involved in the procurement function will have access to procurement training, refresher procurement courses, and hand-holding support by qualified and experienced consultants from the SLM Support Unit; (ii) the MoARD will support procurement planning, implementation, and reporting at the Woreda and Kebele/Community levels; and (iii) the standard bidding documents/templates developed and the local competitive bidding procedures proposed in the Project Implementation Manual will be reviewed and approved by the Bank.

4. Social

85. As part of SLM program preparation, the Ministry of Agriculture and Rural Development undertook a rapid socio-economic assessment in 14 of the 35 selected watersheds and the results (and other studies) indicate the SLM program is likely to have minimal social impacts because it would be working with established farmers. There will be no resettlement or land re-distribution.

86. The watershed management interventions are expected to improve household incomes and the land certification activities are expected to strengthen user rights, including those of vulnerable groups such as female-headed households.

87. For a transparent and fair land certification process, the program implementers would work with existing local institutions, especially the Kebele Land Administration Committees, which are responsible for adjudication of land use rights, boundaries of farm and household plots, etc. The committee is made up of citizens selected by the people and government officials; it plays an important role in minimizing conflicts. As noted above, a study by Deininger et al. (2007)³ reported that the land certification process in Ethiopia is participatory and there were generally no biases in favor of wealthier households or against women, including female-headed households.

88. Despite the fact that the proposed SLM program is expected to have overall positive social impacts, an Environmental and Social Management Framework (ESMF) has been prepared to screen project proposals for potential environmental and social impacts.

5. Environment

87. The proposed SLM program is expected to have positive environmental impacts because it would finance interventions in watershed rehabilitation and management such as terraces, contour bunds, and reforestation. It would also finance interventions to improve land tenure security for smallholder farmers, which importantly enables farmers to respond to incentives to invest in environmentally sound practices.

88. The Ministry of Agriculture and Rural Development's Community-Based Watershed Management Guideline, which would be used to guide the implementation of the watershed management activities, provides very detailed standards on how to design and implement small-scale infrastructure within watersheds.

89. Nevertheless, the program could have some localized environmental impacts if environmental concerns are not taken into account in the location and/or design of small infrastructure such as storage tanks, farm ponds, roadside flood harvesting systems, and drinking water supply systems.

³ K. Deininger, D. Ali, S. Holden, and J. Zevenbergen (2007). Rural Land Certificate in Ethiopia: Process, Initial Impact, and Implications for Other African Countries.

90. No separate environmental assessment was conducted for the SLM program because the types and location of specific interventions would be determined through a participatory watershed planning process. Therefore, an Environmental and Social Management Framework (ESMF) has been prepared to screen all proposed interventions that emerge from the participatory planning process.

91. The ESMF would help to identify potential adverse environmental impacts and, where necessary, disqualify the proposed intervention or develop and incorporate into the design appropriate mitigation measures before it is recommended for financing by the Woreda Office of Agriculture. The effective use of the ESMF would be regularly reviewed as part of the monitoring and evaluation system for the SLM program.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Habitats (OP/BP 4.04)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pest Management (OP 4.09)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Physical Cultural Resources (OP/BP 4.11)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Involuntary Resettlement (OP/BP 4.12)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Indigenous Peoples (OP/BP 4.10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Forests (OP/BP 4.36)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Safety of Dams (OP/BP 4.37)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in Disputed Areas (OP/BP 7.60)*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects on International Waterways (OP/BP 7.50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7. Policy Exceptions and Readiness

92. No policy exception requested.

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

Annex 1: Country and Sector or Program Background

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

1. Ethiopia's economy is dominated by agriculture, which accounts for about 50% of GDP, 90% of export value, and a source of employment for more than 85% of the country's population of more than 70 million people. However, land degradation is undermining productivity growth in the agriculture sector. About 2–3 percent of the country's agriculture GDP is lost annually because of land degradation. Ethiopia has one of the highest land degradation rates in Sub-Saharan Africa and the grim statistics include the following:

- The loss of 30,000 hectares annually from water erosion (more than 2 million hectares have already been severely damaged);
- A total loss of 4,000 hectares on state farms because of severe salinization;
- An estimated one billion tons of topsoil lost each year;
- Nutrient depletion of 30 kilograms of nitrogen per hectare and 15–20 kilograms of phosphorous per hectare;
- The loss of 62,000 hectares of forest and woodland annually; and
- Increasing acidification of soils in vast sections of the high rainfall parts of the country.

2. The issue of land degradation is highlighted in Ethiopia's recently completed Poverty Reduction Strategy known as the Plan for the Accelerated and Sustained Development to End Poverty (PASDEP) 2005/2006-2009/2010. The Government's strategy to reverse land degradation and to promote sustainable land management, outlined in the PASDEP, is to address the root causes of degradation by: (a) strengthening land tenure security; (b) building local capacity in community-based approaches to watershed management; (c) scaling-up of successful models for watershed management; and (d) strengthening natural resource information management.

3. Land tenure security: During Ethiopia's imperial era, which lasted until 1974, only the nobility and the Ethiopian Orthodox church enjoyed private land ownership. Most Ethiopians were tenants of feudal landlords. This era ended with the overthrow of the Emperor by a Marxist military junta (the Derg) in 1974. The Derg nationalized all land, and it frequently implemented land redistribution programs, which created tenure insecurity. Furthermore, the Derg prohibited sharecropping, renting or leasing land.

4. The Ethiopian People's Revolutionary Democratic Front (EPRDF) overthrew the Derg in 1991, and it initiated major changes to land policies in Ethiopia. In 1995, the EPRDF promulgated a new Constitution, which re-affirmed state ownership of all land and was introduced by the Derg. The Constitution in Article 40 (3) states "*The right to own rural and urban land as well as natural resources belongs only to the state and the people. Land is an inalienable common property of the nations, nationalities and peoples of Ethiopia and shall not be subject to sale or other means of transfer.*"

5. In July 2005, the EPRDF Government enacted the Rural Land Administration and Use Proclamation, which re-confirms the ownership of rural land by the state, with indefinite tenure

rights to land users, rights to ‘property produced on his land’, rights of inter-generational tenure transfer, rights to exchange land (‘to make small farm plots convenient for development’), and some rights for leasing. This law makes provision for the registration and certification of land use rights.

6. Regional Governments have used the Federal Rural Land Administration and Use Proclamation as a model for their own legislation on land administration and use. The regional legislation passed so far generally includes the following provisions:

- Smallholder farmers are given land use rights for perpetuity.
- Inheritance is allowed under certain conditions, such as heirs (children) who must live in the rural areas and be dependents of their parents.
- Land rights on a portion (but not all) of the land can be leased to other smallholder farmers for 2-5 years, who use traditional farming practices, and for 15-20 years to commercial farmers using “modern” agricultural practices.
- If a farmer leaves the rural area for two or more years, they forfeit their land use rights. These rights can then be transferred to a landless person.
- Land use rights cannot be used as collateral for bank loans.

7. To improve land tenure security, the Federal Rural Land Administration and Use law make provisions for the registration and certification of land use rights. The PASDEP reports that registration of land use rights have been completed for 6 million out of 13 million rural households in the four major Regional states in Ethiopia—Amhara, Oromia, SNNP, and Tigray—and they have already received “first level user rights” (i.e. temporary certificates with no cadastral maps). Another 1 million households have received “second level” certificates (i.e. permanent certificates with cadastral maps).

8. The Government’s target during the five-year implementation of the PASDEP, 2005/6-2009/10 is to issue the remaining 6.8 million households in the four Regions with first-level certificates and another 1 million households with second-level. After reviewing several pilots on cadastral surveying in Ethiopia, including one that uses total station equipment, the four Regions have selected handheld Global Positioning System (GPS) equipment for cadastral surveys piloted under the USAID-financed Ethiopia Strengthening of Land Tenure and Administration Program for future surveys because of its simplicity of use and cost-effectiveness.

9. Building local capacity and pilot projects: Many of the past and management efforts, especially those undertaken under the Derg were destroyed by farmers, either soon after they were installed or at the collapse of the regime. The top down, imposed nature of these efforts, with little community participation, has been recognized as a cause of farmer resistance.

10. During the last 10 years, in particular, with support from several development partners, including the World Food Program, USAID, GTZ, CIDA, and SIDA, and Non-Governmental Organizations, the government had worked with communities within micro-watersheds, to develop and implement community watershed management plans. However, such efforts have focused primarily on the “moisture deficit” and “food insecure” areas of the country.

11. The largest of the projects in the food insecure areas is the Productive Safety Net Project (PSNP), which is jointly financed by the World Bank and several development partners, whose public works component focuses largely on sustainable land management. These projects have made important contributions, but their positive impacts have been localized because of their small size. The Government expects that the proposed SLM program will build on these initiatives to optimize impacts at the micro-watershed/watershed level in terms of economic, social, and ecological factors in the some of the “food secure” areas that are increasingly becoming more vulnerable to severe land degradation.

12. Based on several years of experience with pilot watershed management projects in Ethiopia, the MoARD published in 2005 the widely accepted Community Based Participatory Watershed Development: A Guideline. This publication has been accepted by practitioners, including those from development partner agencies as the most comprehensive operational manual for watershed management in Ethiopia. The Guideline provides very detailed information on participatory watershed planning methodologies and tools, and technical information kits on different types of soil and water conservation measures.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies
ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Table 1: Insert caption here Bank financed project ratings

World Bank Financed Projects	Latest Supervision (PSR) Ratings		OED Rating (if closed)
	IP	DO	
Productive Safety Nets (APL II)	S	S	n/a
Rural Capacity Building Project	S	S	n/a
Food Security Project	MS	MS	n/a

S = Satisfactory; MS = Marginally satisfactory

1. The Productive Safety Net Project (US\$176.8 million) (APL II) provides support for the creation of productive and sustainable community assets; and contributes to large-scale rehabilitation of severely degraded areas. The project provides grants to households whose adults participate in labor-intensive public works (mostly watershed and communal land management related work) and to households that are labor-poor and cannot undertake public works
2. The Rural Capacity Building Project (US\$54 million) provides support to build the capacity of Agriculture Technical and Vocational Education Training (AgTVET) colleges and improve/reform the agricultural extension system to better respond to farmers' needs. The research component of the Rural Capacity Building Project supports strengthening of research institutions and re-enforces the National Agricultural Research System's capacity to generate and disseminate client-demanded and market-oriented technologies,
3. The Food Security Project (US\$85 million) provides grants to communities to create and increase household and community assets and incomes by: better management of rainfed agriculture (crops and livestock); investment in small-scale irrigation; better natural resource management through "zero tillage" techniques on farms, and catchment level activities to conserve soil, reverse soil degradation, improve water harvesting and use.
4. Other donors, including GTZ, WFP, USAID and SIDA have financed projects on sustainable land management. The GTZ funded Sustainable Utilization of Natural Resources (SUN) project uses watershed-based approaches to rehabilitate degraded land and improve farmer's livelihoods. It promotes the conservation and management of communal and farm lands, supports the development of community infrastructure, and diversification of the farming systems into higher value agricultural commodities.
5. The World Food Program funded the Managing Environmental Resources for Transition (MERET) program is aimed at reducing vulnerability and acute food insecurity. Through food-for-work and food-for-asset building activities, the program provides food aid as a short-term means of enabling progress in the agriculture sectors over the medium to long-term. The program targets the chronically food-insecure areas of Ethiopia. The kinds of work that is done in exchanged for food include watershed and communal land rehabilitation, reforestation, and support for alternative livelihoods.

6. USAID-financed Ethiopia Land Tenure and Administration Program is being implemented by the Federal Government in collaboration with four Regional States: Amhara, Oromia, SNNP, and Tigray. The objective of the program is to establish and implement a sound rural land registration and certification system that provides holders of land use rights with robust and enforceable tenure security on land and related natural resources. The program provides logistical and technical support for land registration and administration, dispute resolution, public awareness and capacity building.

7. Finally, through the Amhara Rural Development Project, the SIDA-financed Pilot Land Certification Program, which covers two Woredas, is aimed at increasing the number of households with secure land tenure. Using a land administration system set up with the Environmental Protection, Land Administration and Use Authority (EPLAUA), SIDA provides support for cadastral surveys on private lands. The program also issues land certificates, which indicate the exact coordinates of all surveyed parcels.

