



Global Environment Facility

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February 24, 2009

Dear Council Member,

The IFAD as the Implementing Agency for the project entitled: *Ethiopia: Community-Based Integrated Natural Resources Management in Lake Tana Watershed under the Strategic Investment Program for SLM in Sub-Saharan Africa (SIP)*, has submitted the attached proposed project document for CEO endorsement prior to final Agency approval of the project document in accordance with the IFAD procedures.

The Secretariat has reviewed the project document. It is consistent with the project concept approved by the CEO December 17, 2007 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by IFAD satisfactorily details how Council's comments and those of the STAP have been addressed.

If by March 23, 2009, I have not received comments from Council Members to have the proposed project reviewed at a Council meeting because in the Member's view the project is not consistent with the Instrument or GEF policies and procedures, I will complete the Secretariat's assessment with a view to endorsing the proposed project document.

We have today posted the proposed project document on the GEF website at www.TheGEF.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Barbut", with a long horizontal line extending to the right.

Attachment: Project Document cc: Alternates, GEF Agencies, STAP, Trustee



REQUEST FOR CEO ENDORSEMENT/APPROVAL

PROJECT TYPE: Full-sized Project
THE GEF TRUST FUND

Submission Date: 31 October 2008
Re-submission Date: 30 January 2009

PART I: PROJECT INFORMATION

GEFSEC PROJECT ID: 3367

GEF AGENCY PROJECT ID:

COUNTRY: Ethiopia

PROJECT TITLE: Community-Based Integrated Natural Resource Management in Lake Tana Watershed

GEF AGENCY: IFAD

OTHER EXECUTING PARTNER(S): Amhara National Regional State (ANRS); Environment Protection, Land Administration and Use Agency (EPLAUA); Ministry of Agriculture and Rural Development (MoARD); Bureau of Agriculture and Rural Development (BoARD);

GEF FOCAL AREA(S): Land Degradation

GEF-4 STRATEGIC PROGRAM(S): LD-SP 1

NAME OF PARENT PROGRAM/UMBRELLA PROJECT: Strategic Investment Program for SLM in SSA (SIP)

Expected Calendar	
Milestones	Dates
Work Program (FSPs only)	DEC 2007
Agency Approval date	APR 2009*
Implementation Start	APR 2010
Mid-term Evaluation	OCT 2013
Project Closing Date	MAR 2017

* Based on receiving CEO Endorsement by MAR09.

A. PROJECT FRAMEWORK

Project Objective: To increase household incomes through sustainable land management practices in the Lake Tana Watershed (LTW). Simultaneously, improvements to ecosystem function will be beneficial for biodiversity conservation and will protect against negative climate change impacts. The project's immediate objective will lead to global environmental benefits as a result of reduced land degradation.

Project Components	Indicate whether Investment, TA, or STA	Expected Outcomes	Expected Outputs	GEF Financing* US\$ '000		Co-financing* US \$ '000		Total (\$ '000) (c=a+b)
				(\$ a)	%	(\$ b)	%	
1. Community-based integrated watershed management	Investment, TA	Community-based integrated watershed management options identified and adopted This outcome delivers on SIP IRs 1 and 3	1.1. Participatory watershed management achieved 1.2. Land surveying and certification carried out 1.3. Improved pasture and participatory forest management in place 1.4. Off-farm soil and water conservation measures implemented 1.5. Biodiversity and ecosystem conservation initiated	3,310.1	17.2	15,964.1	82.8	19,274.2
2. Institutional, legal and policy analysis and reform	TA	Institutional, legal and policy analysis and reform enabled and strengthened This outcome delivers on SIP IRs 2 and 3	Capacity for SLM improved: * Improved institutional capacity for SLM * Update and develop regional strategies and policies on SLM	711.1	22.8	2,414.5	77.2	3,125.6
3. Project management		Efficient and effective project coordination and management	3.1. Coordination and management system operational 3.2. Knowledge management system effective	378.8	12.5	2,645.9	87.5	3,024.7
Total Project Costs				4,400.0	17.3	21,024.5	82.7	25,424.5

* List the \$ by project components. The percentage is the share of GEF and Co-financing respectively to the total amount for the component.

B. FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	<i>Project Preparation a</i>	<i>Project Grant b</i>	<i>Total c = a + b</i>	<i>Agency Fee</i>	<i>For the record: Project Grant at PIF²</i>
GEF	350,000	4,400,000	4,750,000	475,000 ¹	5,190,000
Co-financing	105,138	21,024,500	21,129,638		21,345,000
Total	455,138	25,424,500	25,879,638	475,000	26,535,000

¹ 10% rate applied total value of CEO Approved value of PDFB (\$350,000) and WP Included project grant value (\$4,400,000)

² GEF total value, inclusive of Agency fee, at PIF WPI did not include fees associated to preparatory grant.

C. SOURCES OF CONFIRMED CO-FINANCING FOR PROJECT PREPARATION AND PROJECT

(expand the table line items as necessary)

<i>Name of co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Project Preparation</i>	<i>Project</i>	<i>Total</i>	<i>%*</i>
IFAD	Exec. Agency	Soft Loan		6,500,000	6,500,000	30.76
IFAD	Exec. Agency	Grant	105,138	6,516,000	6,621,138	31.34
EPLAUA, ANRS	Nat'l Gov't	In-kind		2,775,500	2,775,500	13.14
Beneficiaries	Beneficiaries	In-kind		5,233,000	5,233,000	24.77
Total Co-financing			105,138	21,024,500	21,129,638	100%

* Percentage of each co-financier's contribution at CEO endorsement to total co-financing.

D. GEF RESOURCES REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)

<i>GEF Agency</i>	<i>Focal Area</i>	<i>Country Name/ Global</i>	<i>(in \$)</i>			
			<i>PPG (a)</i>	<i>Project (b)</i>	<i>Agency Fee (c)</i>	<i>Total d=a+b+c</i>
(select)	(select)					
(select)	(select)					
Total GEF Resources						

* No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

E. PROJECT MANAGEMENT BUDGET/COST

<i>Cost Items</i>	<i>Total Estimated person weeks</i>	<i>GEF (\$)</i>	<i>Other sources (\$)</i>	<i>Project total (\$)</i>
<i>Local consultants*</i>	4,928	106,280	893,765	1,000,045
<i>International consultants*</i>	20	11,220	33,660	44,880
<i>Office facilities, equipment, vehicles and communications</i>		0	938,134	938,134
<i>M&E, dissemination, and planning and review meetings</i>		246,130	738,391	984,522
<i>Travel</i>		15,170	41,950	57,120
Total		378,800	2,646,790	3,024,700

* Details to be provided in Annex C.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS

<i>Component</i>	<i>Estimated person weeks</i>	<i>GEF (\$)</i>	<i>Other sources (\$)</i>	<i>Project total (\$)</i>
<i>Local consultants*</i>	196	65,136	206,495	271,630
<i>International consultants*</i>	16	7,500	52,500	60,000
Total		72,636	258,995	331,630

* Details to be provided in Annex C.

G. DESCRIBE THE BUDGETED M&E PLAN: Monitoring and evaluation of the project will be conducted in accordance with established procedures laid out in the GEF's "Minimum Requirements for Project M&E" and will be provided by the project management unit under the guidance Project Steering Committee, with support from BoARD. The Project Results Framework (Annex 1 of the FSP document; Annex A here) will form the basis for the project's monitoring and evaluation system. Note also that the M&E that focuses specifically on Global Environmental Benefits will also be refined at this stage, in coordination with the TerrAfrica/SIP Steering Committee (which is finalizing the M&E system for the partnership and SIP program) and the Ethiopian National SLM Platform, and in collaboration with the GEF's Scientific and Technical Advisory Panel.

The monitoring, evaluation and reporting plan, presented in Annex 12 of the project document, including indicators, tracking tools and needs for specific baseline information against which to monitor changes, will be refined and finalized at the project's inception workshop. At this stage the itemised M&E budget plan will be finalised and SMART indicators developed.

The inception workshop will bring together the principal stakeholders of the project to familiarize them with the project staff, develop a detailed Annual Work Plan (AWP) and budget for the first year of operations, and agree on the information and timeframes for reporting project activities to the different levels, including project review meetings at regional, district and local levels. Finally, the inception workshop will provide an opportunity to inform the project staff about GEF-IFAD project-related budgetary planning, budget reviews, and reprogramming as necessary. In subsequent years, a brief annual workshop will be held to develop AWP's and make adjustments to the monitoring and evaluation system as necessary.

An inception report will be prepared immediately following the inception workshop. This will include a review of the project context, including any changes since the design phase which may affect implementation, and will detail the different levels of monitoring and evaluation that will take place throughout the project with specific information regarding the roles, responsibilities, activities, and indicators to be monitored during the first year of operations, Annual Project Implementation Review (PIR), the Mid-Term Review (MTR) the Annual Project Report (APR), Tripartite Review (TPR) meetings, as well as the nature and timing of the mid-term and final evaluations.

The GEF project will rely on the information in its baseline study and on additional information collected by project development unit during the PDF-B phase. During the inception phase of the project, baseline information will be sought in each village to update the information and fill-in any gaps in the local information base. Much of the original baseline information is not disaggregated to a useful enough extent in order to track changes by gender, or by age groups. The current national census being conducted will be a significant contribution to provide baseline information. Additional information on rural credit, employment, and existing agricultural practices, as well as biodiversity status will be necessary to gauge the results of the project.

Measurements will be undertaken through project staff or external consultants. These will include specific studies or periodic sampling, such as soil erosion, sediment yields, and changes in biodiversity indices, populations of important species, crop yield, organic matter flow, carbon status, areas conserved/protected by SLM and change in livelihoods. As noted in the foregoing, for informing the review stages, the original baseline will be updated and further quantified by the project in the first year. Additional information will be needed on specific baseline interventions that are on-going or proposed, and their contribution to SLM.

Day-to-day monitoring of implementation progress will be the responsibility of the project coordinator with oversight by BoARD and the PSC. This will be based on the project's annual work plan and problems faced during implementation, so that the appropriate support or corrective measures can be adopted in a timely fashion. Targets and indicators will be based on those agreed upon at the inception workshop and will be redefined at a workshop to be held at the beginning of each project year.

Periodic monitoring of implementation progress will be undertaken by the BoARD through quarterly meetings and field observation with the project staff. This will allow reviewing and troubleshooting of any problems pertaining to the project to ensure smooth implementation of project activities. IFAD-CO, IFAD-GEF, PSC and the focal point will conduct yearly visits to field sites to assess project progress first hand. A field visit report will be prepared by the PCU

and circulated to all stakeholders.

A terminal TPR meeting will be held in the last month of project operations. BoARD will be responsible for preparing the terminal report and submitting it to the IFAD-CO and the GEF. It will be prepared in draft at least two months in advance of the terminal TPR in order to allow review, and will serve as the basis for discussions in the TPR.

The Project Coordination Unit will be responsible for the preparation and submission to BoARD, IFAD and IFAD-GEF the following mandatory reports: Inception Report (IR), Annual Project Report (APR), Project Implementation Review (PIR), and the Project Terminal Report. Specifications for additional internal and external progress reports will be defined during the IW.

Care will be taken to involve the range of stakeholders from different levels as identified during project preparation. The Project Coordinator will submit quarterly reports to the Project Steering Committee and BoARD, with copies to relevant stakeholders that will be identified during the inception workshop. A quarterly debriefing to the PSC will be held to enhance the flow of information.

The project will be subjected to at least two independent external evaluations. The first will be an independent mid-term review (MTR), by the end of year 4. This will determine progress being made towards the achievement of outcomes and will identify course correction if needed, focusing on effectiveness, efficiency and timeliness of project implementation; it will highlight issues requiring decisions and actions; and it will present initial lessons learned about project design, implementation and management. The timing of the mid-term evaluation will allow coordinators to make any modifications necessary to incorporate improvements or changes in the project's activities for the remaining project period.

An independent final evaluation will take place six months prior to the terminal review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals.

Financial audits are also required. The PCU will provide the IFAD-CO with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of IFAD (including GEF) funds according to the established procedures set out in the programming and finance manuals. The audit will be conducted by the legally recognized auditor of the Government, or by a private independent auditor.

To facilitate the sharing of information, the project staff will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects, and a report will be submitted to BoARD, the IFAD-CO and PSC at the end of each year. BoARD shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. If requested, the project staff will prepare project specific technical reports and technical publications. The technical reports will represent the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

Project publications will also be produced, including scientific or informational texts on the activities and achievements of the project, in the form of journal articles and multimedia publications, etc. The project team will determine if any of the technical reports merit formal publication, and will also (in consultation with IFAD, PSC, the government and other relevant stakeholder groups) plan and produce these publications in a consistent and recognizable format.

The SIP sets out its approach to M&E in its Programme Brief of May 2007. The M&E plan is results-based, and is intended to provide "timely, credible, and useful information on progress being made on SLM. The results-based M&E is: "first and foremost a management tool to help improve performance at all levels" and not an exercise done to satisfy compliance requirements. While the SIP's M&E is aimed at the overall program, the LTW project will use the same basic tools at project level. It is noted (para 230; SIP Programme Brief, May 2007) that the SIP M&E desk "will refine and disseminate the M&E tools for use across SIP investment activities via *learning by doing*". It is further noted that the SIP M&E desk will provide M&E capacity building services to individual SP activity teams where needed. The LTW team will keep up contact with the SIP M&E desk as it develops its own M&E mechanisms.

TABLE 1. ESTABLISHMENT AND OPERATION OF A RESULTS-BASED MONITORING & EVALUATION SYSTEM

Activity	Budget US\$ '000 (rounded) Co-Finance	Budget US\$ '000 (rounded) GEF	Timeframe
A. Analysis of Existing MIS and Design of M&E System	19.6	6.5	Within first two months
B. Stakeholder Consultation Workshop	24.4	8.2	Early in year one
C. Training	14.7	4.9	Every two years beginning year
D. Baseline Survey	25.0	8.3	Within first three months
E. Training and workshop	187.5	62.5	Inception workshop first year and annual implementation workshops each year subsequently
F. Mid-term Review	205.5	68.5	End year four
G. Project completion report	39.2	13.0	Last few months of project
H. Information/ dissemination/ publication/ workshop	285.3	95.1	Throughout
Total	801.2	267.0	

PART II: PROJECT JUSTIFICATION

A. DESCRIBE THE PROJECT RATIONALE AND THE EXPECTED MEASURABLE GLOBAL ENVIRONMENTAL BENEFITS: PROJECT RATIONALE

A.1. Problem statement

Ethiopia has a rich natural and cultural heritage. However, with a per capita income of only US\$ 120 per annum, Ethiopia is one of the poorest countries in the world. Agriculture generates approximately 50% of the GDP and 90% of export earnings. Despite its importance, agricultural performance has improved little over the past 50 years and food security has deteriorated. Eighty-five percent of the country's population live in the rural areas and depend on subsistence agriculture. The recently completed Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) shows that out of the estimated population of 70 million, 45% are below the poverty line and approximately six million people are dependent on food aid, even in a normal year.

There is growing evidence that, at the core of such low agricultural productivity and chronic food insecurity, is degradation of the natural resource base in the Ethiopian highlands on which the overwhelming number of the rural population depend for their survival and livelihoods. Rough estimations indicate that, on average, 2-3% of the agricultural GDP is lost annually due to land degradation. About 85% of the land surface is considered prone to moderate to very severe soil degradation. Land degradation - coupled with high climate variability - is considered one of the factors leading to food insecurity and rural poverty. Simultaneously it contributes to climate change through the loss of carbon dioxide from the soil and through vegetation losses.

Despite the existence of a number of best practices, past efforts have failed to comprehensively address the problem. Some of the key reasons that may explain past failures include: (a) lack of coordination and cooperation among development partners and among different sectoral branches in the government, and (b) a narrow, project-specific or *ad hoc* approach to the problem, which does not capture the cross-sectoral nature of land degradation and cannot systematically address its root causes. In response to these challenges and to leverage the scope and impact of existing and planned SLM interventions, the Government of Ethiopia (GoE) is committed towards adopting a more programmatic approach to address land degradation and promoting sustainable land management (SLM). The GEF component to the LTW project will ensure that SLM is seen as a key element in achieving global environmental benefits; something that would not have received priority otherwise. This operation, co-organized by IFAD and the Regional Government of Amhara, will be part of the GEF/SIP operations in Ethiopia supporting the GoE in its effort to tackle land degradation.

A.2. Project strategy

The GEF operation will be designed to promote sustainable land management (SLM) practice in the Lake Tana Watershed (LTW) and disseminate these good practices across Ethiopia. The project will have two main components, (1) Community-based Integrated Watershed Management, and (2) Institutional, Legal, Policy Analysis and Reform. The activities implemented will be closely monitored and evaluated with successful initiatives replicated and upscaled. Best practices – both from outside sources and from local innovation - and alternative livelihood options will be demonstrated, and greater emphasis will be given to upscaling successful practices. The main activities will focus upon improving agriculture, grazing, forestry, and water management practices, since these are the primary drivers of land degradation in Ethiopia, and more specifically, the LTW. The project will also promote community-based initiatives for the establishment of sustainable models for irrigated agriculture. The proposed project will work at the government, community, and individual levels to generate capacity and incentives for improved SLM practices. Component one covers all these activities. Component two will create an enabling environment and institutional capacity at the local and regional levels to mainstream SLM principles into regional policies, strategies, and action plans pertaining to agriculture, forestry and water development. This component will also ensure that proper coordination with the two other SIP complementary operations planned for Ethiopia (WB, GEF ID 2794, and UNDP, GEF ID 3366) is established, promoting synergies and avoiding duplication (see also section D below).

The project activities will focus on the Lake Tana Watershed (LTW) in the Amhara National Region State, which represents the core of the highlands. The watershed covers approximately 15,000 km² and encompasses Lake Tana - the largest freshwater body in Ethiopia and the source of the Blue Nile. The monasteries and churches within and near Lake Tana are jewels in the crown of its cultural heritage. Its scenic landscape and the Tis Abaye Falls are major tourist attractions. Due to its unique and isolated landscape, which includes forested islands, immense and varied wetlands, and high mountain areas, the Lake Tana watershed hosts a wide variety of fauna and flora and is renowned worldwide for its globally important, endemic plants, birds and mammals.

The project will be also part of the SIP, a regional strategic multi-donor program designed to upscale the area of African cropland, rangeland, and woodland under sustainable management. The operation delivers on the SIP goal, objectives, and more specifically will provide measurable results that aggregate up to the regional program level across key SIP intermediate results. In direct alignment with the SIP, the operation supports the Ethiopian Federal and Regional governments in their efforts to design and manage programs of activities that advance SLM mainstreaming, improve governance for SLM, and catalyze investments that: (i) address weaknesses in the enabling environment that hinder SLM scale up; (ii) apply practices on the ground that simultaneously help secure ecosystem services and increase productivity of croplands, pasture and woodlands, and (iii) scale up land area under more sustainable management in recognized priority areas (LTW, in this case). The project outcomes will facilitate the achievement of three of the SIP Intermediate Results (IR) in the country: IR1, through the identification and demonstration of innovative approaches and implementation of SLM schemes (project component 1); IR2, via the development of skills of government and communities for dialogue and negotiation (component 2), and IR3, through the generation of local incentives for sustainable production (components 1 & 2).

A.3. Expected global benefits to be delivered

The project will achieve Global Environmental Benefits (GEBs) under the Land Degradation Focal Area (LD FA) whose purpose is to foster system-wide change to control the increasing severity and extent of land degradation. In addition to the direct social, economic, and environmental benefits that will be gained from addressing land degradation in LTW and beyond, the project, through the use of SLM practices, will deliver global benefits. Additional benefits will accrue in other GEF focal areas, namely Biological Diversity, International Waters and Climate Change. The global environmental benefits of the project, which will be lost under the business-as usual scenario, will result from upscaling sustainable land management practices within the Lake Tana watershed. These are summarised in Table 2 below:

Table 2. Global Environmental Benefits Framework

GEB	Key indicators		Means/source of verification	Method of measurement	Notes
	Baseline situation <i>(refer Project Document Section 1 “Situation Analysis” for detail)</i>	Expected situation <i>(refer to Project Document Section 2 “Project Strategy” and to Project Results Framework for detail)</i>			
1. Improvements to the integrity of ecosystems (soil, water, etc) and their functions	824,285 ha in total of farmland of which at least 90% degraded; 155,735 ha in total of pasture land of which approx. 95% degraded; 134,250 ha of degraded scrubland; 16,410 ha of plantation forest; 5,910 ha of degraded/ degrading / diminishing natural forest (a negligible amount - in terms of area – well maintained around church and monastery compounds)	227,000 ha farmland treated with SLM measures under 650 participatory watershed management plans; 9,400 ha rangeland/ pasture improved; 32,500 ha land rehabilitated and brought back into production; 18,900 ha land under afforestation through participatory planting schemes; 2,000 ha natural forest under participatory forest management	Evidence of change in land use and land management, and of improvements in soil and water quality	Satellite imagery: eg tracking the greenness of vegetation thro’ Normalised Differenced Vegetation Index (NDVI) Groundtruthing mapping surveys Soil and water sampling Participatory assessment with land users	Monitoring procedures to be developed in line with the TerrAfrica Results Framework and Monitoring matrix
2. Increases in carbon stocks above and below ground in treated areas	Soil organic matter levels in arable topsoils as low as 0.5 to 1.0% (with correspondingly low carbon). Sparse tree and bush cover	Over 700,000 tonnes of carbon* will be sequestered above and below ground through these achievements	Measurable increase in organic carbon levels in vegetation and soil	Soil and whole system carbon assessment	See above
3. Reduce sedimentation in rivers and streams and Lake Tana - waters of international significance	13.5 x 10 ⁶ tonnes annual average sediment delivered through water courses to the lake	Reduction in sediment generated by 50% on land to be treated by SLM: equivalent to an average of a 15% reduction in the overall watershed	Sediment load in rivers draining the SLM-treated sub-watersheds	Automatic water level recorders (AWLR) and sediment sampling	

**Basis of assumptions:*

0.25 tonnes of carbon per hectare per annum (mainly in the soil: though some in woody vegetation also) over 4-5 years for approx 227,500 hectares brought under sustainable land management;

2.5 tonnes of carbon per hectare per annum (in woody vegetation and the soil) over 4-5 years for approx 50,000 hectares of forest/ plantation and rehabilitated land

0.25 tonnes of carbon per hectare per annum (mainly in the soil: though some in woody vegetation also) over 4-5 years for approx 9,400 hectares improved pastureland

A further (indirect) GEB will be achieved from the project as a result of the IFAD/ GoE co-financing. This is preservation and restoration of globally significant species through protection of their natural biodiversity habitats. 15 “core conservation sites” are to be established (100-1000 ha each). The baseline situation is that biodiversity of international importance is diminishing in richness and abundance in forests and wetlands – though this is as yet unquantified and will be the subject of an inventory in the project’s first year. Appropriate means of verification and assessment indices will be developed at that time.