Annex 3: Results Framework and Monitoring
ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Results Framework

PDO/GEO	Project Outcome Indicators	Use of Project Outcome Information
To reduce land degradation in selected agricultural landscapes and improve the agricultural productivity of smallholder farmers.	<ul style="list-style-type: none"> • Increase in normalized difference vegetation index. • Increase in the growth of agricultural productivity over non-intervention areas. 	<ul style="list-style-type: none"> • To assess the extent to which program interventions are contributing to the development objectives of the program.
Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component 1: Watershed Management		
Improved land and water management.	<ul style="list-style-type: none"> • Percentage increase in area under sustainable land management practices in the targeted watersheds. • Percentage increase for carbon sequestered. • Percentage increase in agricultural productivity (for dominant crops and livestock). • Percentage of Development Agents and Woreda experts using information on best management practices in sustainable land management from MoARD's knowledge management system. 	<ul style="list-style-type: none"> • To evaluate the on-the-ground impacts of increased adoption of sustainable land management technologies and practices. • To assess the contribution of the knowledge management system to the dissemination of best management practices.
Component 2: Rural Land Certification and Administration		
Increased sense of tenure security among farmers issued with land certificates.	<ul style="list-style-type: none"> • Percentage increase in the number of beneficiary farmers with a sense of tenure security compared with non-beneficiaries. 	<ul style="list-style-type: none"> • To assess trends in the sense of tenure security among program beneficiaries.
Component 3: Program Coordination and Management		
Effective program management and coordination established and operational.	<ul style="list-style-type: none"> • Planned implementation progress, based on the annual plans, is achieved. 	<ul style="list-style-type: none"> • To ensure that program implementation is participatory, well coordinated, and geared towards results

	<ul style="list-style-type: none"> • Timely actions on implementation problems, including on procurement and financial management. • Functional M&E system is established to monitor implementation progress and outcomes. • Systematic use of the Environmental and Social Framework to screen proposed program interventions before approval. 	<p>and outcomes.</p> <ul style="list-style-type: none"> • To monitor progress in addressing program implementation risks. • To ascertain that land management technologies and practices introduced under the program are environmentally and socially sound.
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Arrangements for Results Monitoring

Objectives of the M&E arrangements

1. The objectives of the result-based M&E system for this program are to: (a) assess and document timely progress towards outputs, outcomes, and impacts, as agreed in the annual work plans; (b) identify implementation gaps for proactive corrective actions; and (c) identify and incorporate lessons learned into program implementation

Monitoring and reporting: roles and responsibilities

2. Community/Kebele level. This would involve joint monthly monitoring and reporting by the Woreda Watershed Development Committee and the Development Agents (DAs). They would oversee implementation progress against the Kebele annual work plans and ensure that corrective measures are taken in a timely manner to address implementation problems. The DA will submit monthly reports to the Woreda Office of Agriculture (WoA).

3. Woreda level. The WoA would review the monitoring reports from the Kebeles and validate the implementation progress against the annual work plans. In addition, the WoA would provide timely assistance to the Kebeles to address problems adversely affecting implementation. The WoA would prepare monthly reports on implementation progress and submit them to the Regional Bureau of Agriculture and Rural Development (BoARD).

4. Regional level. BoARD would prepare quarterly and annual reports to Federal Ministry of Agriculture and Rural Development (MoARD) on implementation progress based on reports submitted by the WoA. The Regional Technical Committees would meet quarterly to review and endorse the quarterly and annual reports to be submitted to MoARD. Lessons learned and agreed upon corrective measures would be incorporated into the following year's work plan.

5. Federal level. MoARD would prepare consolidated quarterly and annual reports for the program. It would: (a) regularly monitor sustainable land management activities carried out in the Regional States; (b) review the implementation of activities against the regional annual work plans and budgets, and ensure that corrective measures are taken, when needed; and (c) collect quarterly reports submitted by the BoARD and compile them into consolidated program-wide reports for submission to the Federal SLM Technical Committee and also to the Steering Committee. The Technical Committee would meet quarterly to review and endorse the quarterly reports, and to discuss progress made, problems encountered, and provide advice on corrective measures. Proposed corrective measures that are policy-related would be referred to the Steering Committee for decisions.

Impact Evaluation: Roles and Responsibilities

6. Kebele and Woreda level (annually): The performance and impact of each component would be jointly assessed by communities, Kebele, and Woreda's officials at the end of each fiscal year, with the support/participation of members of the Regional and Federal Technical Committees. The evaluation will focus on outcomes and impacts. Lessons learned from the impact evaluation and agreed corrective measures would be incorporated into the following year's work plans and budgets.

7. Regional and Federal (mid-term and program completion): There would be two impact evaluations during the life of the SLM program, at mid-term and at program completion. These assessments would be undertaken by an independent team, with the support and participation of members of the Regional and Federal Technical Committees and the intended program beneficiaries. They will focus on intermediate outcomes and impacts of program activities. The results of the evaluations would be presented to the Federal SLM Steering Committee, which would make decisions on corrective actions.

8. A separate study planned by the Ethiopian Development Research Institute, World Bank, and the International Food Policy Research Institute would provide rigorous baseline information for the above evaluations. This study on the impacts of land certification and watershed management interventions on smallholder agriculture is expected to launch a study in FY 2008/09 (not financed under the SLM program). Research questions to be addressed by the study would include:

- What are the impacts of the land certification interventions on tenure security, and how does this affect land management, land and water degradation, land conflicts, and agricultural productivity and poverty?
- What are the impacts of watershed management activities on land management, land and water degradation, land conflicts, and agricultural productivity and poverty?
- How do the impacts of land certification and watershed management interventions vary across regions, community, and household types, considering the differences in resource and asset endowments, gender, and vulnerability?
- What synergies or tradeoffs result from combining land certification and watershed management activities? Are the impacts of such a holistic approach "greater than the

sum of the parts”? What are the implications for the cost effectiveness, scalability, and sustainability of the approach?

- If there are problems in implementation of the program, how can the approach be improved to ensure greater cost effectiveness, scalability, and sustainability?

9. Monitoring of vegetation cover (mid-term and program completion): The SLM program would finance evaluations at mid-term and program completion on the impact of SLM interventions on the vegetation cover of the selected watersheds, using remote sensing and other techniques.

Arrangements for Results Monitoring

		Target Values					Data Collection and Reporting		
Project Outcome Indicators	Baseline	YR1	YR2	YR3	YR4	YR5	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<ul style="list-style-type: none"> Percentage increase in normalized difference vegetation index. 	0						At mid-term review and program completion	Remote sensing analysis	Federal Ministry of Agriculture and Rural Development (MoARD)
<ul style="list-style-type: none"> Percentage increase in the growth of agricultural productivity over non-intervention areas 	0	n/a	15%	30%	40%	50%	At mid-term review and program completion	Farmer survey	MoARD

Intermediate Outcome Indicators	Baseline	YR1	YR2	YR3	YR4	YR5	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Component 1: Watershed Management									
<ul style="list-style-type: none"> Percentage increase in area under sustainable land management practices in the targeted watersheds. 	0	10%	20%	45%	60%	80-90%	Annually	Survey	MoARD

<ul style="list-style-type: none"> Percentage increase in the amount of carbon sequestered 	n/a	tbd ⁴	n/a	tbd	n/a	tbd	Mid-term and program completion	Standard methodologies to measure carbon stored in above and below ground.	MoARD
<ul style="list-style-type: none"> Percentage increase in agricultural productivity (for dominant crops and livestock) 	0%	n/a	15%	30%	40%	50%	Annually after year 1	Crop and livestock production surveys	MoARD
<ul style="list-style-type: none"> Percentage of Development Agents (DAs) and Woreda experts using information on best management practices in sustainable land management from MoARD's knowledge management system. 	Less than 10%	n/a	At least 30%	At least 50%	At least 60%	At least 80%	Annually after year 1	Survey of DAs	MoARD
Component 2: Rural Land Certification and Administration									
<ul style="list-style-type: none"> Issuance of land 	0	250,000 parcels	500,000 parcels	700,000 parcels	700,000 parcels	700,000 parcels	Quarterly	Land registration	MoARD

⁴ The baseline for sequestered carbon will be determined in Year 1 and targets set for Year 3 and 5.

<ul style="list-style-type: none"> certificates, with geo-referencing and maps, to smallholder farmer households Percentage increase in the number of beneficiary farmers with a sense of tenure security compared with non-beneficiaries. 	n/a	n/a	n/a	At least 50%		At least 70%	Mid-term and program completion	records Farmer surveys	
Component 3: Program Management									
<ul style="list-style-type: none"> Planned implementation progress, based on the annual work plans, is achieved. 	n/a	At least 80%	At least 80%	At least 80%	At least 80%	At least 80%	Continuous	Progress reports	MoARD
<ul style="list-style-type: none"> Timely actions on implementation problems, including on procurement and financial management issues. 	n/a	At least 80%	At least 80%	At least 80%	At least 80%	At least 80%	Continuous	Progress reports	MoARD
<ul style="list-style-type: none"> Success rate in timely production of 	n/a	100%	100%	100%	100%	100%	Quarterly	Progress reports	MoARD

quarterly program monitoring and evaluation reports.									
<ul style="list-style-type: none"> Percentage of proposed sub-projects subjected to screening with the Environmental and Social Framework before approval. 	n/a	100%	100%	100%			Quarterly	Progress reports	MoARD

Annex 4: Detailed Project Description

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Program components

1. The SLM program is designed to combine the benefits of land tenure security and sustainable land management in watersheds. It, therefore, has two major components—watershed management and rural land certification and administration—there is no space on either side of the en dash—which would be implemented in the selected watersheds.

Component 1: Watershed Management (US\$ 21.77 million)

2. The objective of the Watershed Management Component is to support scaling up best management practices in sustainable land management, and the technologies of smallholder farmers who are in “high potential”/“food secure” areas that are becoming increasingly vulnerable to land degradation and food insecurity. This objective responds directly to the priorities outlined in the PASDEP, namely building capacity in community-based approaches to watershed management; scaling up the successful models of watershed management; and strengthening natural resource information management to more widely disseminate best management practices and the innovations in sustainable land management.

3. The expected outcomes of interventions under the watershed component are: (a) environmentally sustainable increases in agricultural productivity; (b) reforestation of degraded land; (c) improved management of grazing land; (d) improved resilience of farmers to extreme climatic events through improved soil fertility and moisture management; (e) protection of ecologically critical habitats such as stream banks and wetlands; and (f) increased sequestration of carbon.

4. The program would be implemented in 35 watersheds in six Regional States in Ethiopia (i.e., Amhara, Oromiya, Tigray, SNNP, Beneshangul Gumuz, and Gambela) and it is expected to cover a total area of about 320,000 ha, benefiting 400,000 households. Each of these watersheds, with an average size of about 8,500 ha, comprises 15 to 20 sub-watersheds. The program would not include the urban Regional States (Addis Ababa, Dire Dawa, and Harari). As well, it will not include any pastoral areas in the arid and semi-arid areas of Ethiopia, mainly in the Somali and Afar Regional States, because Federal and Regional policies on land use for pastoral areas have not yet been developed. This is important because the land tenure and use system in the pastoral areas is communal compared with individual parcels in the “settled” areas.

5. The selected watersheds are a subset of a much larger plan of MoARD to support sustainable land management activities in 177 priority watersheds across the country. The proposed watersheds were selected by the MoARD, in consultation with the Regional States and Woredas, based on the criteria in Table 1.

Table 1: SLM Program - Criteria for Site Selection

Criterion	
Rural “food secure” area	The program 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.
Agroecological representativeness	Agroecological 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.
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.

The list of the selected program watersheds/Woredas and their physical and social characteristics are summarized below in Tables 2.