Note that all the GEBs are derived from improved ecosystem function and integrity, and soil quality is a strong proxy for this - as recognised by the GEF.

The activities related to these indicators/results which lead to the GEBs are set out in full detail in the Project Document under Section 2.2 “Project Implementation”.

A further indirect benefit potentially yielding GEBs elsewhere is the contribution to a more programmatic approach to SLM at national level, including more investment in SLM, through the National SLM Framework and Platform. These practices and lessons will be compiled and made available for adoption in other watersheds of the region and of the nation.

These GEBs will be monitored as closely as possible, using a wide range of parameters from satellite imagery to participatory assessments. However these monitoring procedures need to be developed in close collaboration with the TerrAfrica Results Framework and Monitoring Matrix, documents which were not finalized at the time of this resubmission (December 2008). The TerrAfrica Results Framework is built largely upon the SIP M&E framework (2007) and the TerrAfrica Business Planning Framework (2006), being devised to be appropriate to the logic and rationale of TerrAfrica being recognized by partners and sub-Saharan countries as a regional platform for action to implement CAADP Pillar 1 on SLM, NEPAD’s Environment Program areas 1 and 6, the REC action plans, the UNCCD regional and national action plans, and most critically, participating countries’ sectoral programs and national strategies. Outcomes, outputs, indicators and tools at project level are still being developed, especially for the SIP projects (SIP being a subset of TerrAfrica), but these strategic directions and documents will be used to align the project’s M&E and to refine its monitoring techniques during its inception phase. During this phase the project may also recourse to the STAP (if available), noting the STAP’s mandate to “*provide timely and relevant advice on scientific and technical matters related to M&E*”.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS

The Government of Ethiopia is fully committed to the project. At this stage it is important to demonstrate the linkage of the project to those commitments of the government. Furthermore, the project is strongly bonded to IFAD’s commitment to the poverty eradication effort in the country.

The Government of Ethiopia (GoE) will be responsible for the country partnership program, as designated lead agency, in collaboration with IFAD. This development partnership is fitting in respect to achieving the Millennium Development Goals (MDGs): of these, goal 1 (poverty reduction), goal 7 (sustainable environment) and goal 8 (international partnerships for development) are especially relevant here. The partnership aims, through the project, to combat land degradation by community-based integrated natural resource management.

The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) is the National Action Plan for the GoE (2005-2010). The PASDEP being an umbrella action plan has the potential to coordinate all the initiatives that are linked to poverty reduction and environmental management. A number of basic principles underlie the strategy: these include a coordinated approach to reducing poverty and proper utilization of agricultural land. The PASDEP recognizes that land is the essential resource for all farming activities, and puts a dual emphasis on making sure land is available for production while protecting the productivity of land through environmental management and appropriate use of inputs. Improving farmers’ capacity and upgrading technical farming skill through a strong extension and training service is one of the basic strategies incorporated in this action plan.

According to PASDEP, the Ethiopian economy must grow by at least 6 to 7% per year in order to achieve the MDG of

halving poverty by 2015. To assist the country in achieving this goal, IFAD has spearheaded the development of small-scale irrigation schemes in Ethiopia, and the government is cognizant of the need to build on this experience and to learn lessons to promote appropriate sector-wide strategies and policies governing water resource use and management. IFAD focuses on rural poverty alleviation through direct investment aimed at achieving concrete change in the livelihoods of target groups.

Ethiopia receives bilateral and multilateral assistance from development partners and is currently the largest beneficiary of IFAD and International Development Association (IDA) funding in sub-Saharan Africa (SSA). A large number of NGOs are also active in the country. The validity of the IFAD country strategy and Ethiopia's long-term strategy of Agricultural Development-Led Industrialization (ADLI) has consistently been reaffirmed within the framework of the first and second generation of Poverty Reduction Strategy Papers. IFAD's Country Strategic Opportunity Paper (COSOP) calls for investment programs with the greatest potential for the sustained improvement in household food security, nutrition and incomes.

The COSOP also calls for IFAD to play an increasingly proactive role with a view to influencing the shape of emerging public strategies, policies and investments in favour of the rural poor. It further requires development approaches that increasingly enable rural communities to effectively and efficiently manage their own productive resources based on lessons learnt and best practices.

The Government of Ethiopia has committed itself to developing a programmatic framework for SLM, and has undertaken important steps in this direction - as was noted recently (May 2007) by a joint NEPAD/WB mission to the country. The GoE has set up a National SLM Platform under the leadership of the Ministry of Agriculture and Rural Development, comprised of a multi-sectoral and multi-stakeholder National Steering Committee and Technical Committee, and supported by a Secretariat. This scheme will be replicated at regional level, establishing Regional SLM Platforms. The GoE is also organizing a Framework/Program-based Approach for SLM, supported by several international donors and NEPAD. The activities implemented under the proposed operation will help Ethiopia move towards a more cross-sectoral and programmatic approach to SLM through, inter alia, setting up and guiding a regional platform for SLM in Amhara region which could help act as a model for other regions as well as forming an important pillar to support national platform.

Various development partners, under the Development Assistance Group (including AfDB, FAO, GM-UNCCD, GTZ, IFAD, the Royal Norwegian Embassy, UNDP, the WB, and WFP) are aligning to this platform. These partners are committed to contribute technically and/or financially to the implementation of the SLM Investment Framework. The UN System in Ethiopia has given priority to creating partnerships to support government-led strategies to address SLM. These strategies assist in shifting from humanitarian assistance to longer-term sustainable development through harmonization and coordination. The initiatives under the National SLM Framework will be aligned with the Poverty Reduction Strategy and relevant policies at regional level. NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) is particularly relevant in this respect with its program for "Extending the Area under Sustainable Land Management" (Chapter 2). The project is also aligned to NEPAD's Environmental Action Programme (EAP) - and especially its Programme Area One, "Combating Land Degradation, Drought and Desertification" - through its proposed CCD-aligned actions on the protection, and community-based management, of degraded biodiverse ecosystems.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS

This full-sized project focuses on mitigating the root causes, barriers and effects of land degradation through institutional strengthening, capacity building and sustainable land management interventions while contributing to poverty alleviation and improving local livelihoods and economic well-being. It promotes cross-sectoral approaches for tackling land degradation and the creation of an enabling environment in terms of national and regional government policies, as well as ensuring effective participation of stakeholders. The proposed project is therefore in line with the global environmental concerns of the relevant strategic programs of the GEF-4 Focal Area Strategy.

The project will promote Strategic Objective 2 of the GEF LD FA ("To upscale sustainable land management investments that generate mutual benefits for the global environment and local livelihoods") and the expected outcomes will include benefits for the communities from applying and disseminating SLM practices, and the systematic

application, at national scale, of sustainable, community-based farming and forest management systems. It will also contribute to Strategic Objective 1 ("An enabling environment will place SLM in the mainstream of development policy and practice at regional, national and local levels") and the expected outcome is the creation of an enabling policy environment and institutional capacity building. The proposal fits into Strategic Program 1, "Supporting Sustainable Agriculture and Rangeland Management", working in areas of intense competition for land resources that are prone to severe soil erosion and loss of soil fertility. The project will be also a constituent part of the Strategic Investment Program for Sustainable Land Management in Sub-Saharan Africa (SIP), contributing to its long-term Program Goal. WB and UNDP have related SIP operations in the country with which this operation will be coordinated (see section D below).

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES

As part of the SIP, the project is aligned to the TerrAfrica initiative for SLM in Sub-Saharan Africa, following its principles and recommendations, among them the coordination and sharing of information with other stakeholders at national and regional level, and the engagement and participation in a programmatic vision for the sector in Ethiopia (through the SLM National Platform). Under the TerrAfrica Business Planning Framework, Objectives 6 and 7 advocate the mainstreaming of SLM into development strategies and policy dialogues at various levels. This recommendation is addressed through project component 2.

With the current strategic move towards programmatic approaches which join efforts and resources to tackle land degradation problems, it is essential to highlight potential institutions with which the project will seek consultation, coordination and collaboration. The project will build partnerships by securing synergies and complementarity with other poverty reduction and pro-SLM programmes initiated by the government and donors. In this regard, some of the most important institutions and mechanisms are discussed below.

Three GEF Implementing and Executing Agencies are currently preparing initiatives for SLM to be funded under the SIP in Ethiopia: IFAD, UNDP ("SLM Capacity Building in Drylands of Ethiopia") and WB ("Sustainable Land Management Program"). The three agencies have coordinated closely the preparation of their future operations under the National Programmatic Framework for SLM, and they have agreed to formulate their proposals with a common background to show how the three operations will jointly contribute to the same broad objectives. The WB, as leading agency for the three Ethiopian operations under the SIP, requested a joint endorsement letter from the GEF National Focal Point, which was signed last 21 January 2008. The PIF of the IFAD operation was circulated among the main stakeholders, including WB and UNDP, before its submission. Representatives from the three agencies were involved in the preparation of the IFAD proposal, participating in two regional workshops in Bahir Dar, Amhara National Regional State, in November 2006 and July 2007, respectively. Progress made has been duly reported to the TerrAfrica Steering Committee, as the project is included in the TerrAfrica Work Program. The design of the M&E system was also consulted with the persons in charge from the TerrAfrica Steering Committee. Implementation of the project will be done in coordination with the Ethiopian National SLM Platform (see below), sharing information and discussing objectives and with the other two GEF agencies, the TerrAfrica Steering Committee and the SIP.

Furthermore, a national mechanism – the National SLM Platform - has been developed to coordinate all sustainable land management activities. This platform has a steering committee chaired by the deputy Prime Minister, and is responsible for mobilizing financial and technical resources to address land degradation. As LTW is situated in the Nile Basin, the project will build partnerships by securing synergies and complementarity with the GEF-funded "Eastern Nile Watershed Management Project" (GEF ID 3398). This project is aimed at developing a sustainable, transboundary framework for watershed management in the Eastern Nile basin and at improving natural resource-based livelihoods and reducing land degradation. This close cooperation will help to establish the ground for a regional platform and steering committee.

The National SLM Platform will align with the TerrAfrica's business model and support the SIP's objectives by: (1) developing an operational platform for donors' alignment and coordination; (2) addressing key policy and regulatory bottlenecks and removing perverse incentives to SLM upscaling; (3) promoting an integrated and cross sectoral approach to land management; (4) developing mechanisms for upscaling of SLM best practices; and (5) supporting knowledge management and monitoring.

The Global Mechanism of the UNCCD is expected to coordinate with the GEF Implementing and Executing Agencies and other donors in finance resource mobilization. The facilitation committee of the Global Mechanism could assist in supporting such coordination. Other committee members include IFAD, AfDB, WB, UNDP and FAO.

IFAD is dedicated to reducing rural poverty and food and nutritional insecurity in developing countries. Throughout the country, IFAD is currently implementing a number of projects and programs, including small-scale irrigation development, pasture land management, agricultural research and training, agricultural marketing improvement and rural micro financing. IFAD also has substantial experience in watershed management approaches. The GEF Implementing agency, IFAD and the executing agency, EPLAUA of ANRS worked together as co-leaders during the PDF-B preparatory stage to assist the GoE in general and ANRS in particular to develop the country partnership program framework. However, during the implementation period of the full sized project, other GEF agencies will be included. IFAD builds partnerships by securing synergies and complementarity with other donor-funded poverty reduction programs such as the ongoing Productive Safety Net Program, the IDA-led Ethiopian Rural Transportation and Travel Project, Rural Capacity Building Project, and the AfDB-funded Agriculture Support Project.

The African Development Bank (AfDB) has supported two relevant projects: (1) the Koga irrigation project (located in the LTW area) and (2) the Agricultural Sector Support project. Both have watershed management components, which will constitute part of the National SLM Framework. This confirms that SLM will be an important element of the next program cycle (2008-2010). The Koga project is sited within the LTW, covering an area of 26,000 ha, with the overall objective of improving agricultural production in the catchments and command areas of the Koga River valleys by 2008.

The WB Energy Access Biomass supply project is being implemented in 31 *woredas* in ANRS, and out of the 31 *woredas* 10 are located in the LTW. The Participatory Natural Forest Management System, has the overall objective of conserving and developing forests focuses on existing patches of natural forest - with the active participation of concerned communities. A participatory planning approach is used to determine the potential for development of community forests. Forest management support systems include agriculture staff training, field equipment supply and assistance to farmers to establish and manage their own nurseries. Another water supply and sanitation project is ongoing in some of the watershed areas under the same multilateral agency

UNDP has worked closely with GoE, is playing a key role on overall donor-government coordination, and was instrumental in creating the food security and Safety Net program for the most vulnerable people in the country. UNDP has a practical experience in the Second Country Cooperation Framework program in Ethiopia and in ANRS as well. In this aspect, UNDP has helped to implement major conventions on desertification, biological diversity and climate change through concrete action on the ground. It also works through a capacity-building approach supporting governments and encourages the creation of enabling environments for sustainable management of natural resources.

FAO specializes in providing policy, technical and thematic support services for the majority of SIP components and, in particular, through pursuing and promoting integrated approaches and frameworks to tackle land degradation, as well as in knowledge management via the TerrAfrica platform. FAO has also broad in-house specialized technical expertise on SLM-related issues such sustainable management of crops, livestock, grasslands, forest, water resources, bioenergy, and climate adaptation, on information systems and networks. FAO-Ethiopia is working in the framework of the implementation of the national SLM program by contributing to the dynamics and enabling conditions that could provide the basis for the establishment of a regional platform for SLM in southern Ethiopia. Among institutions presented above - and others that have current activities on the ground - consultation, cooperation and collaboration is essential for the success of the project. IFAD, as both a United Nations agency and an international financial institution - through its long standing experience and on going programs - will provide essential strategic support in terms of investment and implementation. This in turn, will add value to IFAD operations in terms of partnership, policy dialogue and learning.

E. DESCRIBE THE INCREMENTAL REASONING OF THE PROJECT

E.1. Business-As-Usual (Baseline Scenario)

The Government of Ethiopia (GoE) follows the Agricultural Development Led Industrialization (ADLI) plan developed in 2001 as its economic development strategy. ADLI aims at increasing agricultural productivity, and is the main engine for both agricultural and industrial sector progress. It is reflected in the Rural Development Strategy, which continues to stress the role of increased agricultural production as the basis for the country's development. The strategy is designed to fulfil food security and increase rural employment opportunities.

The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) developed in 2005 is Ethiopia's guiding strategic framework for the five year period from 2005 to 2010. It gives important strategic directions related to human resources development, rural development, food security and capacity building. The main objective during the PASDEP period is to accelerate the transformation from subsistence, to a more market-oriented, agriculture. However, this requires commercialization of agriculture and promoting much more rapid non-farm private sector growth.

The rural development and food security policies articulated in the PASDEP document are all geared towards the maintenance, restoration and enhancement of the natural resource base of the country. For instance, the Program Implementation Manuals (PIM) of both the Safety Net (the Safety Net Programme includes a public works component aimed at developing communal infrastructure and assets in areas of chronic food shortage) and the Resettlement Programs contain detailed guidelines governing how environmental and natural resources related activities should be selected, planned and implemented. Safety Net is a multi-donor program implemented through national and local non-governmental organizations. The main objective of the program is to make a difference in grassroots level interventions in order to eradicate poverty.

The PASDEP sets the stage for providing a sound business-as-usual foundation to the LTW project. As far as environmental issues are concerned, the PASDEP policy is presented as building on the structure and strengths of the Sustainable Development and Poverty Reduction Programs SDPRP, 2002. As such, it aims to: increase the mainstreaming of the environment into development; strengthen city and regional governments for environmental protection; and develop regulatory frameworks and systems for improving air quality, solid liquid, hazardous wastes and chemicals management by developing standards and laws.

The strategic drive of the PASDEP is to provide a conducive environment through appropriate infrastructure in terms of technological, physical, financial, legal and regulatory aspects, along with strengthened institutions and more professionalized staff. There are a number of activities in key sectors that address, or have the potential to address, sustainable land management issues.

With respect to policy and legal framework, the GoE adopted a National Environmental Policy in 1997, which provides guidelines for environmental protection and sustainable management of natural resources. It also adopted a Biodiversity Strategic Action Plan (BSAP) in 2005. A National Forest law has been recently issued and the NAP (1998) and RAP (2002) for combating desertification have been developed and endorsed. These are important steps, but much more needs to be done to provide an enabling environment for SLM. With the exception of the NAP, policies lack specific measures for controlling land degradation. There is insufficient attention paid to local communities' indigenous knowledge and their innovative and adaptive practices in managing their land resources sustainably.

Environmental considerations are included in several of the ANRS development policies, strategies and legislation. However, according to the baseline review and community consultation, there is a low level of implementation of these policies, strategies and legislation due to shortage of financial resources, a low level of coordination and collaboration among implementing institutions, and inadequate technical skill of personnel. In addition, there is little awareness about land degradation at all levels. Similarly, trade-offs between economic growth and environmental sustainability are not recognized, and lack of policy implementing instruments continue to be disincentives to greater intensification and sustainability of agriculture in LTW. Generally, various partners in the watershed are working in isolation and lacking a holistic approach.

The LTW is one of the most highly populated areas in the region with an average family size of 4.9 persons per household and a population density of 158 persons/km² – far higher than the regional average of 113 persons/ km². In order to strive towards a balanced population and economic growth and to reduce pressure on natural resources, Ethiopia prepared a national population policy in 1993. It focuses on reducing the total fertility rate from the current 4%

and increasing contraceptive use rate to 44% (of couples within the reproductive age group) by the year 2015. However, the efforts made and successes have not met targets due to limited finance, and lack of skilled manpower, poor coordination capacity and inadequate attention to awareness-raising. A coordinated effort and the linkage of concerned institutions, supported by adequate finances and capacity, is urgently required.

The country is already promoting a community-based integrated watershed development approach. The government prepared comprehensive community-based participatory watershed development guidelines in 2005 in order to serve every development intervention by government and non-governmental organizations throughout the country. Based on these guidelines, training to experts at all level has been given and so far as many as 95 micro-watersheds development plans have been prepared in the Lake Tana watershed. However, the implementation is very weak due to constraints of finance, skill and experience in integrated watershed development. The GEF alternative will therefore address these constraints and improve sustainable management of resources on an integrated basis. It will also draw lessons and contribute to updating and refining of the guidelines.

Based on the federal extension model, the ANRS has also designed a new agricultural extension system: the “Training and Advisory Extension Service”. In order to implement this extension system a total of 1,040 development agents at *kebele* level and multidisciplinary team of experts from regional to district level have been posted. The special features of this extension system are training programs (modular and package training) and a “household package”, which focus on familiarizing farmers with planning procedure and farm records. Thus, advisory and training services are based on a package approach to production and as such inadequately cover natural resource development and efficient use of these resources. To implement this extension approach effectively, it requires capacity building at all levels including farmers and development agents. On top of the government development efforts, a number of NGOs are also involved in extension work related to natural resources management in the watershed.

There is a current effort to establish a linkage between research and extension in ANRS by organizing both ARARI and the Extension Department under the BoARD. However, the present linkage is weak. Thus, attention must be given to further strengthen research-extension linkages, coupled with empowering farmers and recognizing their creativity and innovative capacity.

With respect to forest, grazing land and watershed development, there are several on-going and new federal and regional projects that focus on improving forest cover in the country and rehabilitation of degraded grazing lands and watersheds. These represent important business-as-usual contributions underpinning the project.

Business-as-usual actions with respect to agriculture focus on food security and maintaining sustainable agriculture production. These receive high priority both at the national and regional levels. However, neither has incorporated SLM in sector planning. For example, the current development strategy focuses on the agricultural sector both at regional and national levels, without incorporating land degradation aspects to the level required, or involving local communities in the development of land use plans.