Table 2: Proposed Project Sites

Amhara Region/Woreda	Oromiya Region/Woreda	SNNP Region/ Woreda	Tigray Region/ Woreda	Beneshangul Gumuz Region/Woreda/	Gambela Region/ Woreda/watershed	Afar	
1. Bure, Guagusa, Shikudad	1. Alem Gena	1. Gimbo	1. Raya Azebo	1. Asosa	Shai Geji		
2. Jebi, Tehinana, Dembecha	2. Lemen	2. Alich Wuriro	2. Kola Temben	2. Kemashi	Gambela		
3. Mechekel	3. Gimbi	3. Angacha	3. Medebai Zana		Godere special		
4. Fegita Lekoma	4. Woliso	4. Konta					
5. Shewa Robit	5. Gimbichu	5. Dawuro					
6. Misrak Esthe	6. Sismo	6. Basketo					
7. Alefa	7. Nopa	7. Sheko					
8. Habru	8. Sayo						
9. Berehet	9. Uraga						
10. Dembecha	10. Omo Nada						

6. Implementation approach: The SLM program would be implemented using existing government systems, which would be strengthened through the capacity building interventions. Implementation of watershed management interventions would be phased-in, according to the capacity of the government agencies and local communities. Building on lessons learned from several pilot SLM operations, implementation of this component would be guided by the widely accepted Community-Based Participatory Watershed Development Guideline (CBPWDG), which was adopted by MoARD in 2005. The Guideline describes in detail the following eight major steps in participatory watershed management planning and implementation:

- Selection and prioritization of watersheds and community watersheds.(also known as sub-watersheds
- Organization of the beneficiary communities for watershed management planning.
- Biophysical and socioeconomic surveys in the selected community watersheds.
- Identification and prioritization of watershed management interventions (the Environmental and Social Management Framework (ESMF) developed specifically for the SLM program would be used to screen the proposed interventions to ensure that they are environmentally and socially sound).
- Community approval of the proposed watershed management and development plan.
- Development of a multi-year action plan, with annual work plans and budget.
- Development of strategies for implementation of the action plan, including organizational arrangement, community contributions, training needs, etc.
- Participatory monitoring and evaluation.

7. Special attention would be paid to adaptation to climate change during the micro-watershed or community watershed management planning and implementation. Ethiopia is already prone to cycles of drought and floods, and they are expected to become more frequent because of climate change. Specific risk climate mitigation measures such as: (a) the use of drought resistant crop varieties, and (b) disaster prevention, preparedness, and management would be an integral part of the micro-watershed planning process.

8. The German Development Cooperation would finance, subject to the outcome of bilateral negotiations with the Government in April 2008, in parallel, the required technical assistance for the implementation of the program, including targeted use of experts in watershed management, soil science (specifically an expert on acid soils), land use planning, land administration, and knowledge management.

9 Sub-component 1: Capacity Building: The objective of this sub-component is to provide technical assistance and training to support the preparation of participatory community-based watershed management plans for each of the selected sub-watersheds. The program would finance training, farmer exchange visits, equipment, etc. to enhance the capacity of MoARD, Regional Bureau of Agriculture and Rural Development (BoARD), Woreda Office of Agriculture (WoA), Development Agents (DAs) (i.e., extension staff), and local communities in community-based approaches to watershed planning and management, using MoARD's Community-Based Watershed Management Guideline.

10. Special attention would be given to sub-watersheds areas that are adversely affected by acidic soils. In such Woredas, additional funds would be available under the SLM program for collaborative

work involving research institutions, Woreda experts, and DAs to develop on-farm demonstration sites to train farmers in best practices for reclaiming and improving the productivity of acidic soils.

11. Sub-component 2: Communal Land and Gully Rehabilitation: The objective of this sub-component is to stabilize hillsides, and degraded communal lands and gullies through locally appropriate, physical and biological measures. Degraded communal lands and hillsides would be treated through a broad range of management practices and technologies that have proven to be financially, ecologically, and socially viable under local conditions. The program would finance measures such as terraces, forage contour bunds, reforestation/afforestation, deep trenching, and interventions to ameliorate acidic or saline-sodic soils, etc.

12. Similarly, the program would finance the treatment of gullies through a broad range of measures, including building of check dams, reshaping and cultivation with multi-purpose perennial trees, shrubs, and grasses. These activities require investments that have significant public benefits, including on the local community, downstream communities, and the environment. Therefore, the program would finance up to 80 percent of the total costs (in the form of technical advisory services, hand tools, seeds, seedlings, fencing materials, etc). The remainder is expected to be in-kind contribution from the beneficiary communities in the form of labor. The program would also provide technical assistance and forums for communities to develop, in a participatory way, local by-laws to govern the use of communal lands, including grazing land.

13. Sub-component 3: Farmland and homestead development: The objective of this sub-component is to reduce soil erosion and improve agricultural productivity on individual farmlands and homesteads. This objective would be achieved through measures like the application of physical and biological soil and water conservation measures, the introduction of high value crop varieties (horticulture and orchard development, forage and grassland development, etc.), restoring and sustaining soil fertility, improving water use efficiency in smallholder farming systems, and the establishment of woodlots.

14. While considered an essential part of the overall watershed management, these measures would have mostly private benefits and some public environmental benefits. Therefore, the program would finance 25% of the total costs (in the form of seeds, seedlings, technical advisory services) and the intended beneficiaries would cover the cost of the remaining 75% (in the form of labor and cash from their own resources. Or they can access the credit scheme under the Government's agricultural household extension packages or from micro-finance institutions that are widely available in rural Ethiopia.

15. In addition, the program would also finance 30 percent of the cost of energy-saving stoves provided to households on a demand-driven basis to reduce deforestation, which is largely caused by the unsustainable collection of fuelwood.

16. Sub-component 4: Community infrastructure: The objective of this sub-component is to capitalize on the potential created by natural resource rehabilitation efforts implemented under the above sub-components, and to improve the livelihoods of the community and farmers. The program would finance small-scale community-based infrastructure such as water harvesting systems (i.e. farm ponds, storage tanks, roadside flood harvesting, etc.), and drinking water supply systems. The beneficiary communities would contribute labor to such projects.

17. Sub-component 5: Knowledge Management: The objective of this sub-component is to assist the MoARD to facilitate the systematic synthesis, quality management, dissemination and use of best management practices and technologies in soil and water conservation. Currently, soil and water conservation efforts in Ethiopia are informed by the Community Based Participatory Watershed Development Guidelines. While providing a solid foundation, some of the SWC technologies are works in progress that will have to be continuously reviewed and updated as best practice technologies emerge and develop. MOARD has adapted the World Overview of Conservation Approaches and Technologies (WOCAT) tool as a framework for capturing, assessing, and sharing, both the lessons learned, and the worldwide experiences on successful examples of soil and water management.

18. EthiOCAT—a local Ethiopian version of WOCAT has been launched, and its database on proven technologies and approaches of soil and water management that can be shared with diverse practitioners across the country is under further development. The SLM program would finance the development of improved protocols for collecting, in Ethiopia and elsewhere, the peer review information on best management practices, and would provide a structured exchange of knowledge between experienced practitioners, researchers, and farmers. The improved protocols would cover the introduction of learning loops for improving the standard practices of documenting implementation experiences, their storage, and their sharing and dissemination.

19. The program would also finance: upgrading the information management system for WOCAT in MOARD ,and the associated training; expert participation in the process of selecting best management practices; production and dissemination of different kinds of information products (i.e., technical publications, policy papers, brochures, posters, CDs, DVDs, etc. in various local languages) for policy makers, extension workers, and other stakeholders.

Component 2: Rural Land Certification and Administration (US\$3.43 million)

20. The objective of this component is to expand the coverage and enhance the land certification program aimed at strengthening tenure security for smallholder farmers. This objective is consistent with the priority of expanding the land certification program outlined in Ethiopia's PASDEP because of the important role that tenure security plays in stimulating greater investment by farmers in sustainable land management practices. Assistance under this component also seeks to rectify the weaknesses in Ethiopia's Stage 1 land certification process identified by Deininger et al. (2007), particularly the need to geo-reference and map individual parcels to avoid or minimize boundary disputes.

21. The program would scale up an enhanced land certification (i.e., Stage 2) process that has emerged from experiences from the Government's own land certification activities under two pilot projects financed by SIDA and USAID.

22. The program would finance training, equipment, and technical assistance to upgrade the organizational, technical, and managerial capacity of existing institutions or units responsible for land administration at the Federal, Regional, and Woreda levels, and the Judiciary. The curricula and training materials developed and successfully tested under the USAID-financed Ethiopia Strengthening of Land Tenure and Land Administration Program (ELTAP) would be used under the SLM program.

23. Other specific interventions to be financed under this sub-component for all the Woredas participating in the watershed management activities would include cadastral surveying parcel-based land registration, and developing registries for rural land. Such interventions would facilitate timely

processing and issuance of land certificates, with important features such as geo-referencing and mapping of household and farm plots, communal lands, etc. It would also facilitate the continuous updating of land registration records.

24. At each Woreda, one of each of the following specialist would lead the land certification and registration process—cadastral surveyor, registrar, and GIS expert. However, because of limited land survey and registration staff at the Woreda level, private sector (contracted) surveyors and registrars would be recruited. This approach would contribute to the expansion of very limited skills in the private sector on cadastral land surveying and registration as well as contribute to gains for youth employment. The program would finance scaling up in the beneficiary Woredas a successful model developed under the USAID-financed ELTAP whereby 30 diploma-level graduates from the local technical and agricultural colleges per Woreda were trained in cadastral surveying and land registration to work under the SLM program.

25. For the two Regions that have not yet finalized their policies and regulations on land certification and administration, Benishangul-Gumuz and Gambela, the program would finance technical assistance to assist them to finalize them in a timely manner.

26. A public awareness campaign would be implemented in the selected Woredas to raise awareness about the rights and obligations of land users, and regulations on land tenure security, under the Federal and Regional laws.

27. This rural land certification and administration component would use the following operational manuals that were developed and successfully tested under ELTAP to guide the implementation of the land certification and administration component:

- Methodical Instruction for Land Holding Based Rural Land Registration.
- Methodical Instruction for Parcel Based Rural Land Registration.
- A Manual on Hand-Held GPS for Cadastral Surveying.

Component 3: Program management (US\$1.60 million)

28. The focus of this component is to provide financial and technical assistance to MoARD and the Regional, Woreda, and Kebele offices responsible for sustainable land management to effectively support coordination and implementation of the program. Support for coordination would include financing tasks assigned to the SLM Support Unit, MoARD by the National SLM Steering Committee to facilitate coordinated and harmonized approach to SLM investments in Ethiopia.

29. The organizational structure for the implementation of the program would comprise four levels, reinforcing the country's decentralization program – Federal, Regional, Woreda (District), and Kebele (Sub-District). A full time national program coordinator and a deputy for the SLM Support Unit will be appointed by the Federal MoARD to oversee the implementation of the program. Regional and Woreda coordinators will also be appointed by the BoARD and WoA respectively.

30. An operational manual will guide the implementation of the SLM program and it covers the following aspects: (a) detailed implementation arrangements; (b) detailed implementation schedule; (c) financial management and reporting; (d) procurement; (e) monitoring and evaluation; and (f) Environmental and Social Management Framework.

Annex 5: Project Costs
ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Project Cost By Component and/or Activity	Local US\$ million	Foreign US\$ million	Total US\$ million
Watershed management	21.41	0.36	21.77
Rural land certification and administration	3.13	0.30	3.43
Program management	1.54	0.06	1.60
Total Baseline Cost	26.08	0.72	26.80
Physical Contingencies	2.36	0.07	2.43
Price Contingencies	8.52	0.04	8.56
Total Project Costs¹	36.96	0.83	37.79
Interest during construction			
Front-end Fee	n/a	n/a	n/a
Total Financing Required	36.96	0.83	37.79

¹Identifiable taxes and duties are US\$6.7 million, and the total project cost, net of taxes, is US\$31.2 million. Therefore, the share of project cost net of taxes is 21.5%.

Annex 6: Implementation Arrangements

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

1. The organizational structure for the implementation of the program would comprise four levels, reinforcing the country's decentralization program—Federal, Regional, Woreda (District), and Kebele (Sub-District).

2. Federal level

The Federal MoARD would be responsible for program coordination and implementation, using the existing institutional mechanisms already established to coordinate all projects or programs on sustainable land management being financed by the Government and development partners. This mechanism comprises the National SLM Steering Committee, National Technical Committee, and the SLM Support Unit in MoARD.

3. The Steering Committee, chaired by the State Minister for Natural Resources in MoARD, has high level representation from the Ministry of Finance and Economic Development, Ministry of Water Resources, Environmental Protection Authority, Ethiopia Institute for Agricultural Research, Regional Administrations, and the Eastern Nile Technical Regional Office.

4. The Steering Committee will be responsible for the following tasks in the SLM program: (a) establishing policy guidelines and providing overall supervision for program implementation; (b) approving the annual Federal and Regional work program and budget; (c) approving the annual procurement plan; and (d) reviewing the annual implementation performance report to be prepared by the SLM Support Unit; and overseeing the implementation of corrective actions, when necessary.