One business-as-usual activity, the land certification process, will need to be further assisted to ensure tenure security. Other business-as-usual actions such as the promotion of water harvesting technologies will need to be coordinated and expanded, based on activities which have recorded success stories.

Business-as-usual action in water and irrigation development in the watershed is dominated by the Koga Irrigation Development Project. Financed by the Ethiopian Government, through an African Development Bank loan, it is a large scale irrigation project with a total budget of US \$45 million. It has three components: irrigation development in the command area (7,000 ha), the construction of dams, and infrastructure and watershed management over an area of 22,000 ha. The project includes soil and water conservation, rehabilitation of degraded areas, agricultural development, capacity building for beneficiary communities and government institutions. Sharing information and working together with this and other projects through integrating SLM principles and practices will have a significant effect on reducing water scarcity and land degradation.

In the fight against poverty and the combat against land degradation the government of Ethiopia has provided a significant budget to various institutions working in the area of sustainable land management. This budget has been

mainly allocated to increase productivity, improve the livelihoods of the people and enhance the enabling environment for sustainable land management.

There are also a number of higher education and research institutes within the watershed which cover agriculture and land management related topics. However, the integration of SLM practices in their plans, programs and curricula is very limited. Nevertheless this represents a form of business-as-usual that the project can build on by enhancing capacity and skills through integrating SLM in their courses. Especially important is inclusion of environmental education and land administration in the curriculum of the Agricultural Technical and Vocational Education Training (ATVET) College.

Other business-as-usual activities include the integrated food security program of German Technical Cooperation (GTZ) whose aim is to increase the availability of food by applying improved agricultural techniques and sustainable natural resource management. It works on development, testing, and dissemination of improved technologies for crop production, agroforestry, soil and water conservation and the rehabilitation of degraded lands. This project has expanded its area coverage under the revised Sustainable Utilization of Natural Resources project. BoARD runs the World Bank (WB) supported Energy Access Biomass Supply Project whose main objectives are to conserve and develop forest patches remaining within agricultural areas as private and community forests in 10 districts of the watershed. However, these projects are only working within limited areas of the LTW and their capacity is very limited in relation to the extent of the problem on the ground. Therefore, significant gap-filling is needed to address SLM and to improve the livelihood of the rural community in the watershed. A USAID supported program mainly focuses on strengthening the Ethiopian Land Tenure and Administration Program (ELTAP) and actively operates in two *woderas* of the LTW through capacity building and land surveying.

The organization for Rehabilitation and Development in Amhara (ORDA) is a local NGO operating in the region with the objectives of ensuring food security, alleviating poverty and benefiting the rural poor through sustainable socio-economic development. Within the watershed, ORDA implements integrated food security and rural development projects. The Ibat Integrated Food Security Program, for example, is implemented together with German Agro-Action to realize food security by implementing capacity building, agricultural development, afforestation, rural water supply and other related activities. Even though some encouraging successes have been registered, there are still gaps to be filled to improve natural resource management.

The Integrated Livestock Development Project (ILDLP) has successful experience in forage production, natural pasture and genetic improvement and on livestock market promotion (through fattening and dairy market promotion). It is operational within the LTW and this valuable experience will be capitalized upon and upscaled.

Thus in summary under the existing scenario, current approaches to address land degradation will continue to be adopted and land degradation will continue under “business as usual”. The current responses have fallen short of expectations due to an entrenched set of barriers in the enabling environment of the country. These barriers include, among others: (i) limited degree of cooperation and coordination between stakeholders; (ii) ad-hoc/project specific interventions (often focusing on the symptoms of the problem rather than on root causes and/or barriers); (iii) limited attention to the factors that enable the adoption and replication of SLM; (iv) insufficient dissemination of SLM approaches; (v) lack of institutional capacities, and (vi) weak policy formulation and enforcement. As a result, the key factors leading to land degradation will not be substantively or comprehensively addressed. This would result in continued degradation of productive and non-productive land-use systems with consequent loss of ecosystem function, and thus loss in global biodiversity benefits, and increase in carbon releases from vegetation loss. Some global environmental benefits may be generated under the existing scenario by well-designed individual projects. However, the scale of the projects was insufficient for them to have a significant and lasting impact over time.

The risks of increased land degradation in the LTW are substantial. Current resource management practices, from land-use planning to agriculture, forestry and water management, are failing to maintain and restore ecosystem function and cannot facilitate sustainable development. These practices – a result of poverty and population pressure obliging the inhabitants to search for short-term solutions – lead to a decline in land productivity, loss of biodiversity (as well as agrobiodiversity) and reduction of household income. This also threatens the health of important trans-boundary water resources and globally significant biological diversity within the watershed. The situation in turn aggravates overall

poverty and further diminishes the livelihood base of million's of people who depend on the natural resources for their survival.

With the exception of the NAP, policies lack specific measures for controlling land degradation. There is insufficient attention given to local communities' indigenous knowledge in managing their land resources sustainably. While environmental considerations are included in several of the national development policies, strategies and legislations, there is low level of implementation of these policies, strategies and legislations due to shortage of financial resources, poor coordination and collaboration among implementer institutions and inadequate technical skill.

This business-as-usual scenario acknowledges, however, that progress in some areas may be achieved. However, it assumes that such progress will be slow, uneven, and achieved at a high cost due to lack of coordination, duplication of efforts and sub-optimal use of resources. The business-as-usual scenario also takes into consideration the fact that examples of good practices exist in the watershed. However, it recognizes that, under the current model, these good practices are unlikely to reach the scale necessary to comprehensively address the problem and expected global benefits are lost unless the barriers and bottlenecks as described are alleviated.

E.2. GEF Alternative

The IFAD-GEF alternative scenario will build on the baseline actions by promoting integrated, cross-sectoral management of natural resources, mainstreaming SLM into policy and land use planning, strengthening institutions and removing bottleneck barriers. The watershed management and experience on irrigation schemes development of the PASDIP will be fed into to this project. The IFAD-GEF operation will also use the marketing support infrastructure and the credit and saving systems being established under the AMIP and RUFIP as the basis for improving agricultural marketing, including micro-finance. The alternative approach will help introducing incentive measures to encourage local communities to adopt various new sustainable livelihood options. It will enhance the knowledge base and raise awareness among policy makers and the public. The IFAD-GEF alternative will also enhance innovation and the scaling up of good practice through a participatory and replicable approach on the ground. Moreover, the GEF alternative will help to mobilize additional resources for investment in SLM. The alternative will deliver, applying the TerrAfrica-SIP principles and the SLM approach, the global benefits described under A.3 and quantified in Annex A. The incremental monies made available through the GEF are focused on both on and off-farm SLM and land rehabilitation to achieve the GEBs described in section A.3 above. This is where the bulk of the GEF input (75% of the US\$ 4.4m) is targeted.

The success of the GEF alternative depends heavily on advocacy and developing new and viable policies and proper implementation of existing policies and the legal framework relevant to SLM. It also requires strengthened institutional capacity – amongst institutions that have strong political and financial backing from the government of Ethiopia and the ANRS. This fact contributes to the likelihood of success.

The 2.5 million people living in the 21 *woderas* of the watershed are directly or indirectly touched by the project. National and local benefits are expected from poverty eradication due to the increase in incomes obtained through sustainable agriculture, and income-generating activities (IGAs). The following benefits are also expected at the local and national levels:

- Improvement in living conditions and poverty eradication;
- Mitigation of population pressure on land and out-migration;
- Minimization of social conflicts by enhancing land use security;
- Enhancement of alternative income generation activities; and
- Improved conditions for agricultural production

Sustainable management of natural resources leads to increased income and reduced food insecurity. Thus, an important share of the income could be reallocated to productive re-investment rather than to consumption. Effective participation by the local communities and officials will increase their capacities for natural resource management. The capacity of local communities, local institutions and government organizations will be enhanced for sustainable management of project activities that further reduce land degradation.

Finally, the basic value-addition aspect of the GEF contribution, in relation to the IFAD co-financing for this project, is to mould that contribution into a Land Degradation Focal Area project, ensuring global environmental benefits through SLM (see A.3 and Annex A). The GEF adds specific extra value through its support to ecosystem protection/rehabilitation and the other environmental focuses: these will deliver incremental global environmental benefits, and would not normally have been the primary focus of a solely IFAD-financed project

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES:

F.1. General risks

The SIP (Program Brief, May 2007, pp 66 and 67) lays out four basic ‘critical risks’ pertaining to implementation of the overall programme – and these can all be taken as relevant to the Lake Tana watershed situation. They are as follows:

- i. The natural resistance felt by some institutions and stakeholders in shifting from a project based to programmatic based approach;
- ii. The need for sustained political will to improve enabling environments for multi-sectoral programmes in the face of competing priorities;
- iii. The time taken for alignment and mobilization of resources by donors and sectoral institutions; and
- iv. The ability of stakeholders and partners to manage and use information and knowledge at the time and place it is most needed.

To this list could be added the risk of “teething problems” with the implementation of the SIP itself causing delays to start-up of projects and country programmes, as those involved take time to become familiarised with the new procedures and requirements.

With specific respect to the Lake Tana watershed, it is expected that an enabling environment for sustainable natural resource management programs will be created by the federal ministries/authorities, regional line agencies and district (*wodera*) administrations. This assumes the political situation remains conducive to policy reform and line agencies collaborate in the introduction of SLM practices to combat environmental degradation, and are willing to mainstream SLM into national development priorities. It is further assumed that in raising awareness of land degradation issues, the regional government collaborates and participates in community-based integrated natural resource management, and, furthermore, concerned agencies will collaborate and share quality information to develop reliable baseline information for SLM.

Institutional capacity, from the community level to the regional level needs to be built in order to effectively address land degradation. It is taken that stable institutional set-ups at all levels will be in place and the regional government is willing to facilitate participatory land use planning methods and implement these to control further land degradation and to restore degraded landscapes. Besides, it is anticipated that district administrations and communities will fully participate and there will be timely delivery of inputs for the implementation of SLM practices in LTW. Local level coordination among line agencies, NGOs and community organizations are expected to facilitate the mobilization of resources to address land degradation and create favourable conditions for collective site specific planning and the active participation of local communities. The willingness of EPLAUA to house regional coordination units to ensure availability of adequate and reliable funds and put mechanisms to mediate in conflicts which may arise, is anticipated.

The achievement of community-based integrated natural resource management goals could be affected by the occurrence of changes in the priorities of local stakeholders. This is unlikely as local stakeholders will be provided with packages of support which balance technical and financial aspects with awareness-raising. Risks which could affect the successful implementation of technical solutions include unforeseen pests, climatic fluctuations (see following section) and variations in input costs and availability. The project will mitigate these risks by promoting diversified low input production systems and alternative income generation activities wherever possible. SLM technologies – especially biological remedies – that can be further adapted by land users to their specific needs and in the light of changing conditions will be stressed.

Insufficient consultation between stakeholders at different levels or the tendency of one or another actor to use his/her administrative position or hierarchy to impose views on others comprises a significant failure risk to the project, especially at the decentralized, local, level. The establishment of a system of incentives for exemplary agents, sanctions for those who block the process and developing working modalities and allocating duties and responsibilities for each stakeholder is important to mitigate this. This would help to ensure that local stakeholders effectively own the project.

A challenge commonly met is hesitancy of the local communities to accept new knowledge and technical approaches. Moreover, the transition time and incentives needed to progress with alignment and harmonization are potential obstacles to be overcome. Continuous awareness creation, experience sharing and demonstration mitigate these risks – as indeed does the process of participatory technology development where land users are included in making decisions.

Another risk is that linkages and collaboration might remain poor among government agencies. To mitigate this risk, joint management committees with appropriate representation from key organizations will be formed to ensure maintenance and monitoring of linkages.

Delays in the financial commitments and disbursement may prolong implementation of physical action plan. To mitigate this, a disbursement plan for co-financing will be prepared as part of the project document and this will be reviewed every year, and release of project resources will be contingent on realization of the plan.

Moreover, the project will mitigate risks by investing in community-level social capital, including working with members of the younger generation in order to ensure continued local commitment to processes, and by implementing a program of communication with counterparts in order to promote their continued support. The risk of the beneficiaries of environmental services refusing to contribute to schemes designed to internalize their costs will be mitigated by the provision of support. Environmental education will ensure that schemes are not only appropriately adapted to local conditions, but also understood by all.

The GEF support will enable design, implementation and upscaling of appropriate technologies which are cost-effective, and easily handled and modified by farmers. It will also enhance appropriate ways and means of managing the project activities that will enable replication.

The GEF support furthermore encourages replicability since community-based approach emphasizes that interventions should be flexible to respond to various agro-ecological zones, local endowments, and farmers' capacity to invest in affordable soil, water, forest, and livestock management technologies rather than following prescribed packages. Principles are always replicable - while specific practices may not be.

The capacity of local government and local organization to address issues related to land use and land tenure security is very limited. There is generally a low level of awareness among farming communities, women and youth about the degradation of natural resources and its impact on their livelihood. GEF support will strengthen EPLAUA in its recently launched activities to enhance land tenure security, learn from the land use and land tenure experiences of other countries. This could provide valuable lessons to policy makers and enhance replicability of similar institutions and approaches in other regions.

Ethiopian rural society has many important traditional and indigenous institutions which are currently weakly involved in socio-economic activities. They lack the ability to plan and implement development initiatives for their communities. Women and the landless youth, who are marginalized, constitute the most affected parts of the community and have the most to gain from such arrangements. However, these CBOs can be strengthened and transformed to assume various self-help, conservation and natural resources management and development roles if properly organized and their capacity is built.

F.2. Climate Proofing

With respect to climate change, there is some likelihood that various impacts will be felt during the life of the project. These will possibly include more erratic rainfall and a negative impact on crop yields. However, rather than being a 'risk' to the project, this is more likely to have the effect of highlighting the positive effects of the SLM management

techniques adopted, as these will help insulate production systems against the effects of climatic variability.

Thus, as described at length in the SIP Programme brief of May, 2007, there is a need to “climate proof” SLM investments. This, in simple terms, means making sure that the SLM practices, and the capacity built around those practices, take climate change into account. Techniques and thought-processes need to “adaptive”. In other words, the practices should be (as far as possible) able to cope with situations where – because of climate change – temperatures are higher and rainfall less and more erratic, even if we are unsure about the precise degree of change. Simultaneously both SLM specialists and land users should be stimulated to think in an “adaptive” way so that they do not just operate prescriptively, applying blanket recommendations.

As is pointed out in the SIP, there are important differences between SLM to address land degradation with adaptation to climate change, mainly in terms of scale and types of solutions as well as in terms of actors at the national and regional level that deal with these issues. Adaptation is largely viewed as being local and unique circumstances of that place (local climate, social/ ecological/ political capital) versus SLM which tends to encompass a much larger spatial scale, and tends to emphasise the physical systems more (erosion, soil quality etc).

The methods to identify the solutions for the two are slightly different; however for most of SSA, the major issues addressed by adaptation to climate change are likely to revolve around production systems, landscapes, water management and infrastructure, issues that are equally important in considering SLM. The need for coordinated interventions is thus very obvious and a requirement. Both adaptation and SLM require planning that is integrated across sectors and vertically across scales of management.

Adaptation to climate change is a relatively new addition to environmental concerns that have been integrated into national planning, and major guiding principles are still under development and refinement, such as important topics of the nature of benefits in terms of funding obligations, questions of attribution of particular climatic events to either normal climate variability versus anthropogenic climate change, as well as what the nature of adaptation operations would be, as to whether adaptation operations and activities can be stand-alone , or that they are in fact, part of development operations.

Climate proofing will be in-built under the project by, precisely these two approaches of being adaptive and versatile. Technologies will be promoted that lend themselves to deteriorating rainfall/ temperature regimes (thus: water harvesting; soil organic matter amelioration; mulching). Land users will be encouraged to experiment themselves: local adaptive innovation is something land users have been involved in for millennia, yet this is largely overlooked in this current western-knowledge-based global society.

G. EXPLAIN HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN

The approach of using existing government structures at all levels - from the regional to the *kebele* level is the most cost-effective option and one that also ensures sustainability. The alternative, to set up a parallel project infrastructure, would be considerably more costly, would marginalise government (while failing to build institutional capacity) and would need to be dismantled at the end of the project.

The absence of effective coordination and collaboration has been identified as one of the key barriers to implementation of integrated and sustainable land management at local and national scales. The cost-effectiveness of this project is further enhanced given the potential to better align the baseline and associated funding with planned interventions under the GEF Alternative. In the longer term, the community-centred approach to land management being promoted will reduce the recurrent costs of SLM activities and enhance the prospects for success. This will ensure that scarce investment funds for SLM are used cost-effectively.

This project will be jointly implemented with the IFAD-GoE associated project (“Community-Based Integrated Natural Resources Management in the Lake Tana Watershed”), sharing resources and structures. This partnership will undoubtedly enhance the cost-effectiveness of both interventions. Some of the benefits expected are the improvement of coordination and communication, the application of common procurement and supervision procedures, and the implementation of complementary project interventions in the LTW.

The proposed project design also offers potential for a multiplier effect through its upscaling component and direct linkages with the other two GEF SIP operations in the country (WB and UNDP). The integration of the project in the National SLM Platform, that envisages harmonisation, synergies and less duplication for higher and differential impact from each GEF dollar, will also contribute to improved cost-effectiveness. Coordination and harmonisation will reduce transaction costs and duplication.

Furthermore, the project is cost-effective for the following specific reasons. First, since the project is a fully integrated conservation and development initiative over seven years it incorporates interventions across many sectors: participatory forest development, appropriate livestock production systems, land administration and proper soil and water conservation, all of which are components of sustainable land management within the LTW. To ignore these links and focus on land management alone would not bring the intended objectives. Second, the existing grassroots organizations which have been actively involved in the planning phase will be strengthened to implement SLM instead of creating and organizing new structures unless deemed necessary. Finally, the budget breakdown shows that the project management cost is low, comprising about 12% of the total budget.

Considering the baseline, total increment (project costs) are just less than one third of the baseline costs yet will achieve far more than double the local benefits, and will also yield global environmental benefits as described. One of the key ways of achieving its results will be to pull together and coordinate related initiatives in the LTW, mirroring what the SIP is doing at the pan-African level.

The GEF contribution is 17.3% of the total increment (project costs) implying highly effective leverage on co-financing agencies. Taking into account the total area to be brought under SLM and the beneficiaries in LTW, about US\$ 10 per hectare per annum and approximately US\$ 2.5 per head of population per annum of the total increment (project cost) implies a low cost per unit indicator. Having considered the alternatives carefully – looking at institutional capacity building and sustainability as well as short-term impact - the proposed project offers the most cost-effective approach to securing local benefits as well as the GEBs as described in this proposal.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. PROJECT IMPLEMENTATION ARRANGEMENT:

In view of the widespread capacity constraints on the one hand and pressure to get rid of parallel structures on the other hand, there is need to compromise on a coordinating entity whose task could be restricted in building implementation capacity within the government and focussing on *woreda* and *kebele* level structures. Thus, the project will be managed across three administrative levels (regional, *woreda* and *kebele*/community levels) in line with the government institutional set-up. At regional level, project implementation arrangements will include a Project Steering Committee (PSC), a Project Coordination Unit (PCU) composed of the necessary professional team, and focal person in each prominent stakeholder organization. At *woreda* level, the *Woreda* Steering Committee (WSC) that comprises prominent stakeholders will guide the project. In addition, the Environmental Protection Authority (EPA) and National SLM Platform will play important roles in establishing international linkages and give policy directions.

1. National Level

The project will establish an appropriate linkage with the National SLM Platform and the EPA will support the implementation of the proposed full-sized project by giving policy direction through establishing a regional platform and creating linkages with international partnership. It is also expected that EPA will be involved in mid-term and terminal monitoring and evaluation.

2. Regional Level

BoARD will host the project. To ensure optimum cooperation, coordination and collaboration, BoARD will establish a Project Steering Committee (PSC) by pooling representatives from relevant partner institutions. The authority will also establish a Project Coordination Unit (PCU) that will be responsible for overall project coordination, supervision, and backstopping.

- Project Steering Committee (PSC)

It is expected that the core of the established PSC for the development of the project under the PDF-B will continue for the implementation of the project. It will work together as a team on guidance of the project and meet at least on a quarterly basis. Additional members will be identified as deemed necessary to strengthen the existing steering committee. The main duties of the PSC will be to:

- Develop a common understanding of what is needed to expedite the implementation of the project and oversee the activities;
- Approve the detailed work plan and budget produced by the host institution;
- Provide overall policy advice on the implementation of the project;
- Review and advise on the main outputs of the project;
- Ensure that information on the implementation of the project as well as the outputs is brought to the attention of local and national authorities for follow-up;
- Assist in mobilising available data and ensure a constant information flow between all concerned parties;
- Allow for effective communication and decision-making between the project coordinator and other actors;
- Ensure that the environmental and natural resources policy of the government is fully reflected in the project implementation; and
- Provide technical support and policy advice.