5. The National Technical Committee is made up of senior technical staff from the following institutions: MoARD, the Ministry of Finance and Economic Development, Ministry of Water Resources, Environmental Protection Authority, Ethiopia Institute for Agricultural Research, and the Ethiopia Development Research Institute. Development partners with programs in SLM are also represented on this body. This committee will be responsible for providing technical advice to MoARD on the quality of implementation reports and special studies such as policy documents, guidelines, documentation of best practices, and M&E reports.

6. The SLM Support Unit, MoARD would be responsible for the day-to-day management of the SLM program implementation, including: (a) preparation of annual work plans and progress reports; (b) monitoring and supervising overall implementation progress and evaluation of program impacts; (c) financial administration; and (d) procuring goods and services. The Unit will also provide administrative support to the Steering Committee and the Technical Committee. MoARD will appoint two senior technical staff as the National Program Coordinator and the Deputy Coordinator for the SLM support Unit.

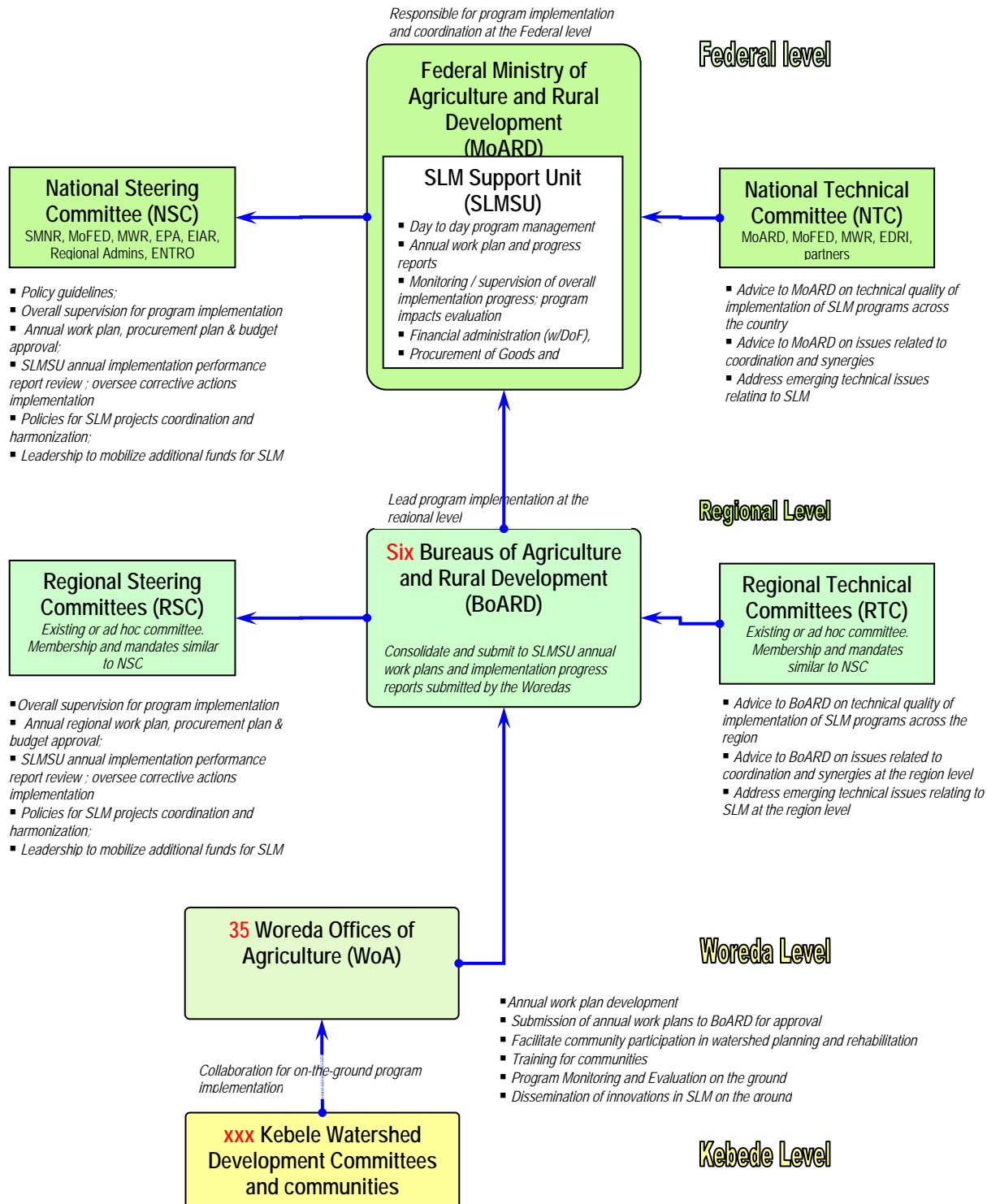
7. Regional level

BoARD would lead the implementation of the program at the Regional level. BoARD would approve and consolidate annual work plans and implementation progress reports submitted by the Woredas. The reports would then be submitted to the Federal SLM support Unit. BoARD will appoint one senior technical staff as the Regional Coordinator for the SLM program. The program would finance an accountant per Region to assist the Woreda Finance Offices in financial management and reporting.

8. Woreda and Kebele levels

On-the-ground implementation of the program would be undertaken jointly by WoA and the Kebele Watershed Development Committee (KWDC), and communities. The WoAs and KWDCs would assist communities in: developing annual work plans and budgets for submission to the Regions for endorsement and integration into the Regions' work plans and budgets; facilitating community participation in watershed planning and rehabilitation; training; monitoring and evaluation; dissemination of innovations in SLM, etc. They would also be responsible for the implementation of the land certification and administration activities at the Woreda and Kebele levels.

Figure 1: Organizational Arrangements for the Sustainable Land Management Program



Annex 7: Financial Management and Disbursement Arrangements

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Executive Summary of Financial Management Assessment

1. As part of the preparation of the proposed SLM program, a financial management assessment was carried out at the Federal Ministry of Agriculture and Rural Development (MoARD) in line with the World Bank Financial Management Practices Manual issued by the Financial Management Sector Board in November 2005. The assessment focused specifically on MoARD's Project Finance Division, which is responsible for managing the Bank's and donor funds. The assessment included the identification of financial risks that may affect project implementation and risks mitigation measures.
2. The assessment was also informed by the following reviews: (i) Joint Budget and Aid Review (JBAR) and the Fiduciary Assessment (FA); (ii) Financial management performance of other IDA-financed projects, that were implemented by the MoARD.
3. The overall project financial management risk is assessed as *substantial*. (see Table 1 below on the risk assessment & mitigation below).
4. **Country Issues and Risks.** The recently completed Joint Budget and Aid Review (JBAR) and the Fiduciary Assessment (FA) indicate that Ethiopia has made significant progress in strengthening public financial management. As part of the JBAR, the Bank, in collaboration with the Government and other development partners, conducted a Public Financial Management (PFM) status review using the Public Expenditure and Financial Accountability (PEFA) framework. Out of the sixteen indicators covered under this review, fourteen were on the government's system for public expenditure planning, budgeting, and reporting. Ethiopia scored high on seven of the fourteen indicators i.e., macroeconomic management, including aggregate fiscal discipline and minimizing fiscal risks. Satisfactory progress was also noted in budgeting and accounting reform, though the adequacy and quality of budget reporting needs improvement and remains a key concern.
5. The FA, which was completed in early 2005, noted that considerable progress has been made in implementing financial management reforms at both federal and regional levels. The areas of improvements identified included budget processes, internal controls, and cash management. Also, the FA noted that some steps had been taken in reforming internal and external audits. Nevertheless, some weak areas were identified that require attention. These include delays in financial reporting (both in – year and yearly, inadequate capacity of the Federal Office of the Auditors General to discharge its responsibilities, and weakness in legislative scrutiny of audited financial reports.
6. The status of PFM reform and performance varies from region to region. SNNP and Tigray Regional States had been the beneficiaries of investments and local initiatives to support PFM reforms. These Regions showed improvement in the overall public finance function and consequential reduction in fiduciary risk. Other regions were at an earlier stage of investment in PFM and, therefore, demonstrated less progress.
7. The FA, however, noted that in all Regions there were capacity and staffing issues in areas such as audit reporting resulting from a shortage of accountants. The situation was further exacerbated by both lower civil service remuneration and incentives relative to the private sector. To address this situation, the Government is building 13 additional universities and new private universities are being

opened in various parts of the country. This initiative will increase the number of graduates in the area of accounting.

8. The absence of a national professional accounting association to train and certify accountants and auditors is another reason for the relatively small number of certified accountants in the country. The Government is in the process of establishing a Board to certify accountants and auditors. Delays in the submission of audit reports to the Bank are common to the entire Ethiopian portfolio and require portfolio-wide efforts to address it.

9. Ethiopia's PFM reforms have been carried out through the Expenditure and Control sub-Program (EMCP) of the Government's Civil Service Reform Program (CSRP). EMCP has developed a revised strategic plan to implement the nine components of sub-program. Mobilization of resources in support of the EMCP, which is a key component of the Public sector Capacity-building Program (PSCAP), is now a priority to achieve further improvement in all aspects of PFM.

10. **Risk Assessment and Mitigation:** The table below summarizes the financial management risks relating to the SLM program and mitigation measures.

Table 1: Financial Risk Assessment and Mitigation

Risk	Risk Rating (pre-investment)	Risk Mitigating Measures Incorporated into Project Design	Residual Risk Rating (post-investment)	Condition of Negotiations, Board, or Effectiveness Conditions.
Inherent Risk				
<u>Country level:</u> Weak capacity in accounting and auditing	S	It is being addressed by the government outside this project through the ongoing CSRP that is supported by PSCAP. Also, the Private Sector Capacity Building Project is supporting private sector initiatives.	S	N/A
<u>Implementing Entity</u>	M	The implementing agency (MoARD) has previous experience in managing IDA projects.	M	N/A
<u>Project Level</u> The project design may involve multiple donors and implementing agencies at regional and lower level.	S	Clearly defined activities, flow of funds, and accountability at all levels have been developed and detailed in the project operational manual and financial procedure manual. Qualified Project Accountants will be hired to support the project financial activities at the regional level. A well-designed and focused FM training will be provided by the Project Finance division unit at MoARD before effectiveness. Regular FM training is to be provided to regional and Woreda level finance staff during the project implementation. There will be regular WB FM supervision	M	

Risk	Risk Rating (pre-investment)	Risk Mitigating Measures Incorporated into Project Design	Residual Risk Rating (post-investment)	Condition of Negotiations, Board, or Effectiveness Conditions.
Overall Inherent Risk	S		M	
Control Risk				
<i>Planning & Budgeting:</i>	L	Government planning and budgeting process will be applied and will include project disbursement requirement.	L	N/A
<i>Accounting:</i> Accounting Policies, Procedure, and Information Systems.	L	Project financial management manual will be developed (as part of the overall operational manual for the program). This will include project chart of accounts to report on project activities and samples of the formats for the Interim Financial Reports.	L	Effectiveness condition
<i>Staffing:</i> Lack of adequate qualified accountants at Regional and Woreda level	M	A qualified Project Accountant will be hired in each six regions to support financial management and reporting. A well-designed and focused FM training will be provided by Project Finance division unit at MoARD prior to effectiveness. Regular FM training to be provided to regional and Woreda level finance staff & the project will provide resources to support these activities.	L	within six months after credit effectiveness.
<i>Internal Control</i>	M	National and Regional Project Steering Committees would be responsible for following up on audit issues raised in the internal and external audit reports to ensure that they are addressed by the project management.	L	N/A
<i>Funds Flow:</i> Delays in release of funds to regions and Woredas and submission of SOEs	M	The government's existing system for tracking expenditure will be used to monitor the timely flow of funds to, and submission of SOEs from Regions, and Woredas.	L	N/A
<i>Financial Reporting:</i> Delay in the submission of quarterly Interim Financial Reports (IFRs) and annual financial statements	S	Samples of the formats for the IFRs will be developed and detailed in the financial management manual to be developed (this should include the time frame for submission of financial reports by the regions and Woredas). Training on the preparation of IFRs will be conducted by the Federal FM team for the regional staff after credit effectiveness. Recruitment of additional accountants to support the project will be done after credit effectiveness.	M	Effectiveness Condition
<i>External Audit:</i> Delay in submission of audits	S	Audit ToRs satisfactory to IDA to be developed (as part of the overall operational manual for the program). The Office of Federal Auditor General	M	Effectiveness condition Within six months

Risk	Risk Rating (pre-investment)	Risk Mitigating Measures Incorporated into Project Design	Residual Risk Rating (post-investment)	Condition of Negotiations, Board, or Effectiveness Conditions.
		will have the option of auditing the project accounts or hiring a private firm to do so.		after credit effectiveness.
Overall Control Risk	S		M	
Overall Risk Assessment	S		M	

Risk rating: *H (High Risk), S (Substantial Risk), M (Modest Risk), L (Low Risk)*

11. The SLM Program's financial management is strengthened by the following features:

- The Government's discipline in executing budget and compliance with the existing government regulations is the major strength in implementing projects and programs in the country. There is a good internal control system, including regular post audits by the Internal Audit Departments of the government agencies.
- In addition, the government continues to strengthen PFM reforms through the Expenditure and Control sub-Program (EMCP) of the Government's Civil Service Reform Program (CSRP).
- MoARD has adequately qualified and experienced accounting personnel at the federal level, and most have been trained in Bank's Financial Management and Disbursement Guidelines.
- MoARD has experience in managing other IDA projects and has internal controls, an internal audit function, a computerized accounting system, and budgeting arrangements in place.
- The National and Regional Project Steering Committees would provide an oversight role ensuring audit issues raised in the internal and external audit reports are addressed by the project management.