- Project Coordination Unit (PCU)

The PCU would have responsibility for commissioning activities identified under the PDF-B and approved under the project agreement. It would be led by a senior professional able to envisage the scope and ambition of the GEF project, but also able to realize the interactions necessary to integrate the overall GEF project with the considerations of other stakeholders involved in complementary projects –seeking synergies rather than competition. With this understanding, the PCU will be established within BoARD. It will comprise full-time highly competent professionals as deemed necessary. The professionals will be recruited competitively. Terms of reference, fully reflecting duties and responsibilities will be prepared with sufficient depth and breadth. Professionals will be paid from the proposed grant. The PCU will be provided with necessary mobility, office facilities, secretarial service and equipment. The PCU will operate directly under the guidance of the Project Steering Committee and be technically supported by external/ national consultancy services. The PCU will have the following general and specific duties and mandates:

- Liaise with international, national, regional, and local government institutions as well as non-governmental institutions including the private sector with the objective of providing information on appropriate interventions/investment, and promoting support for the project;
- Serve as a focal institution for all matters related to sustainable land management in LTW;
- Make sure that project implementation modalities are in line with regional, national and international standards, laws and regulations;
- Provide information to development actors within the watershed;
- Facilitate the resolution of conflicts related to project implementation, operational arrangement and overlaps between projects and programs;
- Help to coordinate all development activities in LTW;
- Connect all development activities with other similar endeavours in Ethiopia or abroad, and improve coordination mechanism with government, NGOs, UN agencies and donors working group on similar types of projects/programs; and
- Make sure that implementation between, and within, projects is compatible and in harmony.
- Carry out surveys and studies in the watersheds and establish a data base;
- Foster institutional strengthening and capacity building needs and facilitate the organization of training programs;
- Facilitate meetings that will help sharing common and individual experiences with the view to induce experience sharing and networking;
- Serve as a secretariat to the PSC;
- Facilitate targeted research and identify training needs and opportunities;
- Collect, analyze, store, documents and disseminate data covering the watershed;
- Monitor and follow-up implementation activities of the project, check if activities are integrated and performed

- according to the general development plan and government strategies;
- In consultation with the Project Steering Committee (PSC), and stakeholders, consolidate an integrated annual plan based on project components as approved and agreed in the project document and worked out by the *woreda* stakeholders;
- Monitor the proper utilization of approved budgets for project implementation;
- Monitor regularly the progress of the project with stakeholders;
- Ensure the training of project staff and local government officials in participatory planning implementation and evaluation methodologies and ensure a genuine participatory approach is applied during project planning and implementation;
- Develop smooth project phase-out and project handover strategies to the government together with stakeholders;
- Conduct regular and periodic field monitoring to facilitate the implementation of the project;
- Facilitate mid-term and terminal project evaluations; and
- Prepare all necessary reports.

- In-country Project Management Team (in-country PMT)

The role of the in-country PMT will be twofold. First, PCU staff will be part of the in-country PMT from the outset. This will provide them with opportunities for participating in national and regional symposia with a view to learn from experiences gained under the country programme, particularly in programme planning and management, community sensitisation, organisation and empowerment. Second, PCU staff will be encouraged and supported to undertake joint supervision missions and study tours between and within the country programme. These initiatives will contribute to the development of appropriate linkages within the country programme so that unemployed youth can be sensitised, trained and organised by MFIs and the regional cooperatives agency into rural savings and credit groups or cooperatives, and rural communities assisted in establishing farmers' research and extension groups, watershed management committees, land administration and use committees, etc. The in-country PMT will also participate in the annual review of progress in project implementation.

3. Woreda Level:

The Government of Ethiopia is committed to decentralization and devolution of power down to the lowest levels. Because of this political commitment, *woredas* are empowered to the level of planning and executing development activities based on their jurisdictional resource potential. This is done under the umbrella of the federal and regional general plans. Therefore, for this project too, *woreda* level coordination and decision-making entity is indispensable. Since the issues of land degradation are cross-sectoral in nature, a *woreda* level steering committee is essential. A *woreda* office head of the lead institution at regional level will chair the *Woreda* Steering Committee and guide the implementation of the project. The *Woreda* Steering Committee shall comprise representatives from the *Woreda* Administrative Office, appropriate line offices, and NGOs.

4. Community level:

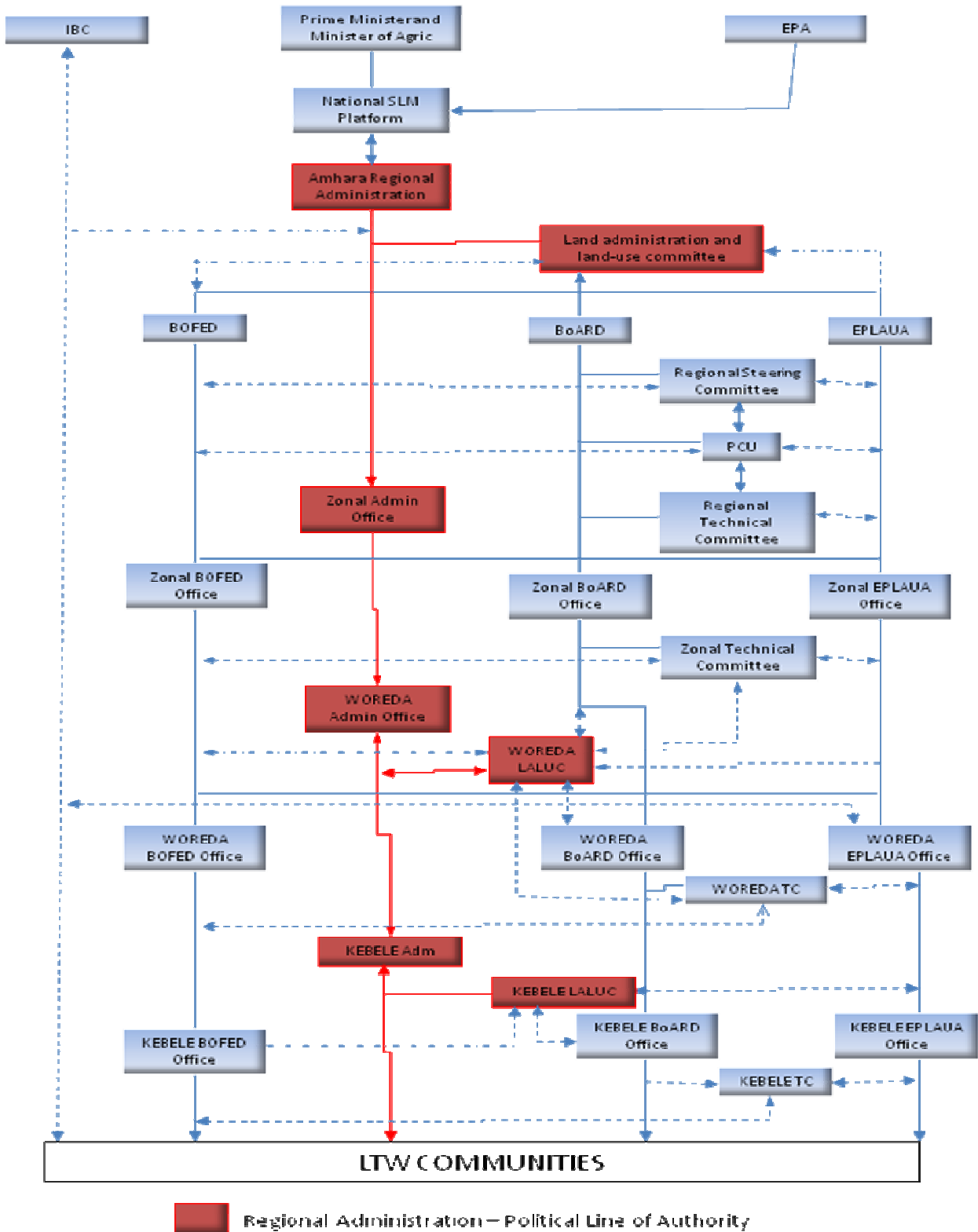
The *kebele* administration is the lowest level organization that deals with development activities and social services of the *kebele*. In addition, communities are organized into various committees, including a development committee that comprises farmers, women, teachers, and extension agents. There are also committees organized for specific purposes, such as the land administration committee. These committees are grassroots level institutions, which will be the engine of the project. The development team or committee, led by the chairman of the *kebele* administration, will be responsible for overall implementation of the project. The development committee may be split into smaller sub-committees in order to execute different activities of the project. An organizational chart that illustrates the level of decision-making and power relation is given below.

Stakeholder Involvement

A project, which attempts to introduce or impose externally planned development activities, has slim chances of success. The genuine involvement of key stakeholders at all level on issues related to the project will lubricate the implementation mechanism, increase implementation speed, and assure success. Extensive consultations made during the design phase must continue during implementation. As indicated above, different level of decision making entities have been identified following the legal government structure. These organizational arrangements will be used for stakeholders' involvement, coordination, monitoring, and evaluation of the project. In addition to this, grassroots

traditional, cultural, and religious institutions, such as *senbete*, *idir*, *mahber*, and *iqub* (as previously mentioned) will be used to enable stakeholders, specially the farmers, to have a greater chance of participation. A wide range of stakeholders, from government, development agencies, NGOs, international organizations, academic and research communities will participate in the implementation of the project.

Graph 1. Implementation Organogram



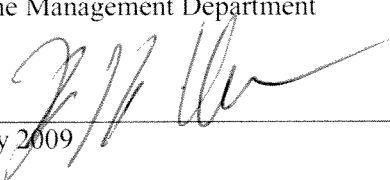
PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF:

The project design has evolved from the PIF in various ways. Most of these are minor. The only significant changes are (a) the main coordinating agency has been changed from EPLAUA to MoARD/ BoARD according to the wishes of the GoE, and (b) the Project Results Framework (Annex 1 of the Project Document; and reproduced as Annex A in this current document) has been modified. In this context the second project component is now named “Institutional, legal and policy analysis and reform”, and furthermore land certification has been transferred from this component (two) to component one. There is no longer an explicit outcome associated with this process (of land certification), but it is subsumed under the umbrella outcome of Component 1, namely: “*Community-based integrated watershed management options identified and adopted*”. Naturally there are costing implications associated with this reallocation of items: Component One now represents 75% of the total project budget, whereas it was 56% previously (though the GEF financing has changed little between components).

In accordance with the new layout of the Project Results framework, there is detail given under “Key Performance Indicators” where in the PIF these were termed “Expected Outputs”. Detail is more explicit regarding both local benefits and, especially, global environmental benefits. For example under local benefits there are poverty reduction targets (eg. 25% increase in per capita income; 15% reduction in children below 5 years of age who are stunted) and under Global Environmental Benefits there is detail about the amount of carbon sequestered (“at least 200,000 tonnes of carbon sequestered in soil under crops plus 500,000 tonnes in forests/ plantations, plus a further 2,500 tonnes in soils under pastures”). Other targets have been readjusted. Note that the project document’s Project Results Framework is reproduced in this CEO request as Annex A.

It will furthermore be noted that the incremental reasoning has been developed: in this respect please compare section E of the PIF with section E here.

PART V: AGENCY CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO Endorsement.	
<p>Kevin Cleaver Assistant President Programme Management Department IFAD</p> 	<p><u>IFAD Project contacts:</u></p> <p>Rodney Cooke Acting GECC Coordinator and Director of Technical Advisory Division Tel: +39.06.5459.2450 Email: r.cooke@ifad.org</p> <p>Jesús Quintana Programme Manager, GECC Tel: +39.06.5459.2210 Email: j.quintana@ifad.org</p>
30 January 2009	
<i>Please do not forget to copy the IFAD/GECC Registry on all official communications, GECCregistry@ifad.org</i>	

ANNEX A: PROJECT RESULTS FRAMEWORK

Hierarchy of Objectives	Key Performance Indicators	Means of Verification	Assumptions/Risks
<p>Goal</p> <p>Sustained poverty reduction for about 450,000 rural households in 21 districts of Lake Tana Watershed</p>	<ul style="list-style-type: none"> • 25% increase in per capita income • 15% reduction in no. of children < 5 years of age who are stunted • At least 200,000 tonnes carbon sequestered in soil under crops plus 500,000 tonnes in forests/ plantations plus a further 2,500 tonnes in soils under pastures • 300,000 households involved in watershed planning and management, range improvement, and participatory forestry • At least 32,500 households obtain access to reclaimed land • 450,000 rural households with secured access to agricultural land 	<ul style="list-style-type: none"> • Baseline surveys • Household income and expenditure surveys • Nutrition surveys disaggregated by gender • Participatory Impact Assessments • Land use dynamics study • Mid-term Review report • Project completion report 	<ul style="list-style-type: none"> • GoE is committed to fulfil its international and national commitments to environmental improvement and SLM • Political stability and security maintained • Minimum internal or external shocks • Effective implementation of policy, legal and regulation on NRM and SLM
<p>Purpose</p> <p>Increased household incomes, food security and family nutrition and enhance rural livelihoods through sustainable land management and improved ecosystem integrity</p>	<ul style="list-style-type: none"> • 25% increase in per capita income • 9,400 ha brought under improved range management • 227,500 ha brought under SLM • 20,900 ha brought under forestry • 32,500 ha reclaimed agricultural land 	<ul style="list-style-type: none"> • Baseline data on existing land-use patterns and natural resources • MTR • PCR • Project progress report • M/E report • Baseline Surveys • Household income and expenditure surveys • Nutrition surveys disaggregated by gender • Land use dynamics study • Specific studies/ sampling (as indicated under Component 1) 	<ul style="list-style-type: none"> • Community and stakeholder interested in SLM and their involvement secured • Funding available on time • Government willingness to accept and implement policy reforms and mainstreaming SLM into sectoral policies
<p>Components/ Outcomes</p> <p>(1) Community-based integrated watershed management</p>	<ul style="list-style-type: none"> • At least 227,500 ha brought under SLM • Up to 450,000 rural household in LTW receive 1st level land certification certificate • EPLAUA strengthened to undertake 2nd level certification and completed a pilot operation in 5 	<ul style="list-style-type: none"> • Progress Reports • Impact studies and beneficiary monitoring data disaggregated by gender • Supervision, MTR and PCR 	<ul style="list-style-type: none"> • Long-term financial support by the Government and donors to arrest land degradation • Continued political commitment to SLM and its interventions

Hierarchy of Objectives	Key Performance Indicators	Means of Verification	Assumptions/Risks
	<p>centres</p> <ul style="list-style-type: none"> • Conservation of ecosystem and biological diversity enhanced in 15 core areas • Total forest cover of the watershed increased by at least 10% • About 9, 400 ha under improved range management • 32,500 ha of agricultural land reclaimed through off-farm SWC works completed • Participatory forestry established on 20,900 ha • At least 200,000 tonnes carbon sequestered in soil under crops plus 500,000 tonnes in forests/ plantations plus a further 2,500 tonnes in soils under pastures • Over 1, 000 government staff trained in areas of participatory development, land administration, NRM, and SLM • Up to 450,000 rural households mobilised and trained in watershed planning and management, NRM, SLM, and land administration • Important domesticated landraces; wild flora and fauna conserved 	<ul style="list-style-type: none"> • Natural resource database • Satellite Imagery plus rainfall data to assess total change in NPP: eg through Normalised Differenced Vegetation Index (NDVI) • Participatory assessments of increased area under SLM by farmers and livestock keepers • Biodiversity surveys (baseline; mid-term; final) using indices to be decided • River (and select stream) flow monitoring using automatic water level recorders (AWLR) and sediment sampling • Wetland and pastureland sampling for cover and biodiversity • Assessments of above ground and below ground (=system) carbon (using techniques to be decided) – as indicator of carbon sequestration/ good land management and as a strong proxy for ecosystem integrity (see SIP, 2007) 	<ul style="list-style-type: none"> • Government is committed to encourage local community participation in SLM • Communities acceptance of new technologies and responsibilities • Stabilization or reduction in livestock population • Assuming the basis for the carbon sequestration rates are accurate (this is a developing science). Rates used as follows: <p><i>0.25 tonnes of carbon per hectare per annum (over 4-5 years for approx 227,500 hectares brought under sustainable land management;</i></p> <p><i>2.5 tonnes of carbon per hectare per annum over 4-5 years for approx 50,000 hectares of forest/ plantation and rehabilitated land</i></p> <p><i>0.25 tonnes of carbon per hectare per annum over 4-5 years for approx 9, 400 hectares improved pastureland</i></p>
(2) Institutional, legal, and policy analysis and reform	<ul style="list-style-type: none"> • Regional strategies, policies and legislations related to NRM and SLM revised and up-dated to mainstream SLM and RMM • A comprehensive report produced on existing traditional system of NRM and SLM practices; and related CBOs • EPLAUA offices at <i>woreda</i> levels strengthened through training and logistical support • Communities mobilised and trained to fully participate in NRM and SLM policy, strategy, legal and regulation improvement • At least two stakeholders workshops held to review and improve existing NRM and SLM policies, strategies, laws and regulations • At least 70 experts from regional and <i>woreda</i> levels and at least 240 <i>kebele</i> level staff undertake exposure visits within or outside the country • 25,000 landless youth (including women) trained and organised into common interest groups for sustainable livelihoods through employment opportunities outside agriculture 	<ul style="list-style-type: none"> • Progress reports • Policy documents • Enacted legislations • Book of register and books of holdings • Impact studies • Supervision, Progress reports, MTR, and PCR, Monitoring and Evaluation report 	<ul style="list-style-type: none"> • Government at all levels buy into and implement policy strategy and legislations reforms • Institutional stability maintained • National and regional SLM platform will function effectively • Logistic support improved for agricultural and rural support services.

Hierarchy of Objectives	Key Performance Indicators	Means of Verification	Assumptions/Risks
(3) Efficient and effective project coordination and management	<ul style="list-style-type: none"> • PCU operational by project inception date • Inception workshop held within 3 months after effectiveness • Project Steering Committee (PSC) and technical committees established before inception workshop • Orientation training for at least 100 staff of planning units at all levels completed within 6 months after inception workshop • Result-based monitoring and evaluation system operational within 6 months after inception workshop • Communication systems set-up for knowledge sharing • Annual implementation review workshops carried out and actions taken on recommendations • AWPBs submitted timely and in adequate form • MTR carried out and report received by not later than end of 4th quarter of PY4 and agreed recommendations implemented not later than end of first quarter of PY5 • Audit report submitted timely and without qualification • PCR carried-out and submitted not later than 4th quarter of PY7 	<ul style="list-style-type: none"> • Baseline surveys • MIS • Progress Reports • Impact studies • Supervision reports, MTR and PCR 	<ul style="list-style-type: none"> • Stakeholders are motivated and staff provided with necessary incentives • BoFED pre-disposed to transforming existing MIS to a full-fledged monitoring system

OUTPUTS	KEY PERFORMANCE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
1.1 Participatory watershed management achieved	<ul style="list-style-type: none"> • Participatory preparation of a database of existing land use patterns and natural resources • 650 micro watersheds plans, each 200-500 ha • Land surveying and certification • Farmer's local innovations recorded and added to best-bet technologies for SLM • Carbon sequestration enhanced 	<ul style="list-style-type: none"> • Watershed plans documented • Database of natural resources • Best-bet technologies documented including local innovations • Progress/ consultants reports • Evidence of numbers of persons trained/ study tours achieved 	<ul style="list-style-type: none"> • Line agencies, local govt. and communities fully participate
1.2 Improved pasture and participatory forest management in place	<ul style="list-style-type: none"> • Promotion of improved pasture management and forage production • 630 community grazing associations organized and trained • 9,400 ha of rangeland/ natural pasture improved • 2,000 women trained and engaged in dairy production • Community forestry and participatory forest management • Total forest cover of the watershed improved on more than 20,000 ha and tree planting through community forestry (18,900 ha @ 15 ha per <i>kebele</i> per year) and through Participatory Forest Management (2,000 ha total in 5 sites) • Potential linkages with carbon credit financing facilities explored • Carbon sequestration enhanced • Demonstrate and promote energy-saving technologies 	<ul style="list-style-type: none"> • Progress reports • Surveys (ground-based and remote sensing) • Land use document • Evidence of database document • Nurseries up and running (one per <i>kebele</i>) • Soil and above ground biomass carbon assessment • Evidence of numbers of persons trained/ study tours achieved 	<ul style="list-style-type: none"> • Line agencies, local govt. and communities fully participate • Sufficient and quality forage seeds available on time • Sufficient supply of seedlings for plantations/ enrichment planting
1.3 Off-farm soil and water conservation measures implemented	<ul style="list-style-type: none"> • Rehabilitation of 32,500 ha seriously degraded lands • Established gauging stations 	<ul style="list-style-type: none"> • Monitoring and evaluation reports • Progress report • Surveys (ground-based and remote sensing) • Evidence of numbers of persons trained/ study tours achieved • Operational gauging stations 	<ul style="list-style-type: none"> • Land users prepared to put in their own time

		<ul style="list-style-type: none"> • Final report 	
1.4 Biodiversity and ecosystem conservation systems established	<ul style="list-style-type: none"> • Local landraces identified and conserved; community groups organized and trained in (agro) biodiversity conservation • At least 15 core conservation sites (forests and wetlands) under community-based management and both demarcated and legalized • Economic valuation of biodiversity carried out for specific cases 	<ul style="list-style-type: none"> • Inventory report • Progress reports • Surveys (ground-based and remote sensing) • Mid-term evaluation • Final report • Report on economic evaluation • 	<ul style="list-style-type: none"> • Willingness of communities and local government in forest development • Forest development understood and acted upon • Willingness of communities to accept alternative and energy saving technologies
1.5 Land surveying and certification carried out	<ul style="list-style-type: none"> • Up to 450,000 households in 21 <i>woredas</i> issued with 1st level certification • Households in 5 pilot areas issued with 2nd level certification 	<ul style="list-style-type: none"> • Progress reports • Final report 	<ul style="list-style-type: none"> • Households 100% willing to have certification
2.1 Improved institutional capacity for SLM activities	<ul style="list-style-type: none"> • 25,000 landless youth (men and women) trained and organized into CIGs for sustainable livelihoods • Institutional capacity to implement SLM at regional, <i>woreda</i> and <i>kebele</i> level improved and strengthened • Efficient system of land use management developed and implemented by EPLAUA • 6 regional policies/ legislation with respect to environment developed to mainstream SLM by the fourth year • Existing policies and legal frameworks revised and popularized 	<ul style="list-style-type: none"> • Policy and legal documents • Consultant's reports • Surveys • Proceedings and records • Evidence of numbers of persons trained/ study tours achieved • 	<ul style="list-style-type: none"> • Government committed to develop policies and legislation • Landless youth compliant

<p>3.1 Coordination and management system operational</p>	<ul style="list-style-type: none"> • Project coordination and execution arrangement established • Monitoring , evaluation and financial guidelines and systems developed • Participatory Monitoring and Evaluation system enhanced • Result-oriented guidelines prepared and implemented by line offices in the watershed • Gender, HIV/AIDS and environment mainstreamed by line offices in the watershed 	<ul style="list-style-type: none"> • Progress reports • Minutes of meetings • Inventory of purchased materials/ equipment • Mid-term evaluation • Final evaluation 	<ul style="list-style-type: none"> • Line agencies are committed to introduce RBM for SLM practices • Adequate and reliable availability of information on time
<p>3.2 Knowledge management system effective</p>	<ul style="list-style-type: none"> • Linkage with national SLM platform, steering committees and PCU established 	<ul style="list-style-type: none"> • Impact surveys/ Progress reports • Consultant's reports • Symposium proceedings • Mid-term evaluation • Final evaluation 	<ul style="list-style-type: none"> • The implementing partners maintain accountability for what they do

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF)

A. With reference to the “Items to consider at time of CEO Endorsement” (GEF Secretariat Review Sheet dated 29 December 2007), IFAD response is as follows:

1. *Incremental role of the GEF funding in relation to the IFAD grant and loan:*

The incremental role of the GEF funding in relation to the IFAD co-finance is spelt out in section E above (Incremental Reasoning). While the IFAD co-finance forms the basis of the project, it concentrates on local benefits (poverty reduction through sustainable land management) while the GEF funding focuses on the global environmental benefits that can accrue by investing in specific areas of the project.