12. The SLM Program's financial management is weakened by the following features:

- Inadequate qualified accountants at regional and Woreda level to support the project operations. A major challenge facing the project and government as a whole is retention of skilled staff. Staff turnover is more serious at the regions and Woreda level due to low pay and remote location.
- Delay in submission of IFRs and project audits. A project audit may take time to complete as implementing agencies are spread throughout the country.

13. The overall project risk for Financial Management is considered **Significant** and the following action plan is designed to mitigate the financial risks/weakness identified.

Table 2: Risk Mitigation Action Plan

Risk/Role	Action Plan to Mitigate Risk	Completion Date	Responsibility
Inadequate qualified accountants and financial management capacity in general at regional and Woreda level.	MoARD to recruit an accountant at each region to support implementation. Focused training will be offered to all finance staff involved in the project: (i) Key staff at MoARD (ii) All project finance staff at all level	Within six months after credit effectiveness During project implementation	MoARD WB/MoARD (Project Finance Division) & Regional Project Accountants
Auditing of project financial statements may take time to complete as implementing agencies are many and dispersed all over the country	The Office of the Auditor General would have the option of auditing the project accounts or recruit a private audit firm to do so. Audit reviews will be carried out, preferably semi-annually, to speed up timely submission of annual audit.	Within 6 months after effectiveness On going	MoARD & Office of Federal Auditor General (OFAG)
Quarterly financial reports may not be submitted from regions and from Woredas on timely basis to facilitate preparation, consolidation, and submission of project financial statements and IFRs to the World Bank.	Woredas to prepare & submit to the regions monthly SOE reports within 20 days after the end of each month. Regions to prepare & submit quarterly IFRs to MoARD within 30 days after end of each quarter MoARD to prepare & submit quarterly IFRs to the WB within 60 days after the end of each quarter.	On going	MoARD (Project Finance Division) BoARD and WoARD

Overview of Financial Management Implementation Arrangements

14. The current IDA-financed projects activities are mainstreamed in the existing MoARD structure and systems, including financial management arrangements. At Federal level, MoARD will assume overall financial management responsibility for the SLM project. More specifically, the Project Finance Division will manage the IDA dollar Designated Account, and maintain and report on the annual project financial statements including submission of IFRs for quarterly project financial reporting and replenishment to the IDA Designated Account. MoARD will ensure that project financial management activities are carried out efficiently and in accordance with financing agreement. The Project Finance Division will work very closely with the SLM Support Unit in ensuring that project financial management arrangements are adequate throughout the project life. Disbursements from the IDA Credit will be Report-Based Disbursement Method, using quarterly IFRs.

15. At the regional level, project accountants providing support to BoARD will be responsible for ensuring adequate financial management arrangements are in place at region and Woreda levels and are maintained throughout the project life. They will collect and aggregate all financial data and information from Woredas on SLM disbursement and prepare quarterly IFRs for submission to the MoARD.

16. At the Woreda level, the existing accounting system that is in use to maintain other IDA financed project such as the Product Safety Net Project (PSNP) will be used to account for SLM funds. Under support of the PSNP, Woreda accounting personnel have already received training on how to maintain accurate project accounts. Additional training and support will be provided by regional SLM accountants to ensure proper accounting records are maintained, and there is timely accountability of SLM funds.

17. The external audit will be carried out annually by the Office of the Auditor General or a private audit firm it selects.

18. Planning and Budgeting: The overall project budget and a disbursement schedule will be drawn up and included in the PAD and will be included in the Ministry's annual budget. The process will be guided by the budget policy guidelines issued by Ministry of Finance and Economic Development. Detailed cost tables for the project have been prepared and will be agreed upon by negotiation. The budget process is participatory among various implementing agencies. Each BoARD at regional level would consolidate and prepare the annual SLM Work Plans & Budget (AWP&B) upon receipt of the AWP&B from the Woredas and submit same to MoARD SLM Support unit upon approval of the Regional Project Steering Committee. The SLM Support Unit will consolidate these Annual Work Plans and Budgets and submit them for approval by the SLM National Steering Committee.

19. Accounting Policies, Procedures and Information systems: The government's accounting policies and procedures will be used for this project. The government has introduced a double entry modified cash basis of accounting. This has been introduced at federal level and in most of the regions implementing SLM activities, namely Amhara, Tigray, SNNP, Oromiya, and Benshangul Gumuz. The project accounting arrangements shall comply with the requirements stipulated in the Government financial regulations and IDA Financing Agreement.

20. Staffing and Training: The Project Finance Division which is headed by the Head of the Accounts Division is staffed with adequate and qualified accountants who have long experience in managing the Bank's and other donor funds at the federal level. Currently there are 10 qualified

accountants handling donor funds and four other staff handling government counterpart funds. However, a major challenge facing the project and government as a whole is the retention of skilled staff at regional and Woredas level due to low pay and remoteness. Additional qualified project accountants will be recruited to support the project activities at the regional level and well designed and focused financial management training programs will be provided by Project Finance Division at MoARD prior to effectiveness to all staff involved in project financial management. Regular training will be offered to all finance staff involved in the project at all levels during the project implementation.

21. Periodic Reporting for Project Monitoring: Formats of the IFRs, i.e., periodic financial monitoring reports, are designed to provide quality and timely information to the Government, the Bank, and various stakeholders on the project's performance. The Project Finance Division will prepare within 60 days of the end of each quarter, the reports and submit them to the Bank. The contents of these financial reports <is there some special reason that is underlined?>include sources and uses of funds by project activity or component, and a statement of actual and budget expenditures, both cumulatively and for the period covered by said report, and explanations for variances between the actual and planned uses of such funds. Sample of the IFRs have been developed and are being incorporated in the financial management manual.

22. To ensure timely submission of the above reports to the Bank, Woredas will prepare and submit to the regions monthly project expenditures reports within 20 days after end of the each month. Regions will prepare and submit to MoARD quarterly IFRs within 30 days after end of each quarter for consolidation purposes.

23. Internal Controls: There are good internal control systems in the government offices at all levels. The government's regular financial rules and procedure that apply to MoARD operations will be used in this project. This includes regular post audits by the Internal Audit Departments of each government agency at regional and Woreda level. At MoARD, the internal control environment revolves around the internal audit function that reviews day-to-day operations of MoARD and donor funds including adequacy and effectiveness of the internal controls.

24. The SLM National and Regional Steering Committee will have an oversight role on financial matters affecting the project. Its major role will include follow-up and implementation of internal and external audit queries. BoARDS at regional level would report on the results of the follow up/review meetings in the quarterly reports to be submitted to the National Steering Committee.

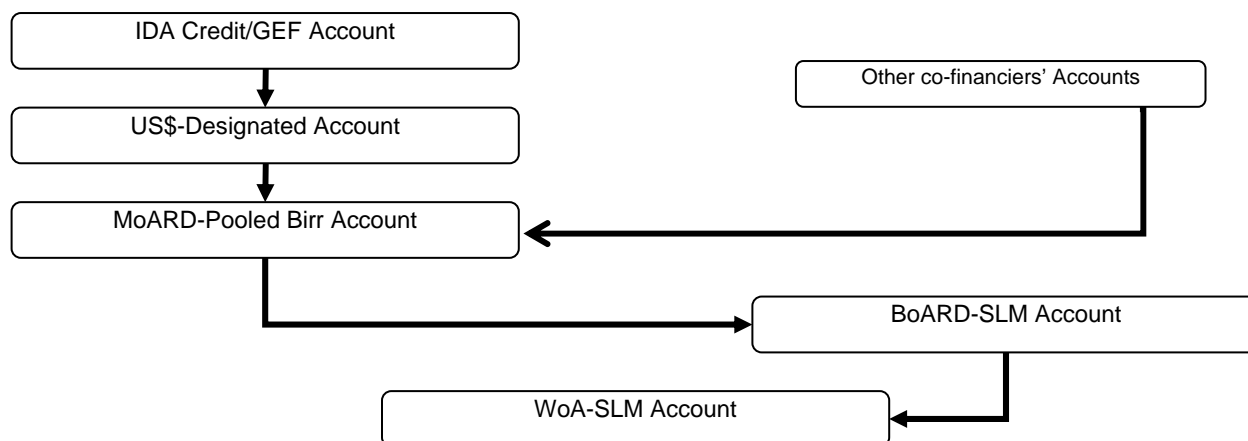
25. The Internal Audit is functioning effectively. Generally, the responsibility of the Internal Auditor is to assist the Minister in managing the systems of internal controls and corporate governance within the ministry. The Department is independent and is headed by Director of Internal Audit who reports directly to the Minister. The Department has an audit strategy and plan based on the risk assessment of the Ministry. Regional and Woredas internal audit sections will perform internal audit activities of the financial transactions. The internal auditor's work related to the SLM Program would be monitored and reviewed by the Bank and SLM National and Regional Steering Committee as part of the implementation support to ensure that internal control systems are functioning adequately and that issues raised in the internal auditor's report are addressed by the Management of the program.

26. External Audit: The Office of Federal Auditor General (OFAG) or a private firm it selects will carry out the external audit annually. The Auditors will provide a single audit report on the project financial statements (which includes the Designated Account). The auditors will be required to carry out a semi-annual audit review and submit to MoARD the audit management letter highlighting internal controls issues affecting project implementation. This will ensure internal controls are well addressed during the project implementation. The review will also accelerate to the finalization of the annual audit. The terms of reference for the audit will be included in the Project Financial Management Manual. The project's annual financial statements audit opinion will be due by January 7 of each year (i.e. six months after the end of the Ethiopia fiscal year).

Funds Flow Arrangements:

27. Bank Account and Flow of Funds Arrangements: A Designated Account for the SLM program will be opened at the National Bank of Ethiopia. Based on the half yearly cash forecast and quarterly project financial performance, the World Bank will deposit/replenish the designated bank account quarterly. In addition, MoARD will open a pooled Birr Account into which funds from the IDA Designated Account, the accounts of other Donors, and counterpart funds from the Federal Government will be deposited. From the pooled Birr account, the SLM funds will be transferred to BoARD SLM account at regional level on quarterly basis and based on the approved annual work plans and budgets. Transfer of funds to Woredas will be made on quarterly basis, based on approved annual work plans and budgets. Regional BoARDS will open separate Birr accounts for the SLM funds and then transfer funds to WoA. All IDA funds will go to the Woredas and they will make all payments at this level. There will be no funds transferred to Kebele and community level. Other donors operating outside the pooled Birr account will transfer their funds directly to the communities. (See Figure 1.)

Figure 1: Flow of Funds



28. Disbursement Method: Disbursements from the IDA Credit will be based on quarterly IFRs involving advances to cover cash forecast of the following two quarters. An advance will be made into a designated account immediately after effectiveness. The advance will cover project expenditures for six months as indicated in the initial six months cash flow forecast. Subsequently replenishments to the Designated Account will be made on quarterly basis (45 days after the end of the relevant quarter).
29. Documentation requirements for report-based disbursement: The following reports are required:
- Interim-un-audited Financial Reports (IFRs)
 - Designated US\$ Account Activity Statement.
 - Designated US\$ Account Bank Statements.
 - Summary Statement of Designated US\$ Account Expenditures for Contracts subject to Prior Review.
 - Summary Statement of Designated US\$ Account- Expenditures not subject to Prior Review.
 - Projected cash requirements for the next two reporting quarters.
30. All documents supporting the reported expenditures, such as invoices, statements, and bills of lading, should be maintained by the implementing entities and made available for review by auditors as set out in the Financing Agreement.
31. Submission of Withdrawal Applications to IDA: An advance will be made into a Designated Account immediately after effectiveness. MoARD should submit to the World Bank the initial withdrawal application together with a six-month cash forecast after the project has become effective. Subsequent replenishments to the DA will be made on quarterly basis (45 days after the end of the relevant quarter). MoARD will submit withdrawal applications to the Bank along with the IFRs and other documents as indicated above.
32. Due date for submission of the above report: The Bank must receive all disbursement reports and bank statements within 45 days of the end of each of the relevant quarter.
33. Procurement arrangements: The Procurement Specialist has assessed the Procurement arrangements for the project as detailed in Annex 8.
34. Overall Monitoring: The monitoring and impact evaluation for the overall project will be the responsibility of the MoARD. The Program will have a five-year implementation period. There will be annual reviews and an Implementation Completion Report (ICR) at the end of the Program implementation, to be jointly prepared by IDA and the concerned implementing agencies.
35. Supervision arrangements: There will be regular FM supervision reviews by the World Bank Financial Management Specialist. The World Bank Financial Management Specialist will also carry out regular reviews of quarterly IFRs and annual audit reports, and follow up on any issues and recommendations. Transactions and control reviews will be carried out at each implementing entity by internal audit units and their reports would be submitted to the SLM NSC for advice and further follow up. In addition, the NSC and RSCs will provide overall supervision role for program implementation, approve annual work plans & budget, and review the implementation performance reports that will include the IFRs

Financial Covenants

36. Standard financial covenants include the submission of the following to IDA:
- Maintenance of a satisfactory financial management system for the project.
 - Audited project financial statement within six months after the year-end of the financial year.
 - Agreed IFRs within 60 days after each financial year quarter, and shall cover such financial quarter.

Annex 8: Procurement Arrangements

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

A. General

1. Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004, revised October 2006; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised October 2006, and the provisions stipulated in the Legal Agreement. The various items under different expenditure categories are described in general below. For each contract to be financed by the Grant, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank 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.

2. **Procurement of Works:** Works procured under this project would include: the rehabilitation of communal land and gullies; farmland and homestead development; and community based infrastructure development. These would involve the construction of water tanks rainwater harvesting; labor based construction of rural feeder roads by small contractors. The procurement would be carried out by Woredas centrally for the Kebeles/Communities using the procedures and experience from the Public Works component of the Public Safety Net Project. It would be done using the National SBD or templates designed for Local Competitive Bidding agreed with or satisfactory to the Bank. The Woreda offices will provide the works supervision services. Details of the procurement to be implemented by communities and procedures to be followed will be in the Project Implementation Manual which is under preparation and will be submitted to the Bank for approval before the procurement can take place..

3. **Procurement of Goods:** Goods procured under this project would include: (i) project equipment like vehicles, motorcycles, computers and printers, photocopiers and digital cameras, handheld GPS and differential GPS to be procured through the Inter Agency Procurement Services Organization; and (ii) hand tools, seeds and polythene bags, or seedlings which would be carried by Woredas centrally for the Kebeles/Communities. The procurement will be done using the National SBD or templates designed for Local Competitive Bidding agreed with or satisfactory to the Bank.

4. **Procurement of non-consulting services:** The non-consulting services to be procured under the project include: Land Certification including purchase of satellite imagery and production of digital orthophoto maps, as well as landscape monitoring through the biannual production of maps showing the change in vegetation cover at the Federal level; preparation of certificates from cadastral maps at the Woreda level; and Printing and dissemination of publicity campaign posters and messages at the federal and/or regional levels. The Bank's sample bidding document for the procurement of non-consulting services is to be used for these procurements.

5. **Selection of Consultants:** The consulting services to be provided by firms will include: training and other capacity building activities; farmer surveys; and other Monitoring and Evaluation studies; studies to integrate land-use systems; Financial Management Agency services; and annual financial audits of project accounts. The consulting services to be provided by individuals required for the project include, Technical Assistance to Woreda offices in the use of GPS to produce cadastral

maps; Project Financial Management Specialist; Project Procurement Specialist; Monitoring and Evaluation Officer; and Regional Project Accountants. Short lists of consultants for services estimated to cost less than \$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

6. **Operating Costs:** The operating costs which would be financed by the project include fuel and vehicle running and maintenance costs, stationary and sundries; advertising and other office running costs. These would be procured using the implementing agency's administrative procedures which were reviewed and found acceptable to the Bank.

7. The procurement procedures and SBDs to be used for each procurement method, as well as model contracts for works and goods procured, are presented in the Project Implementation Manual.

B. Assessment of the agency's capacity to implement procurement (To be done)

8. Procurement activities will be carried out by [*name of the Implementing Agency*]. The agency is staffed by [*describe the key staff positions*], and the procurement function is staffed by [*describe the staff who will handle procurement*].

9. An assessment of the capacity of the Implementing Agency to implement procurement actions for the project has been carried out by [*name of the procurement staff*] on [*date*]. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement Officer and the Ministry's relevant central unit for administration and finance.

10. The key issues and risks concerning procurement for implementation of the project have been identified and include [*describe the risks/issues*]. The corrective measures which have been agreed are [*Describe the corrective measures*].

11. The overall project risk for procurement is [*give the risk rating*].

C. Procurement Plan (To be done)

12. The Borrower, at appraisal, developed a procurement plan for project implementation which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team on [*date*] and is available at [*provide the office name and location*]. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

D. Frequency of Procurement Supervision

13. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended [*frequency*] supervision missions to visit the field to carry out post review of procurement actions.

E. Details of the Procurement Arrangements Involving International Competition

1. Goods, Works, and Non Consulting Services

(a) List of contract packages to be procured following ICB and direct contracting:

1	2	3	4	5	6	7	8	9
Ref. No.	Contract (Description)	Estimated Cost	Procurement Method	P-Q	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Comments

(b) ICB contracts estimated to cost above [*fill in threshold amount*] per contract and all direct contracting will be subject to prior review by the Bank.

2. Consulting Services

(a) List of consulting assignments with short-list of international firms.

1	2	3	4	5	6	7
Ref. No.	Description of Assignment	Estimated Cost	Selection Method	Review by Bank (Prior / Post)	Expected Proposals Submission Date	Comments

(b) Consultancy services estimated to cost above [*fill in threshold amount*] per contract and single source selection of consultants (firms) for assignments estimated to cost above [*fill in threshold amount*] will be subject to prior review by the Bank.

(c) Short lists composed entirely of national consultants: Short lists of consultants for services estimated to cost less than [*fill in threshold amount*] equivalent per contract, may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Annex 9: Economic and Financial Analysis

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

A. Introduction

1. The overall outcomes of the program 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 program 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 approach uses the incremental benefits and costs, attributable to the project interventions. The economic analysis 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 (i)– approaches (ii) and (iii) were adopted and 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) *tenure security effect*, which positively influences the levels of investment at the farm level; (ii) *collateral effect*, which facilitates access to institutional finance; and (iii) *market efficiency or transaction effect*, in 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 benefits⁵.

6. It is, therefore, assumed that farmers' investment in SWC technologies would be enhanced under the project by the improved tenure security as a result of the complementary interventions under the Rural Land Certification and Administration component. Other direct benefits, albeit difficult to quantify, include: increased crop and livestock productivity as a result of improved soil depth, reduced soil loss, improved soil moisture retention, increased crop productivity, expansion of cultivated area due to gully reclamation, and improved quality and quantity of woody biomass resulting in improved livestock fodder.

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)⁶ 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. In addition to the benefit streams that accrue from reduced soil loss, we also assume an increase in crop productivity largely arising from the combined effect of increased soil moisture, topsoil depth, and soil fertility. A conservative assumption based on global studies pertaining to similar soil types indicates that crop productivity decreases by 1% annually without land conservation technologies. In the case of Ethiopia, the Soil Conservation Research Project estimated a productivity loss of 2% annually⁷.

⁵ 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.

⁶ Hurni, H. 1987. Erosion productivity conservation systems in Ethiopia. In Pla Sentis (ed.) Soil Conservation and Productivity. Proceedings of the 4th International Conferences on Soil Conservation. Maracay, Venezuela.

⁷ The computation of the associated productivity effect was done using the change of productivity approach (CPA), where the value of on-site cost of soil erosion equals the value of the lost crop production valued at market prices, with future losses discounted at market interest rates. This methodology relies on the projected yields attainable with and without soil erosion (or with and without SWC technologies). Differences in crop yields are therefore multiplied by their unit market price to get the equivalent value of crop losses from soil erosion.

Table 1: Estimated Soil loss (ton/ha/year) and Saved Productivity (Birr)

Region	Watershed	Current level of net erosion	Annual saving of land (ha.)	Annual productivity saving (Birr)
Tigray	Burka-Gerba	29.2	32.0	88,420.34
SNNPR	Gesha	101.3	172.1	475,474.20
	Aziga-Shuba	64.6	82.0	226,616.50
	Konkeya	52.5	51.4	141,920.20
	Werke Wuha	28.0	14.7	40,467.01
Amhara	Weyteklo	35.6	43.0	118,757.10
	Embuli	80.7	67.5	186,523.70
	Gafera	111.0	134.1	370,356.70
	Dalecha	22.4	31.4	86,712.40
Oromiya	Rebu	69.2	77.9	215,130.80
	Tinishu Leman	61.6	78.8	217,625.40
	Sechi	52.1	16.8	46,281.47
	Gumare	25.5	12.8	35,354.48
Gambella	Hoha	17.5	9.4	26,004.24
BSG				

Note: Only 14 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 14 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.

Table 2: Labor requirement (person days/km) of each SWC technology

SWC technology	Construction	Maintenance
Soil bund construction	150	16
Stone Bund construction	250	16
<i>Fanya juu</i> construction	200	16
Grass strips	30	0

Source: MoARD (2005): Community based participatory watershed development, MoARD; and experts' judgment (for maintenance).

10. The actual person days required for constructing and maintaining these SWC technologies depends 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)⁸. Thus, assuming that the structures will stabilize after 3 years

⁸ 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).

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 results are presented in Table 3. Also, note that two investment scenarios are considered. The first scenario considers investments in SWC in the form of physical structures (stone bund, soil bund, *fanya juu*, and grass strips)⁹, where high value fodder is planted on the structures. The second scenario considers a more integrated approach where physical structures are combined with high value fodder on bunds, and fertility management measure through intercropping.

13. The overall Economic Rate of Return (ERR) is about 10% and 17% in Scenarios I and II, respectively, indicating notable differences in returns between the incomplete package (scenario I) and a more complete SWC package (scenario II). This implies that to achieve higher returns, farmers should be encouraged to combine physical and biological SWC technologies.

Table 3: Summary of Economic and Financial Rates of Return

Scenario	ERR	FRR	Economic NPV (US\$ million)	Financial NPV (US\$ million)
I	10%	8%	(5.36)	(6.89)
II	17%	11%	7.76	6.78

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. Other well documented, but largely unquantifiable benefits of sustainable land management include, improved soil organic matter, moisture retention, fertility, etc. These attributes help to improve the natural capacity of soils to support agricultural production on a sustainable basis. These improvements result in increased nutrient and water use efficiency, thereby increasing the pay-off of inorganic fertilizer and/or irrigation investments. Moreover, there are other global environmental benefits in terms of ecosystem services that will accrue from sustainable production practices.

⁹ Characteristics of each of these conservation measures and requirements for success are presented in a separate annex in the full report prepared by the consultants.

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 most favorable scenario. In that regard, six kinds of sensitivity analyses are conducted.

16. The following are the results of the sensitivity analysis (also in Table 8):

If the overall project costs are increased by 5%, the ERR is reduced only by 2 percentage points to 15% from the base level of 17%, and the NPV declines by 1.68 million Birr to 6.08 million Birr from the base value of 7.76 million birr.

- If the overall project benefits are increased by 5%, then the ERR increases by 2 percentage points to 19%, and NPV increases to 10.5 million Birr.
- When both costs and benefits are increased simultaneously by 5%, the ERR remains unchanged, and NPV increases slightly by 0.14 million Birr.
- When the cost is increased by 10% or benefits reduced by 10%, the ERR declines by 5% percentage points to 12%.
- A 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 10 percentage points, and overall NPV becomes negative.