IFAD cofinancing: IFAD will contribute with US\$ 13,016,000 (51.2 % of total project cost), through a loan on concessional terms (US\$ 6,500,000) and a grant (US\$ 6,516,000).

2. *Environmental impact analysis of small scale irrigation*

Not applicable: the project is not specifically supporting small scale irrigation development.

3. *Coordination with other projects*

Now developed, and explained under section D in this document (please refer)

4. *M&E Plan*

The development of a results-based M&E system is key to tracking performance of the project and will be the task of national and international consultants. It will be developed in the first year with further input towards the middle of the project's life. The results-based M&E systems will be based on the existing management information system (MIS) of BoFED, and BoFED staff will be capacitated.

5. *Confirmation of all co-finance*

Cofinancing letter from IFAD and letter of commitment from the GoE/AMRS are attached.

B. With reference to the “Items to consider at time of CEO Endorsement”, IFAD response to the 7 January 2009 Review Sheet is as follows

Item 7. Is the global environmental benefit measurable?

GEF Secretariat comment:

The proposed GEBs are listed in the Fullsized project (p.7), in the project Document (p.38-39), in the Project Results Framework (Annex 1), Incremental Reasoning (Annex 5), and Impact Measurement Table (Annex 13).

While there are performance indicators and means of verification for some for the proposed GEB [i.e. tons of carbon in soil and biomass, or the number of core areas of globally significant natural habitats –both terrestrial and wetlands-contributing to improved ecosystem stability and protection of biodiversity), there are others for which the links are less clear (i.e. Ha. of land under SLM-improved range management forestry- reclaimed agricultural land as indicators of improvements to the integrity of ecosystems and their functions). For others, including sedimentation, rehabilitation of water sources and species conservation) the indicators and means of verification are much weaker or not present at all. In Annex 13 (Impact measurement Table) there is no reference to key impact indicators for some of the GEB including the core areas of global significant natural habitats, and globally significant plant and animal species). Please modify accordingly.

IFAD response:

Clarification is now provided in the form of an extra table that is included in the Request for CEO Endorsement form (p. 7) and replicated in the Project Document (pp. 38-40). This table summarises the GEBs, the Key Indicators, the Means of Verification, the Methods of Measurement, and includes also brief explanatory notes. Annex 13 has been amended to include the information required. Note the GEB on Biodiversity has now been left out of the GEF-GEB list as it is funded through the IFAD/GoE cofinancing.

Item 8. Is the project design sound, its framework consistent & sufficiently clear (in particular for the outputs)?

GEF Secretariat comment:

Although there are some specific and quantitative performance indicators, the baseline information provided in Annex 5 (Incremental Reasoning) is rather generic and qualitative. Please clarify why the collection of baseline information for this project has been put off to the first year of project implementation when this information was suppose to be presented for CEO Endorsement. Furthermore there was an investment of \$100,000 in the PDF-B towards this baseline collection. Are there any applicable results here?

IFAD response:

The Incremental Benefits Table in Annex 5 has been rationalised and improved. The main baseline situation data have been included as far as they are available, mostly from the baseline information compiled during the PDF-B phase. The baseline survey planned for the first year of implementation (see para 255 of Project Document, p. 38) is “building on the database... [of the considerable information amount of information accumulated in the baseline studies]”. There will be (see para 220 of Project Document, p. 32) an inventory of the biodiversity resources of the demarcated conservation areas also upon commencement of the project.

Item 15. Is the value-added of GEF involvement in the project clearly demonstrated through incremental reasoning?

GEF Secretariat comment:

In order to address this matter, it is important to deal with the issues raised under Project Design. Regarding incremental reasoning (Annex 5), there is no baseline information sufficient enough to see if the proposed targets (i.e., GEBs) are actually incremental. Is there baseline information available in the PDF-B Report to address this issue?

IFAD response:

Please refer to the newly revised table under Annex 5: with the exception of the detailed inventory of biodiversity – which is not amongst the GEF-supported GEBs - (see under response to item 8 above), there exist available baseline data for this purpose.

Item 16. How would the proposed project outcomes and global environmental benefits be affected if GEF does not invest?

GEF Secretariat comment:

Not clear until issues described above under item 15 are properly addressed.

IFAD response:

Some of the GEBs would be achieved with the IFAD/GoE investment (especially those related to biodiversity and climate change), but other not, since their attainment is considered incremental. See also response under item 15 above, and refer to Annexes 5 (Incremental Reasoning), 12 (M&E) and 13 (Impact Measurement).

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
I. For Project Management			
I.1. Local			
Project coordinator	445.0	336	The PC, selected by the MoARD with approval from IFAD, will be in overall control and responsible for, the planning, implementation and M&E of the overall project (including the GEF increment). He/she will head the project management team. His/ her activities will be guided by the steering committee, and he/ she will be answerable to the MoARD and through the MoARD to IFAD.
Financial management officer	224.0	336	Responsible for financial control, the FMO will be in charge of budgeting, accounting, and financial reporting according to the procedures required by the MoARD, IFAD and the GEF. The FMO will be responsible to the PC.
Procurement officer	185.0	336	Answerable to the FMO (see above) the procurement officer is responsible for the acquisition and purchase of inputs required by the project, through procedures (tendering etc) that are approved by the GoE and acceptable to IFAD and the GEF.
Planning, M&E officer	224.0	336	The M&E officer will be responsible to the PC, and his/ her duties will include helping to draw up work plans that lend themselves to tracking/ monitoring. The M&E systems itself will be drawn up at the inception of the project, and the PM&E officer will be charged with putting these in place.
Data management officer	148.0	336	The data management officer will be in charge of collation and analysis of the considerable body of data generated by the project: both background and monitoring data. The DMO will work closely with, and be responsible to, the PM&E officer
Training officer	224.0	336	Initially in charge of the design and interpretation of the training needs assessment
Secretary	92.3	336	1 position
Drivers	37.0	1,008	3 positions
Guards	18.5	672	2 positions
Messengers	14.8	672	2 positions
Consultants: Development of M&E system	1,885.0	224	The development of a results-based M&E system is key to tracking performance of the project and will be the task of national and international consultants. It will be developed in the first year with further input towards the middle of the project's life. The results-based M&E systems will be based on the existing management information system (MIS) of BoFED, and BoFED staff will be capacitated (4 positions)
I.2. International			
Consultant: Development of M&E system	2,244.0	20	The international M&E consultants will assist the national M&E consultants in their development of the results-based M&E system (see above TOR). 20 weeks total input is estimated, giving the international consultants time to inform their

			national counterparts of how these systems have been designed elsewhere and how they can be tailored to the requirements of this specific project.
II. For Technical Assistance			
II.1. Local			
Consultant: Preparation of a database of current land use	1,385.0	64	The tasks here are to prepare a digital database of existing land use patterns and the resource base. There will be a simultaneous assessment of the status (and trend) in land degradation.
Consultant: Assistance with plans for improved pasture and participatory forest management	1,385.0	8	Because of the lack of institutional knowledge in improving pasture (through management and overseeding) and simultaneously in participatory forms of forest management, consultants will take models that have worked elsewhere and prepared indicative plans for the LTW.
Consultant: Biological diversity/ valuation of ecosystems and services	1,385.0	4	At the start of the project's life there will be an exercise in valuing and justifying the the benefits of investing in biodiversity conservation. This will be carried out by personnel from the Institute for Biodiversity Conservation – and others.
Consultant: Improvement of institutional capacity	1,385.0	48	The improvement of institutional capacity in the overall field of SLM is lacking throughout, and it will constitute the work of significant consultant input to provide plans for institutional upgrading through training and streamlining organizational responsibilities where necessary.
Consultant: Update and develop regional strategies and policies on SLM	1,385.0	32	The role of the SLM consultant is to bring in expertise and experience from outside the area (both other parts of Ethiopia and international) and to match these with the requirements of the LTW project area. After consultation with local counterparts, the resulting outputs will be regional strategies and policies on SLM.
Consultant: Off-farm SWC measures	1,385.0	36	Split between three separate input periods (beginning; middle; end) the consultants will guide the process of rehabilitating degraded land – usually through the well-established Ethiopian practice of area closure combined with physical measures and re-vegetation through planting and resting.
II.2. International			
Consultant: Assistance with plans for participatory forest management	3,750	8	The international consultant on PFM will be expected to bring in experience from outside on participatory (or “joint”) forest management (for example from the JFM programme in India, and others in east Africa) to feed into the planning process.
Consultant: Biological diversity/ valuation of ecosystems and services	3,750	8	The valuation of ecosystems and their services is a relatively new discipline and the international consultant will be expected to be at the cutting edge of developments and carry out assessments while simultaneously sharing his/ her skills.

* Provide dollar rate per person weeks or months as applicable

** Total person weeks/months needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN

The objective of the PDF-B grant (to develop a high-quality project, endorsed by the Government of Ethiopia, for funding by GEF, IFAD and other sources) was achieved through the activities undertaken: baseline studies, review and assessment of lessons from other countries, and project preparation and discussion with relevant partners and stakeholders, being able to formulate a proposal that will address priority issues in the Lake Tana watershed.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY

There are no findings or indications that may affect the project implementation. Project design was finalized without major concerns.

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW

<i>Project Preparation Activities Approved</i>	<i>Implementation Status</i>	<i>GEF Amount (\$)</i>				<i>Co-financing (\$)</i>
		<i>Amount Approved</i>	<i>Amount Spent to date</i>	<i>Amount Committed</i>	<i>Uncommitted Amount*</i>	
1. Baseline studies	Completed	100,000	100,000	0	0	29,439
2. Environmental Impact Assessment	Completed	20,000	20,000	0	0	7,360
3. Review, assessment and lessons learned from other countries' experience	Completed	85,000	85,000	0	0	25,233
4. Project Design and Preparation	Completed	105,000	95,000	0	0	28,387
5. PDF management costs	Completed	40,000	50,000	0	0	14,719
Total		350,000	350,000	0	0	105,138



Government of the Federal Democratic Republic of Ethiopia
Amhara National Regional State

Full-Sized Project Document

**Community-Based Integrated Natural Resources Management
in the
Lake Tana Watershed, Ethiopia**

prepared by

Amhara National Regional State of the Federal Republic of Ethiopia

in collaboration with

Global Environment Facility (GEF)

and

International Fund for Agricultural Development (IFAD)

October 2008

PROJECT SUMMARY

This 7-year project focuses on the Lake Tana watershed within Amhara National Regional State (ANRS). It will pioneer a new approach in Ethiopia under the national SLM platform, which has been developed in the spirit and context of TerrAfrica and the GEF's Strategic Investment Program. The project's objective is to increase household income through upscaling sustainable land management practices in the watershed. Simultaneously, ecosystem integrity will be improved and global environmental benefits realised: these include carbon sequestered in the land, biodiversity (including agrobiodiversity) of global importance protected, and the source of the Blue Nile conserved.

The project will be implemented in 21 *woredas*/districts of the ANRS with a total area of just over 15,000 km², and inhabited by 2.5 million people – nearly 90% of whom depend directly on the land for a living. The watershed has a severe land degradation problem resulting from overgrazing, deforestation, unsustainable agricultural practices and over-exploitation of wetlands. The problem is aggravated by lack of institutional capacity, poor coordination of stakeholders, and absence, or weak implementation, of policies. Land degradation exacerbates already low land productivity and poverty is increasing: it also threatens biodiversity resources of local, national and global significance.

This project, therefore, will focus on removing barriers to sustainable land management (SLM) through demonstrating best practices and stimulating upscaling. It will emphasize the connection between conservation and production. The project will result in SLM issues being mainstreamed into the operations of a range of institutions and projects working in the area, thus ensuring sustainability. Local communities were actively involved in the planning phase and will continue to be involved in the whole implementation process. Existing local institutions will also be strengthened so they can play a central role. The project will work on the entire watershed in activities such as capacity building and tenure security, while other activities will focus on selected sub-watersheds where participatory processes of selection, demonstration and upscaling of SLM practices – ranging from proven technologies to local innovations - will be facilitated.

Lake Tana Watershed

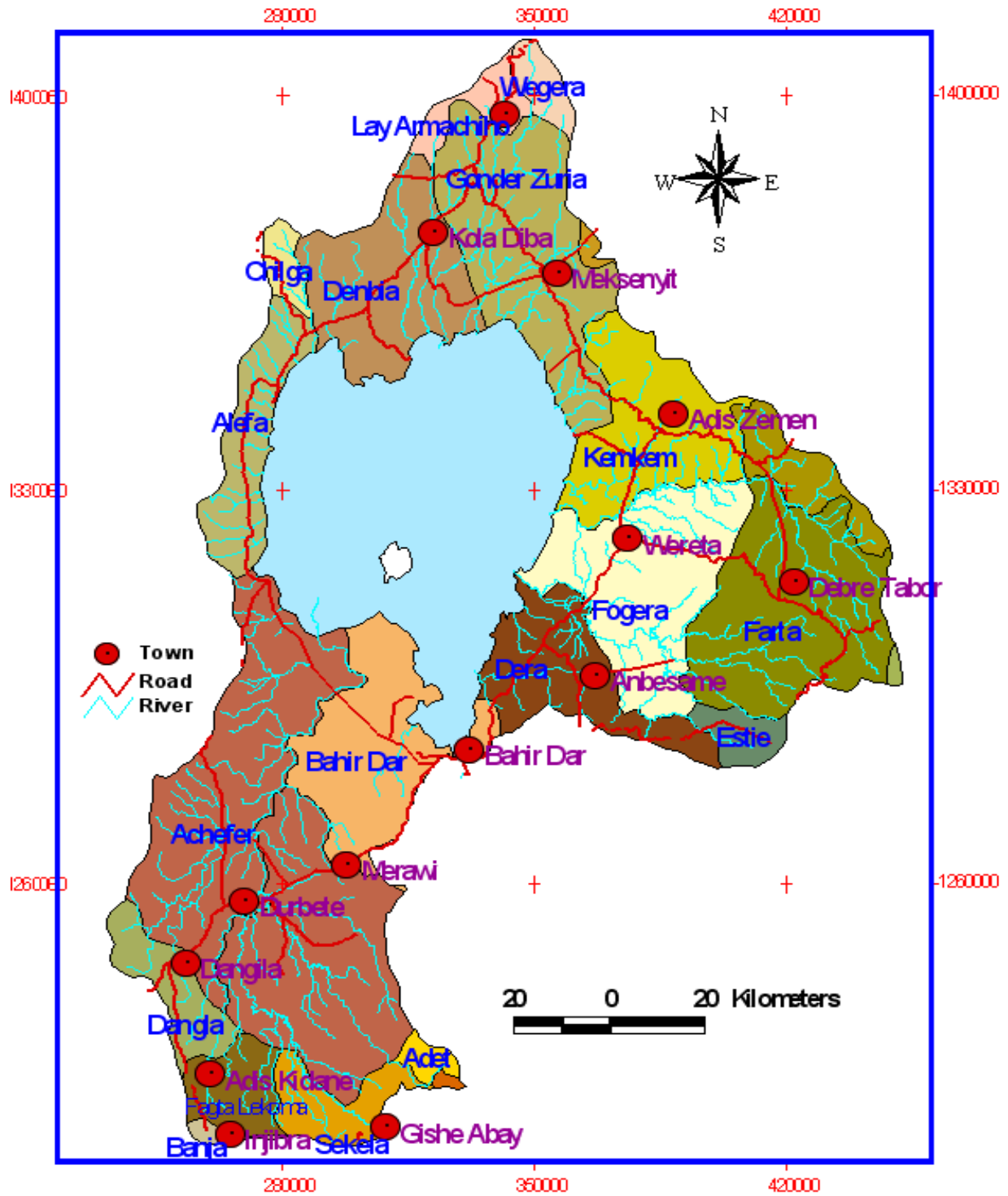


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ACRONYMS and ABBREVIATIONS

ACSI	Amhara Credit and Saving Institution
ADLI	Agricultural Development-Led Industrialization
AFAP	Amhara Forestry Action Program
AfDB	African Development Bank
AISCO	Agricultural Inputs Supply Corporation
ANRS	Amhara National Regional State
APR	Annual Project Report
ARARI	Amhara Region Agricultural Research Institute
ARRA	Amhara Rural Road Authority
ATVET	Agricultural Technical and Vocational Education Training
AWPB	Annual Work Plan and Budget
BCEOM	<i>Bureau Central d'Etudes pour les Equipments d'Outre-Mer</i>
BDU	Bahir Dar University
BoARD	Bureau of Agriculture and Rural Development
BoCP	Bureau of Cooperative Promotion
BoFED	Bureau of Finance and Economic Development
BoWA	Bureau of Women's Affairs
BoWRD	Bureau of Water Resource Development
CAADP	Comprehensive Africa Agriculture Development Program
CBD	Convention on Biological Diversity
CBOs	Community-Based Organizations
CCD	Convention to Combat Desertification
CITES	Convention on International Trade in Endangered Species of Fauna and Flora
COSOP	Country Strategic Opportunities Paper
CSE	Conservation Strategy of Ethiopia
DA	Development Agent
DfID	Department for International Development
EAs	Executing Agencies
ECPSLM	Ethiopian Country Program for SLM
EEPCO	Ethiopian Electric Power Corporation
EFAP	Ethiopia Forestry Action Program
EIA	Environmental Impact Assessment
ELTAP	Ethiopian Land Tenure and Administration Program
ENCCD	Ethiopian NGOs/CBOs Coordination Committee for Combating Desertification
EPA	Environmental Protection Authority
EPC	Environmental Protection Council
EPE	Environmental Policy of Ethiopia
EPLAUA	Environmental Protection Land Administration and Use Authority
ERA	Ethiopian Road Authority
ETB	Ethiopian Birr
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field Schools
FSPCDPO	Food Security Program Coordination and Disaster Prevention Office
FTC	Farmers' Training Centre
GDP	Gross Domestic Product
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GoE	Government of Ethiopia
GPS	Global Positioning System
GTZ	German Technical Cooperation
GWC	Green Water Credits
ha	hectare