Table 4: Sensitivity Analysis Over a 25-Year Period

Scenarios	ERR (%)	NPV (in million Birr)
Base case	17%	7.76
Cost increased by 5%	15%	6.08
Benefit increased by 5%	19%	10.5
Combined effect of cost and benefit increment by 5%	15%	7.90
Cost increased by 10%	11%	4.40
Benefit reduced by 10%	12%	3.50
Combined effect of cost increment by 10% and benefit reduction by 10%	7%	-0.16

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 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 program 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 with biological soil fertility management activities technologies. The results are even stronger in areas currently exhibiting high soil erosion rates such as the Gesha, Aziga Shuba, Gafera, Rebu, and Tinishu Lemen watersheds 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. Economic prices have been derived from shadow prices (import parity prices) of key crops used in the farm models such as teff, wheat, and maize.
- Constant prices are used. Separate input and output prices are not considered in the with- and-without soil SWC scenario, as 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 through out 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 conservations structures. The value of unskilled labor for construction of SWC is based upon the average labor wage (Birr 8/person day).
- 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.
- The selected watersheds do not have moisture problems, therefore, no productivity benefits due to moisture retention capacity were taken into account, except in three drier watersheds with less than or equal to 900mm annual rainfall. The moisture benefit is assumed to be 10% increment in agricultural productivity though Sutcliff (1993)¹⁰ estimated up to 25% increase in production due to better moisture retention as a result of improved quality of the soil and slope reduction due to natural terrace formation.
- Harvesting of improved fodder grown on bunds is assumed to begin in year 2. There is no statistically significant cereal grain yield difference when cereals are grown alone and intercropped with forage legumes (Zewdu et al, 2002)¹¹. A time horizon of 25 years is assumed to capture the benefits of SWC both in the medium and long term.
- A discount rate of 10% and 12% is assumed in calculating the economic and financial rates of return because these rates are consistent with the opportunity cost of capital in public and private sector lending institutions, respectively.

¹⁰ Sutcliffe J. P., 1993. Economic assessment of land degradation in the Ethiopian Highlands. A Case Study. National Conservation Strategy Secretariat, Ministry of Planning and Economic Development, Transitional Government of Ethiopia, Addis Ababa, Ethiopia.

¹¹ 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 10: Safeguard Policy Issues

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

1. The SLM Program would finance scaling-up of successful models for watershed management and rural land certification in 35 watersheds, covering 35 Woredas in six Regional States. The implementation of the watershed management interventions will follow the widely accepted Community Based Participatory Watershed Development Guideline (CBPWDG) issued by the MoARD in 2005.
2. Specific interventions to be financed under the watershed component would include hillside and gully rehabilitation, reforestation, and sustainable agriculture on farmlands. These interventions are expected to make a major contribution towards environmental transformation, and consequently, improved and sustainable agricultural productivity.
3. The SLM program is likely to have minimal or no negative social impacts because it would be working with established farmers. There will be no resettlement or land re-distribution. The watershed management interventions are expected to improve household incomes and the land certification activities are expected to strengthen user rights, including of vulnerable groups such as female-headed households.
4. However, environmental rehabilitation efforts to protect or enhance the natural resource base could potentially have some adverse environmental impacts on human populations or the biophysical environment, if their location, design, or maintenance systems do not follow good environmental practice. Therefore, the World Bank's Safeguard Policy on Environment Assessment (OP/BP 4.01) is triggered.
5. However, individual sub-projects to be financed cannot be determined upfront because they would be decided as part of program implementation through a participatory watershed planning process. They are also expected to be small, numerous, community-based. Therefore, it is unrealistic to execute environmental impact assessment for individual sub-projects. Instead, the environmental safeguard requirements of both the Government of Ethiopian and the SLM partners, including the Bank, would be addressed through an Environmental and Social Management Framework (ESMF).
6. The ESMF document: (a) establishes clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the SLM program; (b) specifies appropriate roles and responsibilities, and outlines the necessary reporting procedures, for managing and monitoring environmental and social concerns related to proposed sub-projects; and (c) provides practical information resources for implementing the ESMF.

Annex 11: Project Preparation and Supervision
ETHIOPIA: ET-Sustainable Land Management Program (FY08)

	Planned	Actual
PCN review	01/23/2006	01/23/2006
Initial PID to PIC	10/06/2006	10/06/2006
Initial ISDS to PIC	10/05/2006	10/05/2006
Appraisal	03/04/2008	
Negotiations	03/10/2008	
Board/RVP approval	05/15/2008	
Planned date of effectiveness		
Planned date of mid-term review		
Planned closing date		

Key institutions responsible for preparation of the project:

- Federal Ministry of Agriculture and Rural Development

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Abel Lufafa	Young Professional	ARD
Achim Fock	Senior Economist	AFTAR
Beyene Kebede		
Ernst Lutz	Consultant	AFTEN
Frank Byamugisha	Operations Adviser	AFTAR
Hardwick Tchale	Agriculture Economist	AFTAR
Herbert Acquay	Lead Natural Resource Management Specialist (Task Team Leader)	AFTAR
Ian Campell	E.T. Consultant	AFTH3
Jorge Rodas	Senior Sociologist	AFTCS
Matteo Marchisio	E.T. Consultant	AFTEN
Mercy Sabai	Senior Financial Mgmt. Specialist	AFTFM
Richard Olowo	Senior Procurement Specialist	AFTPC
Salimata Follea	Office Manager?	AFTEN
Sandra Bulls	Program Assistant	AFTEN
Sara Yirga		

Bank funds expended to date on project preparation:

1. Bank resources: \$53,833.08
2. Trust funds:
3. Total:

Estimated approval and supervision costs:

1. Remaining costs to approval:
2. Estimated annual supervision cost:

Annex 12: Documents in the Project File
ETHIOPIA: ET-Sustainable Land Management Program (FY08)

1. Country Partnership Program for Sustainable Land Management (CPPSLM) Program Component: Institutional Support.
2. Country Partnership Program for Sustainable Land Management (CPPSLM) Design and Preparation of Implementation Plan for SLM in the Institutional Support Components and Subcomponent.
3. CPPSLM: Institutional Support Component.
4. Detailed Project Description For the Component: “Establishment of Mechanisms to Scaling-Up of Best SLM Practices”.
5. Executive Summary For the Component: “Establishment of Mechanisms to Scaling-Up of Best SLM Practices in 177 Weredas.
6. Table of Cost Estimate for Component 3- Scaling Up Mechanism (in 177 Weredas).
7. Ministry of Agriculture and Rural Development (MOARD) Federal Republic of Ethiopia Preparation of the Proposed Country Program for Sustainable Land Management (SLM) Final Report Agriculture.
8. Strengthening Rural Land Tenure Security’ in Ethiopia Component under the proposed Sustainable Land Management Project.
9. PAD Rumyana Tonchovska Sub-Component 2.3 and component 4.
10. Supply of Equipment and Standard SW.
11. Summary Report Mrs. Rumyana Tonchovska, Information Management Expert Responsible for Sub-Component 2.3 and component.
12. Financial and Economic Analysis of CPPSLM Project in Ethiopia.,
13. Environmental Management Framework for Country Partnership Program for Sustainable Land Management (CPPSLM).
14. Some Salient Socio-Economic Factors and Their Implications to SLM A Final Report Presented to SWC of the Ministry of Agriculture and Rural Development.
15. Sustainable Land Management Program Executive Summary
16. Sustainable Land Management (SLM) Program Scale-up SLM in ‘high potential’ areas, and create the conditions for a programmatic approach to SLM - Program Document
17. Poverty and Land Degradation in Ethiopia.

Annex 13: Statement of Loans and Credits
ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd< Rec'd?>
P101473	2007	ET-Urban WSS SIL FY07)	0.00	65.00	0.00	0.00	0.00	102.38	0.00	0.00
P098093	2007	ET-Productive Safety Nets II (FY07)	0.00	0.00	0.00	0.00	0.00	176.82	0.00	0.00
P098031	2007	ET-Multi-Sectoral HIV/AIDS II (FY07)	0.00	0.00	0.00	0.00	0.00	30.20	0.00	0.00
P074015	2006	ET-Protection of Basic Services (FY06)	0.00	0.00	0.00	0.00	0.00	80.19	109.91	0.00
P077380	2006	ET-GEF Energy Access Prj (FY06)	0.00	0.00	0.00	4.93	0.00	4.68	0.00	0.00
P079275	2006	ET- Cap. Building for Agric. Serv (FY06)	0.00	54.00	0.00	0.00	0.00	47.08	-8.50	0.00
P094704	2006	ET-Financial Sector Cap Bldg. Project	0.00	0.00	0.00	0.00	0.00	15.22	0.84	0.00
P097271	2006	ET-Electricity Access (Rural) Expansion	0.00	133.40	0.00	0.00	0.00	136.38	-5.00	0.00
P082998	2005	ET-Road Sec Dev Prgm Ph 2 Supl 2 (FY05)	0.00	160.90	0.00	0.00	0.00	223.13	36.76	0.00
P050272	2005	ET-Priv Sec Dev CB (FY05)	0.00	19.00	0.00	0.00	0.00	21.95	3.06	0.00
P078692	2005	ET-Post Secondary Education SIL (FY05)	0.00	40.00	0.00	0.00	0.00	35.96	22.10	0.00
P078458	2005	ET-ICT Assisted Dev SIM (FY05)	0.00	25.00	0.00	0.00	0.00	22.74	10.97	0.00
P076735	2004	ET-Water Sply & Sanitation SIL (FY04)	0.00	75.00	0.00	0.00	0.00	86.88	22.69	0.00
P074020	2004	ET-Pub Sec Cap Bldg Prj (FY04)	0.00	100.00	0.00	0.00	0.00	58.13	14.79	0.00
P075915	2003	ET-Pastoral Community Dev APL (FY03)	0.00	0.00	0.00	0.00	0.00	3.66	-8.97	0.00
P044613	2003	ET-RSDP APL1 (FY03)	0.00	0.00	0.00	0.00	0.00	82.62	35.95	0.00
P049395	2003	ET-Energy Access SIL (FY03)	0.00	132.70	0.00	0.00	0.00	141.05	112.19	0.00
P050938	2003	ET-Dec Serv Del CB (FY03)	0.00	26.20	0.00	0.00	0.00	16.37	11.75	3.62
P050383	2002	ET-Food Security SIL (FY02)	0.00	85.00	0.00	0.00	0.00	60.90	17.24	0.00
P057770	2002	ET-Cultural Heritage LIL (FY02)	0.00	5.00	0.00	0.00	0.00	2.27	1.29	0.00
P073196	2001	ET-Demob & Reinteg ERL (FY01)	0.00	170.60	0.00	0.00	0.00	9.61	2.41	-0.67
P035147	2001	ET-GEF Med Plants Cnsv & Sust Use (FY01)	0.00	0.00	0.00	1.80	1.00	0.04	1.80	0.00
P000733	1998	ET-Agr Research & Training SIL (FY98)	0.00	60.00	0.00	0.00	0.00	1.39	0.08	-0.32
Total:			0.00	1,151.80	0.00	6.73	1.00	1,359.65	381.36	2.63

ETHIOPIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
	Total portfolio:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic.