HIV	Human Immuno-Deficiency Virus
HLIs	Higher Learning Institutions
IAs	Implementing Agencies
IBC	Institute of Biodiversity Conservation
ICT	Information Communication Technology
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFAD-CO	IFAD Country Office
IGA	Income Generating Activities
ILDIP	Integrated Livestock Development Project
IPM	Integrated Pest Management
IPMS	Improving Productivity and Market Success
IR	Inception Report
IUCN	International Union for Conservation of Nature
IW	Inception Workshop
KLAaUPC	<i>Kebele</i> Land Administration and Use Planning Committee
km	kilometer
LTW	Lake Tana Watershed
M&E	Monitoring and Evaluation
m.asl	meters above sea level
MDGs	Millennium Development Goals
MIS	Management Information System
MoARD	Ministry of Agriculture and Rural Development
MoFED	Ministry of Finance and Economic Development
MoWR	Ministry of Water Resources
MRERDEO	Mines and Rural Energy Resource Development and Expansion
MTR	Mid-Term Review
NAP	National Action Program
NBSAP	National Biodiversity Strategy Action Program
NEPAD	New Partnership for Africa's Development
NGO	Non Governmental Organization
NRM	Natural Resources Management
OoARD	Office of Agriculture and Rural Development
OP	Operational Program
ORDA	Organization for Rehabilitation and Development in Amhara
PADPA	Parks Development and Protection Authority
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PASIDP	Participatory Small Scale Irrigation Development Program
PB	Project Brief
PCR	Project Completion Report
PCU	Project Coordination Unit
PDF	Project Development Fund
PDF-B	Project Development Fund for Block-B
PDT	Project Designing Team
PFM	Participatory Forest Management
PIC	Prior Informed Consent
PIM	Program Implementation Manual
PIR	Project Implementation Review
PRSP	Poverty Reduction Strategy Paper
PSC	Project Steering Committee
PTR	Project Terminal Report
RAP	Regional Action Plan
RBM	Result-Based Management
RCS	Regional Conservation Strategy
RSC	Regional Steering Committee

RUFIP	Rural Financial Intermediation Program
RUPES	Rewarding the Upland Poor for Environmental Services
SDPRP	Sustainable Development and Poverty Reduction Programs
SH	Sub-Humid
SIDA	Swedish International Development Agency
SIP	Sustainable Investment Program (of the GEF)
SLM	Sustainable Land Management
SM	Sub-Moist
SMNP	Simien Mountain National Park
SSA	Sub-Saharan Africa
SWC	Soil and Water Conservation
TBA _s	Traditional Birth Attendants
ToR	Terms of Reference
TPR	Tripartite Review
TV	Television
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNESCO	United Nations Education Science and Cultural Organization
UNFCCC	United Nations Framework Convention on Climatic Change
USAID	United States Agency for International Development
US\$	United States Dollar
VIPLS	Ventilated Improved Pit-Latrines
WB	World Bank
WBIPP	Woody Biomass Inventory and Strategic Planning Project
WHS	World Habitat Society
WOCAT	World Overview of Conservation Approach and Technologies
WOoARD	<i>Woreda</i> Office of Agriculture and Rural Development
WOoEPLAU	<i>Woreda</i> Office of Environmental Protection Land Administration and Use
WSC	<i>Woreda</i> Steering Committee

1. SITUATION ANALYSIS

1.1 ENVIRONMENTAL CONTEXT

1. Ethiopia is situated in East Africa between 3⁰N and 15⁰N latitudes and 33⁰E and 48⁰E longitude with a total area of 1,130,000 km². It is a country of great geographical diversity with altitudinal ranges from the highest peak at Ras Dashen 4,620 m.asl down to the Afar depression around 110 m below sea level. Much of the country consists of high plateaus and mountain ranges. Altitude is one of the dominant factors influencing the climate and vegetation of the country.

2. The Amhara National Regional State (ANRS), situated at 9⁰ to 13⁰ 45'N and 36⁰ to 40⁰ 30` E, occupies about one-sixth of the country (170,750 km²). The region is characterized by diverse elevations with the lowest point at about 600 m.asl and the highest at 4,620 m.asl. The highest peak of the country, Ras Dashen and the source of the world's longest river, the Blue Nile, are found in this region.

3. The Lake Tana watershed (LTW) is found in the ANRS and is part of the Nile basin, situated within the upper course of the Blue Nile River Basin. Geographically situated between latitude 10°58' – 12°47'N and longitude 36°45' -38°14'E, the watershed consists of 347 *kebeles*, and 21 *woredas* (districts) in four administrative zones of the ANRS (see annex 15).

4. The watershed has a total land surface area of approximately 15,000 km² of which about 55% is under cultivation. Water bodies, grassland, shrub-land and natural forest cover approximately 21%, 10%, 9% and 0.4% of the total area of the watershed, respectively (see Table 1).

5. LTW has eight major agro-ecological zones, namely Hot to Warm Sub-Moist (SM1) (4%), Tepid to Cool Sub-Moist (SM2) (17%), Cold to very Cold Sub-Moist (SM3) (1%), Hot to Warm Moist (M1) (1%), Tepid to Cool Moist (M2) (64%), Cold to very Cold Moist (M3) (5%), Tepid to Warm Sub-Humid (SH1) (1%) and Tepid to Cool Sub-Humid (SH2) (7%). The mean annual rainfall of 12 meteorological stations within the watershed varies from 800 -2,000 mm. Similarly, the average temperature ranges from 11.4 to 16.9°C. There are eight main types of soil groups found in the LTW, Cambisols, Alfisols, Fluvisols, Leptosols, Luvisols, Nitisols, Regosols, and Vertisols.

Table 1: Land Use/ Land Cover of LTW

Type of land use/land cover	Area (ha)	%
Cultivated	824,285	54.95
Water	315,960	21.06
Grassland	155,735	10.38
Shrub land	134,250	8.95
Wetlands/Swampy/	24,000	1.6
Plantation forest	16,410	1.09
Rock	7,925	0.53
Natural forest	5,910	0.39
Others/Settlement	5,330	0.36
Woodland	4,710	0.31
Bare soil	3,310	0.22
Afro-alpine	2,235	0.15
Total	1,500,060	100

1.1.1 Water Resources

6. The watershed contains the largest lake of the country- Lake Tana with an area of just over 3,000 km², a width of 60 km, a length of 74 km, an average depth of 9m and a surface level of 1,785 m.asl. The source of Lake Tana is from surface runoff, rainfall on the lake surface and ground water recharge due to the presence of extensive wetlands. Lake Tana accounts for 50% of the total inland water of the country, and has 60 rivers and streams that flow into it. However, 87% of the inflow is contributed by four perennial rivers; namely Gilgel Abay, Gumara, Rib and Megech. It has a significant share of the country's irrigation and hydropower potential. As the source of the Blue Nile, it contributes a significant amount of water to Sudan and Egypt through the Nile system.

7. LTW has about 250,200 ha of potentially irrigable land. However, irrigation development is currently only 4% of that potential: currently some 10,000 ha are irrigated representing just over 1% of the cultivated area of the watershed. Due to the low extent of irrigation most of the food, as well as cash crops is produced using a single - unreliable - rainfall season. This situation aggravates land degradation by obliging farmers to expand their cropland to marginal lands in order to produce adequate amount of grain for their subsistence.

8. Although there is high water potential in LTW, only about 30% of the population has access to potable water, and consequently the population is affected by waterborne diseases. The total sources of potable water supply in the watershed are currently 1,946. Of these, 1,135 (58%) are hand dug wells, 735 (38%) springs, 63 (3%) shallow wells, and 13 (1%) boreholes.

1.1.2 Ecosystems, Fauna and Flora

9. Identification and classification of ecosystems has been very limited at national or regional level. Thus vegetation types in the country are considered as being equivalent to ecosystems. According to the Biodiversity Strategy and Action Plan (BSAP, 2005) Ethiopia is categorized under 10 vegetation-based major ecosystems. The existence of a wide range of ecosystems with varied ecological, edaphic, altitudinal and climatic conditions accounts for the wide diversity of biological resources both in terms of flora and fauna.

10. The LTW contains five of these 10 vegetation-based ecosystems. These are: dry evergreen montane forest and evergreen scrub ecosystem; montane grassland ecosystem; aquatic ecosystem; alpine and sub-afroalpine ecosystems; and wetland ecosystem.

11. The largest extent of wetlands in Ethiopia are found in the LTW: there are wetlands surrounding practically the whole lake. The Dembia plain to the north, the Fogera plain to the east and the Kunzila plain to the southwest are areas bordering the lake, which are often flooded during the rainy seasons.

12. The National Consultative Workshop on the Ramsar Convention (2004) and the World Habitat Society (WHS, 2004) identified Lake Tana and the Fogera wetlands as a potential sites for United Nations Education Science and Cultural Organization (UNESCO) Man and the Biosphere Reserves and Wetland conservation. They were also identified as important bird areas due to presence of globally threatened endemic species, and migrating birds. Besides this, the wetlands provide important environmental functions such as ground water recharge, flood control, sediment retention and regulating water flow into the Nile basin.

13. The diverse geographical position, range of altitude, rainfall pattern and soil variability has created a conducive environment for the development of a wide variety of fauna and flora in Ethiopia. The flora of the country is very diverse and it is estimated that 6,500-7,000 species of higher plants occur, of which 12% are endemic. Ethiopia has the fifth largest flora in tropical Africa and is one of the 12 centres of origin/diversity of crops. The country is also a centre of fauna diversity. Of the 277 mammals, 862 birds, 201 reptiles and 63 amphibians, 29, 16, 10 and 34 species respectively, are endemic to Ethiopia,.

14. Due to its diverse landscape, the LTW itself hosts a wide variety of fauna and flora and is known for endemic plants, birds and mammals of global importance. The presence of a number of churches and monasteries with their culture of protecting surrounding natural vegetation has contributed to the existence of a wide range of biodiversity.

15. The wetlands and forests of the watershed provide a habitat for aquatic and terrestrial mammals. Of the large mammals, the Hippopotamus (*Hippopotamus amphibius*) is the most prominent both on the fringes of Lake Tana and the Blue Nile. LTW also provides habitats for globally threatened and biome-restricted bird species and large numbers of waterfowl (in flocks of as many as 20,000) occur. From 19 highland biome species, 40% are found around Lake Tana. The lake harbors diverse fish species, including the only remaining species flock of cyprinid (*Labeobarbus* spp.) fishes left in the world. It has 26 species, of which 20 species are endemic to the country. Among these, 18 species are found only in Lake Tana.

16. Regarding woody plant diversity of the watershed, 113 species were identified in the Zege peninsula alone. Similarly, the presence of 67 species was confirmed in one of the relatively undisturbed dry evergreen afro-montane forests of Tara Gedam Monastery. These habitat patches may be the only primary forests remaining locally. Several endemic and endangered species, which in some places were destroyed completely over the last century, have been recorded from such church forests. They buffer against the depletion of genetically adapted local variants and overall biodiversity in the area. These forests form examples of *in situ* conservation sites and are sources of seed for rehabilitation of degraded areas.

17. The important woody plant species include: *Albizia gummifera*, *Albizia schimperiana*, *Acocanthera schimperi*, *Bersama abyssinica*, *Calpurnea aurea*, *Dombeya torrida*, *Dracaena steudneri*, *Entada abyssinica*, *Euclea shimperi*, *Ficus lutea*, *Gardenia fernifolia*, *Myrica salicifolia*, *Olea capensis*, *Syzygium guineense*, *Teclea nobilis*, *Allophylus abyssinicus*, *Apodytes dimidata*, *Otostegia tomentosa*, *Pterolobium stellatum*, *Vernonia myriantha*, *Phytolacca dodecandra*, *Dodonaea angustifolia*, *Capparis tomentosa* and *Carissa edulis*.

18. The watershed is also rich in aquatic flora. A total of 85 species of phytoplankton are recognized so far. The eastern and southern shores of Lake Tana are covered with swamps dominated by papyrus (*Cyperus papyrus*), which extends from the shore and forms floating islands in the open water.

19. This diversity of fauna and flora should not however disguise the fact that several of the existing species are endangered due to loss and fragmentation of habitat, and are found in scattered and limited localities. Degradation of forests and wetlands in the past has caused severe degradation of habitats of both flora and fauna. As a result, various species of plant and wildlife are confirmed by community members to be very few in numbers and are at the risk of, at least, local extinction: others have already disappeared locally. Unless the root causes of land degradation are addressed and mitigated, such wealth of diversity of local and global importance will be lost.

1.1.3 Genetic Diversity

20. Field crops which make Ethiopia a primary gene centre include *noug* (*Guizotia abyssinica*), *teff* (*Eragrostis tef*), *mashila* (*Sorghum bicolor*) and Ethiopian mustard (*Brassica carinata*). Many indigenous medicinal plants such as *endod* (*Phytolacca dodecandra*), *kosso* (*Hagenia abyssinica*), *gesho* (*Rhamnus prinoides*), *wanza* (*Cordia africana*) and *girawa* (*Vernonia amygdalina*) are also found in the watershed.

21. The LTW is a major centre of livestock resources and genetic diversity. The Fogera wetland supports the native Fogera cattle breed. This breed is an important gene pool for crossbreeding to improve milk production in indigenous cattle. Other livestock characteristic of the watershed, with good feed conversion traits, include the Dangillie and Washerie sheep, and Tilli chicken breeds.

1.1.4 Forest Resources

22. Farm forestry, either in the form of homestead and boundary plantations, roadside plantations or woodlots is the dominant forestry activity in the watershed. Additionally, indigenous agroforestry practices in the form of retaining naturally regenerated trees dispersed in crop fields are common traditions in the watershed. These indigenous multipurpose tree species are consciously and deliberately nurtured by the farmers due to their multitude benefits. The dominant species are *Croton macrostachyus*, *Faidherbia albida*, *Cordia africana*, *Ficus thunninghii*, *Ficus sycomorus*, and *Acacia seyal*.

23. High density, short rotation eucalyptus woodlots are increasing in the LTW especially in the southern and eastern part. Privately owned plantation forests are dominated by eucalyptus species (*Eucalyptus globulus* and *Eucalyptus camaldulensis*) in high density stands.

24. The other most important woody vegetation resource in the watershed is highland bamboo. It grows in the four highland *woredas*, namely Sekela, Banja, Fagta Lekoma and Farta. But in Farta *woreda*, almost all has disappeared except remnants around homesteads. The highland farming system is poorly productive, and poverty here is rampant. Hence, the community largely depends on sales of unprocessed bamboo and handicrafts. There many of traditional bamboo products which are produced and used within the communities as household tools and furniture.

25. There is no statistical basis on which to establish current rates of deforestation in Ethiopia or in ANRS, or the LTW. At national level a figure of equivalent to 150,000 - 200,000 ha/yr loss of natural forest has been quoted in several reports. Still, some patches of remnant natural forests are located in the LTW and most of them – with the exception of those surrounding religious institutions - are being disturbed due to pressure exerted by the local people.

26. Long term clearing and loss of woody vegetation have increased, and will continue to significantly increase, greenhouse gases in the atmosphere and aggravate climate change at the global level. Change in biodiversity has also impact on climate change. Alterations to genetic or species biodiversity can lead to change in the structure and functioning of ecosystems and their interaction with water, carbon, nitrogen, and other major biogeochemical cycles.

27. One of the burning issues in the country in general and in ANRS's forestry sector in particular, is how to improve the communities' sense of ownership over the remnant forest resources. It is widely agreed amongst forestry experts that the best way to conserve these resources is to share management responsibilities and benefits with the communities living in adjacent to the forest. So the "Participatory Forest Management" (PFM) system is one potential alternative forest management option which will be considered. Patches of natural forests in the LTW, including Zegie, Tara Gedam, Alem Saga, Kulkual Ber and others are viable locations for PFM.

1.1.5 Land Degradation Issues

28. Often quoted figures state that the country loses 2 billion tons of fertile soil every year, of which 1.1 billion (58%) is from the ANRS. Furthermore the annual loss of cultivated land in ANRS – mainly infertile land abandoned – was estimated to be about 6,365 ha in the year 2000 and could reach 62,716 ha by the year 2025. These losses occur despite the fact that crop land is actually expanding into grazing areas and other marginal zones: the rate of loss is greater than the areas "gained". These figures indicate the seriousness of land degradation and the urgency of undertaking remedial measures.

29. Due to erosive rainfall and deforestation and resulting sparse land cover, some estimates give the annual gross soil loss in vulnerable parts of the LTW as high as 230 tonnes/ha, though the average net loss per hectare is 11 tonnes/ha. From the four major rivers, the average sediment load delivered to the lake is around 13.5×10^6 tonnes. The estimated mean annual sediment outflow from the lake is around 1.1×10^6 tons. Thus, about 91% of sediment accumulates in the lake. This sediment mainly originates

from anthropogenically accelerated soil erosion occurring on arable, grazing and forestlands in the catchment area.

30. The serious population pressure on the available natural resources implies massive removal of vegetation cover to meet the increasing demand for food, feed, and fuelwood. The loss of vegetation results in soil erosion, decline of household income and land productivity leading to poverty. The major causes of land degradation include deforestation, overgrazing, unsustainable agricultural practices and wetland degradation.

31. Traditional cultivation practices – often ploughing the land several times before sowing - the steep topography and the erosive rainfall contribute to the removal of the top fertile soil in Ethiopia. Consequently, about 20,000 to 30,000 ha of cropland is abandoned yearly in the highlands and, due to this huge cropland loss, grain production is estimated to be reduced by 2% annually, which is roughly equivalent to 120,000 tonnes of cereal.

32. Cropland deterioration due to unsustainable crop production practices results in declining crop productivity, reduction of household income, poverty, loss of ecosystem integrity and crop diversity in the LTW. Continuous cultivation of a farmland with inadequate application of organic as well as inorganic fertilizer (average annual fertilizer application rate is as low as 28 kg/ha) results in soil fertility depletion. Furthermore, removal of nutrients within crop residue and dung due to shortage of fuelwood and animal feed, has resulted in severe “fertility mining”.

33. The termination of traditional fallowing and cereal-legume crop rotation, due to the shortage of farmland driven by population growth, further contributes to soil fertility depletion and crop diversity losses.

34. Shortage of improved crop production technologies, lack of demonstrations and upscaling services, and inadequate seed supply has enforced farmers to follow “horizontal expansion” through opening new cropland by clearing natural forestlands and intruding on grazing lands. This practice has increased soil erosion through deforestation and overgrazing. The rainfed, low-input crop production system (only 10,000 ha representing 1.1% of the total cropland is irrigated) requires extensive areas for cultivation, and the population increase has thus triggered cultivation of marginal lands.

35. The traditional open access grazing system has led to severe degradation of grazing lands in the LTW. Land users in the watershed can, by tradition, own as many livestock as they wish, which encourages overstocking and aggravates overgrazing. Surface soil compaction reduces infiltration of rainfall into the soil, and increases surface runoff. A degraded soil structure impairs the capacity of the soil to store rainwater for subsequent use for growth of forage species. In this regard, in areas where pastures are under communal property regimes, the risk of overgrazing is particularly acute.

36. In the LTW, population growth has resulted in a substantial reduction in land holdings and this in turn has led inevitably to encroachment onto communal grazing and marginal lands for cultivation. Livestock numbers on the other hand have increased, and this has led to overstocking of those areas. Livestock production, which accounts for 40% of the average household income, is thus reduced and farmers’ incomes decline correspondingly.

37. In general land degradation is the main threat in sustainable use of natural resources in the watershed, both in affecting the lives of the rural poor and damaging the ecosystem integrity - and therefore the biodiversity resources.

38. The impacts of change in land use is reflected in the peak flows and average annual runoff: the tragic 2006 floods that affected parts of Ethiopia have been naturally perceived by many as being an outcome of higher rainfall/runoff. Flooding in the past used to occur at long intervals with limited casualties. These days, the interval has significantly shortened. Prior to 1996, the Fogera plains of the LTW were never flooded on a significant scale. Since then, seven flooding incidences have been

experienced. Unlike previous years, the 2006 rainy season flooding was unique in many respects. The wave of floods hit not only traditionally inundated areas of the country, but also new areas where floods were hardly experienced before. In the Fogera plains, floods killed three persons, made 35,900 people homeless, inundated over 6,650 ha of cropland, destroyed more than 320 beehives, damaged a school and several water points, spoiled stored seeds, and deposited large volume of gravel and sand on farmlands.

39. The watershed depends heavily on rainfed agriculture, making rural livelihoods and food security highly vulnerable to climate variability such as shifts in growing season conditions. A review of climatic history indicates that drought occurs every 3-5 years in some parts of the country and every 6-8 years in the whole of Ethiopia. It causes severe losses under rainfed agriculture. For example, the decline in the level of rainfall during severe drought years in Ethiopia (1984/85, 1991/92, 1993/94 and 1999/2000) was accompanied by serious reductions in rainfed agriculture outputs. A 10% drop in rainfall (below the long-term national averages) is said to result in a drop of 4.2% in cereal yields on average.

40. Human activities have caused, and will continue to cause, a loss in biodiversity through *inter alia*, destruction of habitats due to land use and land cover change, soil and water pollution and degradation, habitat fragmentation, selective exploitation of species and the invasion of non-native species. Climate change will add to these pressures on many threatened and vulnerable species.

41. Species with limited climate range and/or restricted habitat requirement (such as the endemic fish species of labeobarbus in Lake Tana) are typically the most vulnerable to extinction. The risk of local loss is high for many species especially those that are already at risk (such as *Cordia africana*, *Olea europea*, *Juniperus procera* and *Hagenia abyssinica*) due to factors such as low population numbers, restricted or patchy habitats, and limited climatic ranges. Others potentially vulnerable to climate change are geographically restricted ecosystems - such as the islands of Lake Tana, and fragmented ecosystems - such as churches and monasteries that are separated and isolated.

1.1.6 Impacts of Climate Change

42. The most important impacts of climate change on biodiversity are centred on the most vulnerable ecosystems. The montane centres of diversity are particularly threatened by an increase in temperature, since many represent isolated populations (Lake Tana forests) with no possibility of vertical or horizontal migration; increase in droughts and floods (e.g. that of 2006). Other extreme events would add to stresses on many ecosystems. Significant local and regional extinction of plants and animals species, many of which are important basic resources for the people, would affect rural livelihoods and tourism.

43. One of the most significant impacts of climate change is likely to be on the hydrological system, and hence on river flows and regional water resources. This will be true in LTW where water resources are very sensitive to climatic variability, particularly rainfall. Most of the small-scale water development's existing water supply schemes draw directly on rivers or the lake. The supply of drinking water for people and livestock depends mainly on river flow, so a decrease in the flow will have a severe impact. During consultation, the community members confirmed that inappropriate management of the watershed coupled with climate change has resulted in declining base flow of rivers.

44. The effects of climate change are already visible in the watershed and are exacerbating land degradation processes. This has created immense challenges for the poor rural communities because of their limited adaptive capacity and high dependence on fragile land resources. Injudicious cultivation of marginal land leads to land degradation and therefore reduced productivity, reinforcing rural poverty. This, in turn, leads to further overexploitation of the marginal lands, and so on in a vicious circle.

45. Climate change has increased the extent of areas with a length of growing period of less than 120 days. This has reduced cereal production and the types of crops as well as crop varieties growing on the field. The situation has resulted in agrobiodiversity loss in the watershed. For example, the number of barley, faba bean, and field pea varieties grown in the cooler parts of the watershed has declined, and only the early maturing varieties remain. Similarly, in the mid and lowlands, some varieties of *teff*, sorghum and *noug* which were grown traditionally, have now been lost.

46. The potential negative impacts of climate change on livestock production are also likely to be serious in the LTW area, where production is already operating at the margins. The effects of climate change will be noted with respect to forage yield (changes in the structure of vegetation communities; changes in the lignification of vegetation), changes in livestock productivity and changes in ecological processes. The well-being and productivity of livestock in natural conditions depend on the animals' ability to cope with challenges, such as altered nutritional and thermal environments and exposure to disease and parasites. This is most likely to be manifested as decreases in feed intake, milk production, and rates of reproduction.

47. Climatic variability is a critical factor in triggering trypanosomiasis epidemics, and stimulating many type of internal parasites (liver fluke; lung worm) as well as external parasites (ticks; mange mites). Previously, the LTW experienced rare trypanosomiasis and parasite outbreaks. The pattern is changing. Changes in the incidence and spread of disease and parasites will reduce animal productivity and increase animal morbidity and mortality.

48. It is known that climate variability and extreme weather, such as high temperatures and intense rainfall events, are critical factors in initiating malaria epidemics. Previously, LTW experienced rare malaria outbreaks; however, due to increase in ambient temperature, the current pattern is characterized by increased outbreak frequencies, expanded geographic range, and increased case-fatality rates.

1.2 SOCIO-ECONOMIC CONTEXT

49. Ethiopia is the second most populous country in Sub-Saharan Africa with a current estimate of 80 million people. Similarly, ANRS with total population of 19.63 million and annual growth rate of 2.73% is the second populous regional state in Ethiopia. The majority of the population (89%) lives in rural areas and is engaged in agricultural activities.

50. Ethiopia is endowed with historical, cultural, and natural resources, which have high potential for tourism development. Out of seven world heritages sites of the country registered by UNESCO, three of them (Lalibela, Gondar and the Simien Mountain National Park) are found in the ANRS. Of these, Gondar castle is found within the LTW. In addition, the lake area consists of 37 islands and 16 peninsulas, which are home to 21 churches and monasteries with strong cultural and religious heritage. These islands and peninsulas are already tourist destinations – but have further potential to provide income and employment opportunities to the local people. Tourism can contribute to the reduction of land degradation through taking people off the land – and by providing (a limited) market for “niche” local products.

51. The LTW was home to 2.5 million people in the year 2005 (49.2% female; 50.8% male) and accounted for 12.7% of the total population of the ANRS. The watershed is one of the most populated areas in the region, with average family size of 4.9 persons per household and population density of 158 persons/km² - considerably higher than the regional average of 113 persons/km².

52. Subsistence, mixed, agriculture is the mainstay of the national economy. The same is true for ANRS where it accounts for half of the GDP, 60% of exports, and 89% of total employment. This implies that agriculture, and particularly crop production, remains the dominant economic sector in the LTW. The livestock sector accounts for about 40% of agricultural GDP and 20% of the total GDP. It is estimated that the contribution of this sector to total GDP increases to about 35% if draught power,

manure and transport services are taken into account. Similarly, the contribution of forestry sub-sector in the regional GDP stood 4th in the whole economy and 3rd in the agricultural GDP.

53. The current livelihood system in the watershed is strongly traditional, and the community continues to live under extremely poor food security conditions. To solve this problem, the federal and regional governments follow the Agricultural Development-Led Industrialization (ADLI) policy and strategy. However, 45% of the rural population of the country and 43% of Amhara region remain under absolute poverty. This situation forces farmers to exploit the natural resource base through localized over-fishing, deforestation for fuelwood, reed harvesting and selling, and as noted already, cultivating marginal and fragile areas.

54. Out of 89% of the total population of ANRS living in rural areas, 27% comprise youth. About 47% of the youth population in rural areas is landless. Off-farm activities as livelihood strategies are very limited and underdeveloped in the watershed due to many reasons. The lack of access to credit and rural financial services limits opportunities for developing significant alternative income sources in the area. As a result, the landless rural youth has no alternative to abusing the natural resource base in order to survive.

55. Rural households in the project area must increasingly employ alternative income sources either to complement subsistence and below-subsistence crop production because they possess little or no land. However, off-farm activities as a livelihood strategy and/or means of getting additional income are very limited and underdeveloped. Instead of looking for such options, parents of the landless youth share their increasingly fragmented land resources when their children are about to begin families.

56. The most important off-farm activities in the watershed include cottage industries (weaving, blacksmithing, carpentry and tailoring), sale of fuelwood, sale of papyrus, petty trade (cereals, livestock and local alcoholic beverages), and sale of souvenirs of cultural and religious origin. There are also some people, mainly the landless youth, who temporarily migrate to other areas.

57. Engagement in off-farm activities as a means of livelihood is limited due to many reasons. The lack of access to credit and rural financial services limits opportunities for developing significant alternative income sources in the area. Lack of skills and access to market is also another limiting factor. There are good opportunities for the landless youth if they are organized into fishery cooperatives and supported in modern fishery activities. Furthermore, organizing and promoting better processing of bamboo has potential, especially in Sekela, Fagta Lekoma and Banja *woredas*.

58. More than 99% of the people in the watershed depend on biomass fuels (firewood, cow dung and crop residue). The use of kerosene, electricity and other alternative energy sources is negligible in the rural areas. Moreover, the use of improved fuel saving stoves as efficient energy technologies is in its infant stage. Consequently, shortage of fuelwood is very high in the watershed.

59. To overcome the energy problem in the country, the federal government is striving to construct a number of hydroelectric power generating stations. LTW has also enormous hydropower potential. Despite potential environmental hazards associated with altering hydrological regimes, a shift to hydropower may substantially reduce land degradation, as well as greenhouse gas emissions. However electrification of the LTW is in the distant future.

60. The total road network of the Amhara region is about 5,950 km, implying a regional road density of almost 37 km per 1,000 km². This means that quite a number of people, especially in rural areas, still have to travel long distances to reach main roads and find transport. The rural road network in LTW mirrors the regional condition and can be considered as a limiting factor to development in the area. A poor road network contributes to low productivity since it limits the use of external inputs by farmers: it also constrains efficient agricultural marketing.

61. Lake Tana serves as a means of water transport to the islands and peninsulas by ship or boat. Sand is mined from the lake and the lake shore (800 tonnes of sand per year) for the construction industry. This activity makes its own, minor, contribution to desilting the lake.

62. The primary health service coverage both in ANRS and LTW is about 55%. Considerable numbers of people living in the watershed are affected by HIV/AIDS and malaria. The trend of HIV/AIDS prevalence (ages 15-49) in ANRS is reported as 5.8%, 6.1%, 6.5% and 6.7% in the years 2002, 2003, 2004 and 2005, respectively. An HIV/AIDS and malaria infected population is less productive, and income is used primarily for medical treatment; indirectly this situation contributes to land degradation through deteriorating household income and assets.

63. The Federal Government of Ethiopia has developed a national policy to speed up equality between men and women so that women can participate in the political, social and economic matters of their country. Furthermore, a Ministry of Women's Affairs and line offices have been established at different levels to facilitate matters related to women in the country. Although the government is striving to solve gender problems - and women constitute half of the total population - only 35% of civil servants are women. They also face various gender-inequality related problems such as long distances to travel to collect firewood and water due to lack of improved technology, shortage of resources, and inadequate infrastructure.

64. Women are heavily involved in agricultural production through supplying labour for various agricultural activities and making important farm management decisions. They play a significant role in agricultural production (they are involved in planting, weeding, harvesting, threshing of crops etc), food processing and management, marketing, promoting indigenous technologies and generating supplementary income for their families. Duties solely undertaken by women in livestock management in the LTW include milking and milk processing, dung cake preparation (for fuel), feeding, and marketing of livestock products. Similarly, they are involved in removing and managing manure. It is thus clear that action to deal with sustainable land management problems of rural communities must take account of this central role of women.

65. A survey which was carried out in Merawi town, West Gojam in 2004, indicated that male fuelwood sellers (collectors) mostly sell chopped eucalyptus wood by taking it to the market on donkeys' backs, while the women sell brush wood collected from natural forests by taking to the market on their *own* backs.

66. Regarding the input-output linkage between rural and urban areas, small and micro-enterprises that depend on agricultural output such as food and beverage processing, leather working, carpentry, work in hotels and restaurant are expanding in urban areas. However, a sustainable supply of sufficient quantity of good quality agricultural products is not guaranteed. In turn, there is a very limited demand for industrial products in the rural areas. This is due to both low purchasing power and consumption patterns/ lifestyle.

1.3. INSTITUTIONAL CONTEXT

67. In Ethiopia a number of institutions have been established and legally delegated to pursue the cause of sustainable land management. Most of these institutions have regional and district level bureaus and offices respectively. Some of the most important are listed below.

1.3.1 National Level Institutions

68. *Ministry of Agriculture and Rural Development (MoARD)*: Proclamation No. 300/2004 issued on 13th January 2004 amended the proclamation for the reorganization of the Executive Organs of the Federal Democratic Republic of Ethiopia. Thus, the MOARD replaced the former Ministry of Agriculture and Ministry of Rural Development. The power and duties vested in the ministry include: conservation and utilization of forest and wildlife resources, food security program, water harvesting

and small-scale irrigation, monitoring events affecting agricultural development and operating an early warning system, enhancing market-led agricultural development, issuing guidelines and procedures for agricultural input evaluation and release, ensuring the distribution of high quality agricultural inputs to users, and establishing and directing training centres of agriculture and rural technology.

69. The ministry is working to solve problems associated with deforestation, land degradation, inappropriate land use, decline in crop and livestock production, dependency on biomass fuels, lack of alternatives livelihoods, etc. The ministry, on the basis of its national legislation, has the responsibility and duty to implement the Convention on International Trade in Endangered Species of fauna and flora (CITES) and Prior Informed Consent (PIC) to which Ethiopia is a party through its two departments, namely Wildlife Conservation and Plant Protection. The aforementioned duties and responsibilities are directly related to the strategic programs of the GEF-4. These include supporting sustainable agriculture and rangeland management, forest management and production landscapes - which all fall within the GEF's focal area of land degradation. In general, as explained above, the MoRAD is one of the most important institutions in realising SLM within Ethiopia.

70. *Environmental Protection Authority (EPA)*: Environmental Organs Establishment Proclamation (Proclamation No. 295/2002) was enacted in 2002. According to this proclamation, EPA is accountable to the Prime Minister. This proclamation also established the Environmental Protection Council (EPC) to oversee EPA's activities, as well as the activities of sectoral agencies and environmental units with respect to environmental management. It coordinates ministries and agencies on environmental matters. EPA is also responsible for mainstreaming the implementation of the NAP for combating desertification as well as being the focal point for CBD with its direct linkage to SLM. Furthermore, EPA is a focal institution for GEF initiatives.

71. *Ministry of Water Resources (MoWR)*: Understanding the challenges of the water sector, the federal government has given mandates and authority to the MoWR through proclamation No 197/2000. The MoWR is responsible for the planning and management of water resources for drinking and irrigation uses. It has taken a number of reform measures to deal with the problems, constraints, issues, challenges and opportunities of the Ethiopian water sector. Integration, comprehensiveness, a participatory approach and decentralized management are some of the fundamental principles of the ministry with respect to environmental issues. However, deeper consideration of watershed management is far from producing the required results in sustainable land management. The fundamental policy principles that guide the equitable, sustainable and efficient development, utilization, conservation and protection of water resources have not been properly put in place.

72. *Institute of Biodiversity Conservation (IBC)*: Realizing the need for biodiversity conservation and its sustainable use, the Ethiopian government upgraded the former Plant Genetic Resources Centre to the Institute of Biodiversity Conservation (IBC) by proclamation no. 381/2004. This institute has the responsibility to implement the CBD. These are all relevant to those strategic objectives and programs of GEF-4 that relate to SLM.

73. *The Ethiopian Road Authority (ERA)*: The Ethiopian Roads Authority, ERA, was re-established in 1997 through proclamation no. 80/1997. The ERA is currently engaged in planning, construction, maintenance and contract administration for road construction. The Ethiopian Roads Authority has started a process of environmental consideration in all its road projects – thereby attempting to reduce land degradation arising from road construction. To further this, an Environmental Procedures Manual has been prepared for use by all stakeholders involved in the development of the main road networks of the country. In the construction and rehabilitation of roads there is still little attention to taking care and protecting natural resources. This has a negative impact on SLM.

74. *Ethiopian Electric Power Corporation (EEPCO)*: EEPCO was re-established in 1997 by proclamation 18/1997. The Corporation has responsibilities for energy generation and distribution throughout the country. This has its own role in alleviating land degradation by reducing biomass-based fuel demand. Its Environmental Monitoring Unit was established in 2002 at the head office level

to manage the environmental impacts of hydropower establishment and energy transmission projects. EEPCO has an indirect impact on SLM through supplying electric power and reducing the demand on biomass for energy (mainly, as previously noted, wood fuel, crop residues, and cow dung).

75. *Ministry of Finance and Economic Development (MoFED)*: The MoFED is responsible for approving all development programs in the country. It has an Environmental Planning Unit that ensures sustainability and provision of clean and healthy environment requirements within development programs. The ministry also approves and signs multilateral and bilateral partnership programs in upscaling SLM investments that will generate mutual benefits for the global environment and local livelihoods.

76. *Higher Learning Institutions (HLI)*: These are engaged in activities relevant to environmental problems. Addis Ababa University has launched a post-graduate study program in environmental sciences, which offers courses in all major areas of environmental issues. Recently, Gondar and Bahir Dar Universities have also launched training in agricultural fields. The Higher Learning Institutions have a direct potential contribution to SLM through establishing SLM related facilities and departments to build human capacity.

1.3.2 Regional Level Institutions

77. *ANRS Bureau of Agriculture and Rural Development (BoARD)*: The regional government established BoARD with similar mandates as those of MoARD. BoARD was restructured by proclamation No.107/2004. The bureau is working to solve problems associated with, amongst other issues: land degradation, lack of land use planning, decline in crop and livestock productivity, deforestation, dependency on biomass fuels, and lack of alternative livelihoods. The bureau also has regional responsibility and a duty to implement CITES and PIC. BoARD has an institutional structure that reaches down to the grassroots level. It has development agents (DAs) who are working at *kebele* level, which is the lowest administrative structure. Currently, three development agents, responsible for agronomy, livestock, and natural resources management respectively are posted to each *kebele*. The Bureau has a direct mandate to support sustainable agriculture and rangeland management, forest management and production landscapes and investing innovative approach in SLM.

78. *Environmental Protection, Land Administration and Use Authority (EPLAUA)*: In response to the Regional Conservation Strategy, EPLAUA was established as a competent agency by proclamation No. 47/2000. It is responsible for ensuring that matters pertaining to the regions' social and economic development activities are carried out in a manner that will protect the welfare of people as well as sustainably protect, develop and utilize resources. It is also a focal institution at regional level to implement environment related conventions. Currently, it has three technical departments and four service providing sections. In each district and zone it has branch offices to implement the duties and responsibilities vested by the same proclamation. The authority creates a conducive atmosphere for SLM ensuring that the management, administration and use of rural land in the region is carried out according to established laws and regulations.

79. *Bureau of Finance and Economic Development (BoFED)*: The Bureau of Finance and Economic Development was established by merging the two separate bureaus - the former Finance Bureau, and the Planning and Economic Development Bureau - by proclamation number 60/ 2002. BoFED is responsible for aspects linked to the mobilization of internal and external resources for the implementation of natural resources management in the region.

80. *ANRS Parks Development and Protection Authority (PADPA)*: As indicated in the RCS document, wildlife conservation is stipulated as a sectoral policy to ensure the long-term conservation and management of wildlife assets, especially those species which are teetering on the brink of extinction. To strengthen conservation and management of this park and establish similar protected areas in the region so as to generate income from sustainable wildlife conservation, development and management,

the regional government established the PADPA in 2003. The aforementioned duties of the authority have strong linkages to SLM.

81. *ANRS Food Security Program Coordination and Disaster Prevention Office (FSPCDPO)*: The FSPCDPO was set up by proclamation No. 101/2004 as an autonomous institution to alleviate poverty and to ensure food security in the region. The ongoing productive safety net program, which has a watershed management component, is under this institution - a baseline SLM investment.

82. *ANRS Bureau of Water Resource Development (BoWRD)*: In the spirit of the RCS and the regional constitution, the Bureau of Water Resource Development was established by proclamation No. 99/2004. This institution is directly responsible for water resource conservation and management in the region in order to attain sustainable water development. BoWRD is responsible directly, or indirectly, for implementing various environmental conventions at regional level. In addition, it has a watershed management component which is related to SLM.

83. *ANRS Mines and Rural Energy Resource Development Expansion Office (MRERDEO)*: This office is responsible for the development of mining, and promotion of energy efficient and alternative energy technologies. It puts in place appropriate control mechanisms to change the situation for resources to be economically managed and developed without causing damage to the natural environment. The office is responsible for the promotion and dissemination of energy saving and alternative energy technologies to reduce the rate of deforestation: highly relevant to SLM.

84. *ANRS Rural Roads Authority*: Realizing that the expansion of roads into rural areas has a great role in accelerating economic and social development of the region, which in turn has an impact on poverty reduction, the council of the ANRS established the Rural Roads Authority by Proclamation No 41/1999. However, the environmental concerns of the authority in its design and construction work remains questionable. The authority, on the other hand indirectly contributes to SLM by establishing access roads (when these are constructed correctly) for rural community development.

85. *ANRS Agricultural Research Institute (ARARI)*: ANRS established ARARI by Proclamation No 48/2000 to lead agricultural research in the region. Research for generating new technologies and adapting foreign technologies that helps to meet the region's agricultural development strategy is its goal. It is an important institution in improving agriculture, and forms the basis for the development of the region's economy and the social welfare of its people. Furthering research outputs on environmental conservation through – amongst other fields - targeted research on improving farmers' innovation in SLM could have an impact on poverty reduction. The institute has three directorates; one of these is the natural resources research directorate.

1.3.3 NGOs and CBOs

86. There are more than 650 registered NGOs/CBOs in Ethiopia. These NGOs and CBOs are engaged in various fields including environmental protection and natural resource management. Recently they have established a network, called Ethiopian NGOs/CBOs Coordination Committee for Combating Desertification (ENCCD). The ENCCD promotes UNCCD/NAP implementation in the country. Some of the major activities accomplished by ENCCD are: creation of a network among its members and other organizations working in the field; sharing various information and experiences related to UNCCD/NAP implementation; providing information and feedback on different studies conducted by ENCCD on UNCCD/ NAP implementation; participating in training and awareness creation activities to popularize UNCCD/NAP; and participating in meetings representing NGO/CBOs nationally and internationally.

1.3.4 Local Level Institutions

87. Ethiopian rural society has many important traditional and indigenous institutions which are involved in socio-economic activities. Nevertheless, they lack the ability to plan and implement

development initiatives for their communities. The lack of such effort affects mainly women and the landless youth who are marginalized and are the most affected sections of the community. However, these CBOs can be strengthened and transformed to assume various self-help, conservation and natural resources management and development roles if properly organized and their capacity built.

88. The traditional informal savings and loans association (known as *iqub*) could also be transformed to serve as rural credit or revolving fund institutions to undertake conservation and development activities at the community level. The proposed project will build on those indigenous institutions that can facilitate a group approach for loans and fund raising to promote self-help conservation and development activities.