Annex 14: Country at a Glance

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

POVERTY and SOCIAL		Sub-Saharan Africa	Low-income
	Ethiopia		
2005			
Population, mid-year (millions)	71.3	741	2,353
GNI per capita (Atlas method, US\$)	160	745	580
GNI (Atlas method, US\$ billions)	11.4	552	1,364
Average annual growth, 1999-05			
Population (%)	2.1	2.3	1.9
Labor force (%)	2.2	2.3	2.3
Most recent estimate (latest year available, 1999-05)			
Poverty (% of population below national poverty line)	44	..	..
Urban population (% of total population)	16	35	30
Life expectancy at birth (years)	42	46	59
Infant mortality (per 1,000 live births)	110	100	80
Child malnutrition (% of children under 5)	47	29	39
Access to an improved water source (% of population)	22	56	75
Literacy (% of population age 15+)	..	..	62
Gross primary enrollment (% of school-age population)	93	93	104
Male	101	99	110
Female	86	87	99

Development diamond*

Life expectancy

GNI per capita

Gross primary enrollment

Access to improved water source

Ethiopia

Low-income group

KEY ECONOMIC RATIOS and LONG-TERM TRENDS					
	1985	1995	2004	2005	
GDP (US\$ billions)	9.4	7.6	9.7	11.2	
Gross capital formation/GDP	11.4	18.0	21.3	26.3	
Exports of goods and services/GDP	5.8	9.7	15.4	16.4	
Gross domestic savings/GDP	5.8	11.9	4.1	3.6	
Gross national savings/GDP	7.5	20.7	16.2	17.2	
Current account balance/GDP	-4.0	2.5	-5.1	-9.1	
Interest payments/GDP	0.4	0.8	0.5	..	
Total debt/GDP	55.3	135.5	67.5	..	
Total debt service/exports	27.7	19.1	5.9	..	
Present value of debt/GDP	..	..	21.2	..
Present value of debt/exports	..	..	124.6	..
	1985-95	1995-05	2004	2005	2005-09
(average annual growth)					
GDP	0.8	4.0	12.3	8.7	5.6
GDP per capita	-1.9	1.6	10.1	6.8	3.4
Exports of goods and services	-1.4	13.2	36.4	-2.5	11.7

Economic ratios*

Trade

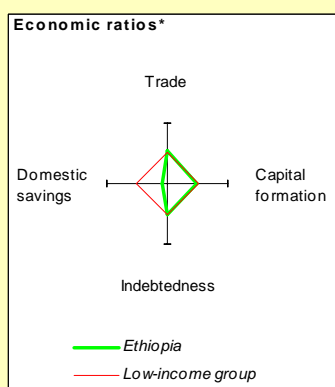
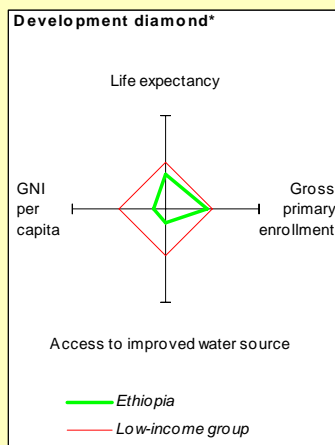
Domestic savings

Capital formation

Indebtedness

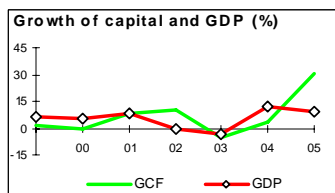
Ethiopia

Low-income group

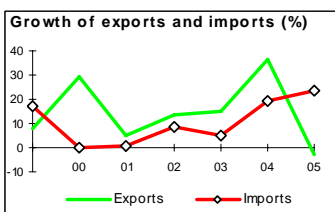


STRUCTURE of the ECONOMY

(% of GDP)	1985	1995	2004	2005
Agriculture	55.6	57.7	46.3	47.7
Industry	12.3	9.9	13.5	13.3
Manufacturing	5.1	4.8	5.3	5.1
Services	32.1	32.4	40.2	39.0
Household final consumption expenditure	84.0	79.6	81.9	82.2
General gov't final consumption expenditure	10.3	8.4	14.0	14.2
Imports of goods and services	11.5	15.7	32.6	39.1



(average annual growth)	1985-95	1995-05	2004	2005
Agriculture	3.0	2.2	17.3	12.0
Industry	-3.8	5.2	6.8	6.6
Manufacturing	-5.1	3.5	5.4	5.0
Services	-0.2	5.2	5.8	5.8
Household final consumption expenditure	1.9	3.0	14.7	11.7
General gov't final consumption expenditure	-3.1	9.8	0.4	8.6
Gross capital formation	-1.6	5.1	3.4	30.1
Imports of goods and services	-0.1	9.2	19.5	23.4



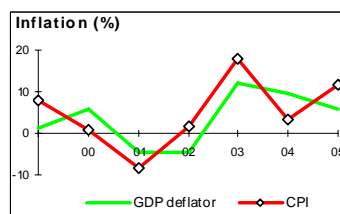
Note: 2005 data are preliminary estimates.

This table was produced from the Development Economics LDB database.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

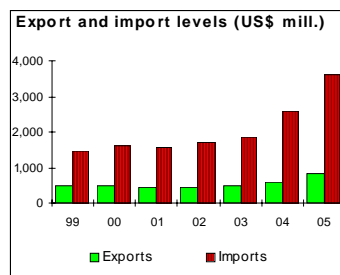
PRICES and GOVERNMENT FINANCE

	1985	1995	2004	2005
Domestic prices				
(% change)				
Consumer prices	19.1	10.0	3.3	11.6
Implicit GDP deflator	32.1	13.5	9.6	6.0
Government finance				
(% of GDP, includes current grants)				
Current revenue	14.1	14.4	18.4	19.2
Current budget balance	0.3	3.1	4.2	5.7
Overall surplus/deficit	-5.8	-3.5	-6.6	-6.5



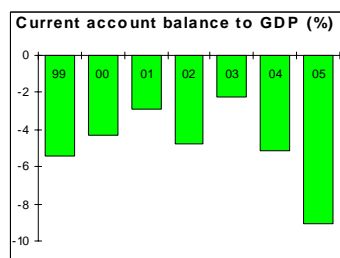
TRADE

	1985	1995	2004	2005
(US\$ millions)				
Total exports (fob)	360	454	600	818
Coffee	225	288	224	335
Pulses and oil seeds	16	25	105	138
Manufactures	84	76	62	79
Total imports (cif)	975	1,063	2,587	3,633
Food	283	181	269	247
Fuel and energy	186	169	311	669
Capital goods	249	350	920	1,265
Export price index (2000=100)	110	156	81	102
Import price index (2000=100)	100	86	117	133
Terms of trade (2000=100)	110	182	69	77



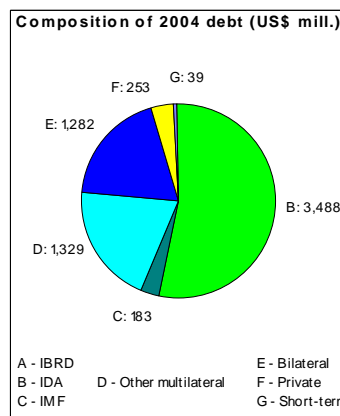
BALANCE of PAYMENTS

	1985	1995	2004	2005
(US\$ millions)				
Exports of goods and services	549	784	1,498	1,829
Imports of goods and services	1,082	1,272	3,171	4,367
Resource balance	-533	-488	-1,673	-2,538
Net income	-33	-60	-64	-36
Net current transfers	193	739	1,238	1,561
Current account balance	-373	190	-499	-1,013
Financing items (net)	420	-111	903	1,225
Changes in net reserves	-48	-79	-405	-212
Memo:				
Reserves including gold (US\$ millions)	216	589	1,350	1,555
Conversion rate (DEC, local/US\$)	2.1	6.3	8.6	8.7



EXTERNAL DEBT and RESOURCE FLOWS

	1985	1995	2004	2005
(US\$ millions)				
Total debt outstanding and disbursed	5,206	10,308	6,574	..
IBRD	49	0	0	0
IDA	437	1,470	3,488	3,359
Total debt service	159	154	97	..
IBRD	7	4	0	0
IDA	6	23	36	72
Composition of net resource flows				
Official grants	515	476	1,422	..
Official creditors	527	189	259	..
Private creditors	59	-48	71	..
Foreign direct investment (net inflows)	0	14	545	..
Portfolio equity (net inflows)	0	0	0	..
World Bank program				
Commitments	32	142	189	..
Disbursements	50	84	202	162
Principal repayments	7	16	13	44
Net flows	43	67	189	118
Interest payments	7	11	23	28
Net transfers	36	56	167	90



Note: This table was produced from the Development Economics LDB database.

8/12/06

Annex 15: Incremental Cost Analysis

ETHIOPIA: ET-Sustainable Land Management Program (FY08)

Global Environment Objectives and Expected Outcomes

1. The global environment objective of the proposed SLM program is to reduce land degradation, leading to the protection and/or restoration of ecosystem functions and diversity in agricultural landscapes. The SLM program would be financed with a US\$20 million IDA credit, US\$9 million grant from the GEF, and US\$8.79 million from the GoE.

2. It is expected that the implementation of interventions proposed under the SLM program would help to reverse land degradation, leading to the preservation of ecological services that support agriculture; the conservation of biological diversity; and an improvement in carbon sequestration. The program is also expected to improve the resilience or risk management capability of smallholder farmers to extreme climatic events associated with climate change.

GEF incremental analysis

3. The baseline interventions (or the “GEF baseline scenario”) under the SLM program (i.e., interventions that would contribute largely to local and national benefits such as increased agricultural productivity) are: (a) the introduction of improved farming systems that promote soil fertility and moisture management; (b) improved access to agricultural advisory services; (c) establishment or strengthening of organizational mechanisms for land certification and registration; and (d) provision of small-scale community and individual infrastructure such as water harvesting structures.

5. The added value of the GEF’s involvement in the SLM program is to build on the above “GEF baseline scenario” by helping to catalyze a paradigm shift to approaches that complement the economic and social dimensions of land degradation with the ecological aspects, particularly the global environmental benefits. Such a paradigm shift would also emphasize the following: (a) strong country ownership and a shared vision; (b) government leadership in program development; (c) a holistic approach—because the problem of land degradation is multi-faceted and multi-disciplinary—and therefore requiring an integrated approach; (d) building on existing knowledge and best practices; (e) strengthening stakeholder participation in program development and implementation; and (f) harmonization and alignment of interventions financed by the government and its development partners.

GEF financing would specifically target, in a complementary way, the following “GEF incremental actions” or “interventions” to achieve not only local and national benefits, but also such global environment benefits as: (a) the rehabilitation of communal and farmlands to protect or restore ecological services such as the water and nutrient cycles that support and sustain agricultural productivity; (b) strengthening and expansion of the land certification and registration system to increase the number of farmers with land certificates because land tenure security is an important incentive for farmers to invest in environmentally sound farming practices; and (c) the upgrade of the knowledge management system in MoARD (known as EthiOCAT) to better synthesize knowledge on demonstrated best practices and technologies on land and water management from Ethiopia and other countries, and proactively disseminate them in user-friendly information products to facilitate wider adoption.

Table 1: Incremental Cost Matrix

Component/Interventions	Cost Category	Cost US\$ M	Domestic Benefits	Global Benefits
Watershed management component <ul style="list-style-type: none"> • Introduction of improved farming systems that promote soil fertility and moisture management. • Improved access to agricultural advisory services. • Provision of small-scale community and individual infrastructure such as water harvesting structures. 	Baseline actions	\$25.13 (IDA: \$17.78; Govt.\$7.35)	Increased agricultural productivity and incomes.	N/A
Rural land certification and administration component <ul style="list-style-type: none"> • Establishment or strengthening of organizational mechanisms for land certification and registration. 		\$3.34 (IDA: \$2.32; Govt.: \$1.02)		
Program implementation <ul style="list-style-type: none"> • Effective implementation of program interventions 		\$0.32 (IDA: \$0.2; Govt. \$0.12)		
	Total baseline cost	\$28.79		

Component/Interventions	Cost Category	Cost US\$ M	Domestic Benefits	Global Benefits
Watershed management component <ul style="list-style-type: none"> Communal land and gully rehabilitation Farmland and homestead development Community infrastructure development Knowledge management 	GEF alternative actions ¹²	\$31.68 (IDA: \$16.73; GEF: \$7.79; Govt.: \$6.99)	Increased agricultural productivity.	<ul style="list-style-type: none"> Restoration and/or protection of ecologically sensitive areas. Conservation of biodiversity. Improved resilience of farmers to extreme climatic events. Increased sequestration of soil and biomass carbon.
Rural land certification and administration component <ul style="list-style-type: none"> Expansion of the land certification and registration system to increase the number of farmers with land certificates. 		\$4.39 (IDA: \$2.31; GEF: \$0.74; Govt.: \$1.35)		
Program implementation <ul style="list-style-type: none"> Implementation of a coordinated and harmonized system of managing the implementation of sustainable land management interventions. 		\$1.72 (IDA: \$0.97; GEF: \$0.30; Govt.: \$0.45)		
	Total cost of the GEF alternative	\$37.79		
	Incremental cost (i.e. cost of the GEF alternative minus the baseline cost)	\$9.00		

¹² Because the GEF financing is fully mainstreamed, the GEF alternative scenario comprises the baseline actions augmented with additional interventions to achieve both national and global environment benefits.

Annex 16: Maps

ETHIOPIA: ET-Sustainable Land Management Program (FY08)