89. The community-based organizations of *mehaber*, *senbete* and *idir* are also important for communal activities in natural resource management. *Mehaber* is a community organization which is organised once in a month on one of the preferred saint days. This community gathering has a strong *de facto* connection to religion. Each member of the *mehaber* has to prepare a feast, turn-by-turn, to honor the saint's day they revere most.

90. *Senbete* is also a religious institution. This gathering occurs on Sunday of every week at the church compound in which the community attends mass. Membership is decided themselves, as with the *mehaber*, and likewise feasts are prepared in turn.

91. *Idir* is a community organization which was originally established for cooperation among the members. This organization is active when members are faced with difficulties such as loss of life or property. Although all these community organization were established for different purposes, informal discussions on economic, environmental, social and political dimensions are common. Hence, there is great potential for the project to use these institutions as a discussion forums for SLM issues - without disrupting their current structural arrangements.

1.4 LAW AND POLICY CONTEXT

92. Ethiopia follows the Agricultural Development Led Industrialization (ADLI) strategy. In the early 1990s, the government of Ethiopia made progress in laying the foundations for addressing environmental problems. One major initiative for introducing environment into the national policy arena was CSE. Similarly, RCS for the ANRS has been developed. Both conservation strategies went far towards raising awareness of environmental issues and contributed to key achievements with respect to environmental policies and institutions.

93. The country also issued the Environmental Policy of Ethiopia (EPE) with its overall goal: "*to improve and enhance the health and quality of life of all Ethiopians through sound management and use of environmental resources in order to meet the needs of the present generation without compromising the ability of future generations to meet their own needs*". Performing activities based on this policy direction can reduce land degradation by avoiding mismanagement of environmental resources and ensures SLM.

94. Rural land-use-related policy issues are addressed in the RCS as cross-sectoral policies to prevent land degradation and natural resource depletion in the region. In response to this, the Rural Land Administration and Use Policy were formulated in detail to identify policy-oriented problems so as to arrive at solutions. Subsequently, proclamation 46/2000 was issued by the ANRS to give legal ground to the policy. Based on experience gained from the implementation of proclamation 46/2000, a revised Rural Land Administration and Use Proclamation was enacted by proclamation No 133/2006 to implement the policy objectives through a legal framework. The objectives of the rural land administration and use policy and proclamation are directed towards enabling farmers to work for sustainable development - and making them beneficiaries of such development by ensuring tenure security.

95. Currently the Government has placed food security and poverty reduction at the top of its development agenda. PASDEP describes the government's approach to achieve the Millennium Development Goals (MDGs) by 2015.

96. In order to address the goals of a balanced population and economic growth and to reduce pressure on natural resources, the country prepared a national population policy in 1993. It focuses on reducing the total fertility rate to 4% and increasing contraceptive use rate to 44% of reproductive-age couples by the year 2015.

97. The National Policy on Ethiopian Women (1993) addresses the prevailing discrimination of women and promotes women's rights and participation in the democratization and development process of the country. It advocates women's participation in political, social and economic spheres. It also confirms their right to own property, demands that they be given equal access to basic social services, and finally states that all prejudices against women be removed.

98. Ethiopia developed a national policy on HIV/AIDS in 1998 with the general objective: "*to provide an enabling environment for the prevention and control of HIV/AIDS*". The policy recognizes that the response to HIV/AIDS needs to be widespread and multi-sectoral.

99. In order to address the issue of public hygiene and environmental health, the council of the people's representative of the Federal Democratic Republic of Ethiopia issued proclamation No. 200/2000. Similarly, the ANRS issued the Hygiene and Environmental Health Regulation of the region (Regulation No 16/2000).

100. A number of other policies have been issued that touch on the interface between development and environment in Ethiopia. For example, the Water Development Policy refers to the need for environmental conservation and protection and the requirement for environmental impact assessment in designing and implementing water resource development projects and programs.

1.5 PROJECT AREA

1.5.1 General Description

101. Lake Tana Watershed (LTW) is situated at the head of the Blue Nile Basin, forming its upper course. Geographically, LTW is bounded between latitude 13° 45'N and Longitude 36° to 40° 30' E It is located in four Administrative Zones and comprises 21 *woredas* and 347 *kebeles*.

102. As previously noted, the five major slope classes of the watershed are 0-2, 2-8, 8-15, 15-30 and above 30 percent. Just over half of the total area has slopes of less than 8 percent. According to the traditional classification of agro-climatic zones of Ethiopia, about 75% of Lake Tana Watershed is located within *Weina Dega* (temperate to cool semi-humid) and 25% within *Dega* (cool to cold humid) extending from 1,785 m.asl at Lake Tana to 4,150 m.asl at Mount Guna in south Gondar. The mean annual rainfall within the watershed varies from 800 to 2,000 mm. Similarly, the average temperature ranges from 11.4 to 16.9°C.

103. According to WBISPP (2002), cultivated lands cover most (55%) of the watershed area. Forest area accounts for 1.5%. Afroalpine areas and grasslands in the watershed account for 10.5%. Shrub lands comprise 9.3% of the total. Alfisols, Fluvisols, Leptosols, Luvisols, Nitisols, Regosols, Vertisols and Cambisols are the major soils found in the watershed.

104. The project will work over the entire watershed in some activities - capacity building for example - whereas in other activities it will follow an integrated development process, focusing on specific areas located in selected watersheds. Here participatory processes of selection, demonstration and upscaling of SLM practices will be facilitated by the project. For this integrated approach two sub-

watersheds have been selected: namely Megech and Upper Gilgel Abay. These were selected because they are free from other project interventions.

105. A profile of land cover, soil types, climate, physiography and demography has been prepared in order to give an overview of each of the two sub-watersheds where the project will concentrate its activities. A detailed description of the two project sites is presented in Annex 8.

1.6. THREATS, ROOT CAUSES AND BARRIERS ANALYSIS

106. During the project preparation stage a participatory analysis of threats, root causes and barriers to SLM was conducted. Detailed consultation with communities, meetings and discussions with a multidisciplinary team of line officers, as well as regional and national workshops involving important stakeholders was the basis for the analysis - and ultimately the design of this project. The root causes, threats and barriers matrix is presented in Annex 4.

1.6.1 Threats and Root Causes

107. The major threats and root causes of land degradation in LTW are, in summary, cropland deterioration, overgrazing, deforestation and overuse of wetlands. Each is discussed as follows

Cropland Deterioration

108. High prices and an inefficient supply system of fertilizer coupled with a poor credit service has enforced farmers to grow crops with inadequate inorganic fertilizer application. Consequently, soil fertility, crop productivity and household income has declined and food insecurity and poverty continues to increase in the watershed.

109. An acute shortage of fuelwood and animal feed has triggered removal of organic matter in the form of dung and crop residue from the cropland and impeded the process of nutrient recycling. Continuous cultivation with removal of organic matter has resulted in soil fertility depletion and cropland deterioration.

110. Steep topography and erosive rainfall coupled with the limited technical skills and practical experience of development agents, and lack of knowledge, labour and tools amongst land owners has resulted in ineffective soil conservation measures. This has aggravated soil erosion with all its consequences.

111. The shortage of cropland due to high population growth in rural areas coupled with lack of alternative livelihood opportunities has resulted in continuous cultivation of the same land with inefficient ploughing technologies. This in turn has resulted in soil compaction and soil structure destruction, low crop productivity, low household income, and ultimately has aggravated the level of poverty.

112. There is also a cereal dominated crop production system (over 70% of the cropland) and a notable absence of perennials. The fine grained cereals (*teff*; sorghum etc) in particular require repeated cultivation for a fine seedbed preparation. This practice exacerbates soil structure destruction.

113. The high population pressure coupled with shortage of productive technologies and lack of off-farm employment opportunities triggers conversion of grazing and forest land into cropland and has resulted in a shortage of animal feed and fuelwood. This situation enforces farmers to remove biomass from the farmland for fuel and animal feed. Consequently, soil biota loss and soil structure destruction occur, crop productivity and household income is declining and food insecurity and poverty have increased.

Overgrazing and Pasture Degradation

114. Overgrazing is one of the main threats to land degradation and it is a widespread problem in LTW. It is mainly caused by uncontrolled grazing, the presence of a high livestock population and shrinkage of grazing land. Most of the pasturelands are overgrazed and trampled year-round resulting in loss of biodiversity: the most palatable species in the grasslands are being replaced by invasive alien species that have a lower feed value. This ultimately alters ecosystem structure and integrity. The pastureland is consequently exposed to erosion, due to removal of vegetation cover and surface compaction. Consequently, declining returns from pastures/livestock results in low household income, which increases poverty and also requires cultivation to move into degradation-vulnerable marginal areas.

115. The livestock population has increased nearly by 2.9% per year in the ANRS, and this can be taken as indicative of the LTW also. Increasing livestock populations are caused by partially by prestige attached to large livestock holdings, and free access to grazing land which is unregulated by the community. Further compounding factors are the need for draught livestock to plough, thresh, and for transport, and the fact that low productivity characterizes the local breeds.

116. The low productivity of the livestock in LTW is caused by feed shortage, inadequate health care with widespread presence of economically important diseases and parasites, poor genetic potential of the indigenous livestock breeds and poor husbandry practices. In ANRS the total animal feed availability in the year 2000 was around 9 million tons of dry matter, while the total theoretical annual demand was 21 million tons - a deficit of around 12 million tons. This suggests that the livestock population of the region is much greater than the current carrying capacity. Feed shortage is very severe from March to August. At this time of the year, the available feed is unable to meet even maintenance requirements.

117. Over the whole watershed area, natural pastures contribute about three quarters of the overall energy requirement. One of the causes of feed shortage is shrinkage of grazing land due to expansion of cropland and poor management of grazing land. With increasing human population, there is an increasing competition for land between cropping and grazing. As a result, grazing lands contract by 1.1% every year because of the growth and expansion of farming into grazing lands.

Deforestation

118. The natural vegetation cover, especially the forest tree/shrub area is dwindling at an alarming rate in ANRS in general and in the LTW in particular. Among the major causes of diminishing natural forest vegetation in the watershed is unavailability of alternative energy sources. This obliges people to depend entirely on biomass fuels for cooking, heating, and lighting. Total dependency on biomass fuels coupled with wasteful energy utilization technologies and ever-increasing human population creates a heavy demand for wood. Consequently deforestation has become one cause of low land productivity, which in turn reduces household income. As a result of these chains of causes and effects poverty is exacerbated.

119. Biomass provides 99% of the total domestic energy supplies. 65% of this is derived from woody biomass, 17% from crop residues and 17% from dung. Similarly, wood demand for construction and other uses is increasing. About 87% of houses in the ANRS are made of wood and thatched with grass. This demand for wood and other biofuels has expropriated organic matter from the soil, reduced vegetation cover, aggravated soil erosion and reduced the level of carbon sequestered in the land.

120. An ineffective population policy implementation and weak capacity to deliver family planning services coupled with a high household labor demand, value associated with high numbers of children, and fear for lack of support in old age has resulted in high population growth (currently

2.73%) that – as noted already, forces people to clear more and more forest areas to convert into agricultural fields with the inevitable consequences of further land degradation and poverty.

121. Most of the community members are uneducated and they believe in having large families. With ever increasing population growth, land holding size per household has been squeezed to as low as 1.14ha. This in turn exerts great pressure on the natural resources and land fragmentation, which leads to unsustainable land use and rampant poverty.

122. Open access to natural forests and the assumption that natural forests constitute “free goods” is another root cause of forest clearance. During the community consultation exercise, representatives mentioned that natural forests are being cleared at an accelerating rate due to the absence of clear ownership assignments and accountability.

123. An indispensable amount of forest vegetation has also been cleared for rural settlement and urban expansion. Out of the total rural population of the ANRS, 27.3% comprise youth. Young farmers build houses by encroaching on the nearby forest and grazing lands. The horizontal expansion of a number of settlements further contributes to deforestation.

124. The aforesaid unsustainable development and livelihood practices have brought decreased vegetation cover, a reduced carbon sequestration capacity and a decline in productivity leading to serious land degradation and poverty. Hence, it can be concluded that high level of poverty with its associated reliance on natural resources is the major cause of deforestation – and leads to a vicious spiral in which land degradation and rural poverty are intertwined.

Wetland Degradation

125. For the same reasons set out in the previous paragraphs, wetlands are under severe pressure from conversion to crop and grazing land; from overuse and pollution resulting from highland degradation. In order to feed the ever-increasing population, wetlands are steadily being converted to other land uses, and particularly cropland. Rice production, boosted by a buoyant market, is becoming another potential threat. This situation is aggravated by lack of alternative livelihood strategies to address the issue of unbalanced population growth and the high number of landless people.

126. The expansion into the wetlands is threatening this important bird area, the buffering potential for the lake, the breeding site of fish, and furthermore leads to a general loss of biodiversity. Drainage and double cropping systems within the wetland ecosystem have become major threats. Draining the wetlands – for pastures as well as crops - also disrupts their ecological functions and services, including their water holding capacity. Conversion of wetland habitats which support globally important and endangered plant and wildlife, especially endemic birds, is a critical global problem in terms of loss of biodiversity.

127. Poverty and dependence on natural resources forces people to overexploit the communal wetland resources, which are, by default, freely accessible. There is no clearly defined ownership and management strategy for these communal forests and wetland resources. So whenever productivity declines, people overexploit these. One of the most exploited resources is papyrus which grows on the fringes of Lake Tana. Papyrus is used for making reed boats, and has a ceremonial function during holidays and particularly for the famous Ethiopian coffee ceremony. It is especially important for the minority ethnic group, the *Woitto* who depend on papyrus for their livelihoods.

128. The community employs destructive fishing techniques such as fishing with small diameter nets, poisoning and trap fishing. This indiscriminate and unregulated fishing is especially damaging with respect to overfishing of spawning aggregation of the endemic *Labeobarbus* spp. Decline in the population of this species by about 70% has been reported. These activities deplete juvenile as well as reproductive stocks. The immediate and long-term effects of over-fishing of particular fish genetic resources are alarming.

129. As previously noted, the loss of vegetation within the catchment has in turn has resulted in accelerated erosion leading to accumulation of silt within the wetlands. Unless this sedimentation rate is reduced, the water volume of the lake will decline and disrupt the integrity of the ecosystem, leading to biodiversity loss and disrupted livelihoods.

130. The unsustainable use of the wetlands is a serious threat to the many people whose livelihoods depend on groundwater resources. It causes irreversible environmental effects, hardship for the poor, real losses to the economy, and gives rise to human health concerns. Pollution and habitat destruction have depleted fish stocks and other resources and thus affect the lives of many people who depend on such resources for their survival.

131. The heavy sediment load from the watershed is severely damaging aquatic biodiversity, making rivers more prone to flooding, and results in damage to cropland and, therefore, lowered food production. The lake ecosystem and the water resources as a whole are endangered: the LTW suffers from a number of interrelated factors that conspire to exacerbate land degradation.

132. In conclusion, degradation of the wetlands leads to a number of ecological and economic problems such as reduction of buffering capacity to the lake, loss of breeding sites for bird and fish species of local and global significance, and a reduction in ground water availability. It also threatens the livelihood of thousands of people who directly depend on the wetlands for their livelihoods.

1.6.2 Institutional, Coordination and Policy Barriers

133. The Strategic Investment Plan of the GEF (SIP) details the main gaps, bottlenecks and barriers that tend to hinder the successful mainstreaming of SLM in SSA. While these are generic barriers, it will be noted that all – to one extent or another – are relevant to the situation in the Lake Tana watershed. These barriers are as follows:

- Inadequate knowledge transfer and management
- Knowledge gaps on specific land degradation (LD) and SLM issues
- Compartmental approach of many SLM programmes and knowledge management systems
- Inadequate monitoring and evaluation of LD and its impacts
- Lack of local-level capacities and experience with SLM
- Lack of on-the-ground implementation
- Lack of coordination and collaboration between stakeholders
- Lack of policy harmonisation and mainstreaming of SLM
- Slow and ineffective decentralisation
- Inappropriate incentive structure, in particular land tenure arrangements
- Inappropriate domestic economic policies, including pricing policies
- Trade distortion and barriers
- Poverty and general lack of resources and investment opportunities
- Lack of credit facilities
- Lack of financial resources at the national level

134. With respect to the specific situation surrounding the Lake Tana watershed, both at federal and regional level, there are various institutes responsible for different interventions. Each of these institutes operates under different mandates; for example, increasing agricultural production, governing land administration, developing water resources and managing national parks. However, most of these have overlapping mandates. This creates confusion with respect to duties and responsibilities of institutions. For instance, some of the natural resource components of the watershed such as wetlands, forests and grazing areas have weak regional or locally responsible institutes which led to abuse in resources utilization and lead to land degradation.

135. Although there are a number of institutions responsible for land management, most of them plan and implement their duties and responsibilities in isolation, without proper communication or knowledge of the inter-relations between proposed sectoral interventions. Furthermore, they do so with little understanding of the consequences on land degradation or consequent impacts on economic development and ecosystem integrity. Thus, weak coordination and collaboration among different institutions, sectors and department at all levels is a barrier to implementation of effective SLM.

136. A national, as well as a regional, action plan to combat desertification have been developed. However, due to inadequate institutional capacity and awareness, the action plans are not yet properly mainstreamed in planning and implementation of different development endeavors.

137. In the LTW, community and user involvement in natural resource management is very low and there are no functioning mechanisms to give local authorities and resource users a significant stake in the benefits arising from good natural resource management. This is true for all sectors including agriculture, forestry, water, and livestock/grazing land. In addition, sectoral decision makers are unaccustomed to applying an integrated perspective to resource management.

1.6.3 Policy and Law Barriers

138. The absence of comprehensive policy regarding natural resource and land management, and poor awareness of the relevance of these issues to the socio-economic development has meant that land degradation and SLM issues are poorly integrated into the region's development programs and priorities.

139. Considering the long term environmental degradation problems and associated poverty, a number of natural resources management policies, legal and strategic frameworks must be formulated and issued. The lack of effective forest, wetland and grazing land management policy and legislation both at regional and national level is one of the impediments to development and conservation.

140. Ineffective population policy implementation is also another key barrier to alleviation of unsustainable agricultural practices, overgrazing and deforestation. Lack of directives and regulations for issued policies (e.g. land use and administration) and poor monitoring and evaluation system on policies, strategies and legal instruments are also major deficiencies.

141. The current natural resource management regime is based on "open access" by default, due to a failures of individuals, community, and/or government to regulate or define parameters of access. Open access to natural resources is a major constraint to the adoption of SLM practices by land and resource users, because it is a major disincentive to taking a long-term perspective. Furthermore, open access tends to occur in locations that are both highly susceptible to degradation and important to land stabilization – especially wetlands, grazing lands and forests.

142. The absence of incentive mechanisms is one key barrier to SLM. Communities' primary concerns are, naturally, immediate benefits. They are understandably less attracted to conservation and management of wetlands, forests and biodiversity, which are vital for long term, sustainable use of resources.

143. Absence of land administration training in the curricula of technical training institutions has impacted negatively on the capacity of development agents in discharging their responsibilities with respect to tenure security. This in turn has led to inefficient implementation of the land law and therefore weak tenure security arrangements - that have contributed in turn to deforestation.

1.6.4 Socio-Economic Barriers

144. Ethiopia is one of the least developed countries in the world. As a result, both the government and the communities have financial constraints to implementing sustainable land

management practices under an integrated approach. Moreover, credit institutions and the credit services in the country, especially in rural areas, are at a rudimentary stage. This impedes adoption of improved technologies which are vital for the realization of SLM. Consequently, planned activities are usually implemented in a piecemeal approach which is ineffective to achieve comprehensive SLM.

145. Poor infrastructural development is one of the barriers to SLM in LTW. Although the government is striving to establish communication facilities, especially telephones and roads, rural areas are still poorly networked. As a result, information flow and inputs supply are costly and slow.

146. Development demands healthy, skilled and educated human resources. Both the health coverage (55%) and the education service (only 27% literate) provided by the government and private investors are inadequate. Therefore, SLM activities cannot be implemented as required, due to a shortage of healthy, skilled and educated human resources.

147. Severe poverty is one of the barriers to SLM. About 43% of the total population in ANRS lives in absolute poverty: the communities are currently economically incapable of implementing/adopting successful SLM practices without guidance, incentives and encouragement. There is a conflict of interest between long term natural resources management and short term economic gains.

1.6.5 Knowledge Gaps

148. There is little awareness of land degradation issues among the general public, planners, policy makers, and even those who are directly responsible for the management of land resources. Policy makers are poorly aware of how SLM can contribute to economic development and help to alleviate poverty. On the other hand, as found out during consultations, communities in highland areas are relatively aware of the negative impact of land degradation, but have limited knowledge about how to combat it.

149. In ANRS, there is insufficient quantitative data on current land use or status and trends of natural resources and their utilization. There is a severe knowledge gap in relation to wetland resources and pastureland management, rehabilitation of degraded ecosystems, and sustainable agriculture and livestock production systems. Moreover, the available information is scattered across many institutions and not readily available to researchers, planners, and policy makers. This impedes the assessment of land degradation problems and quantification of threats to ecosystem functionality and resulting economic losses.

150. There is no efficient system at any level to assess the extent and impact of land degradation. The absence of a comprehensive monitoring system which focuses on quantification rather than simply visible results places serious limits on the application and expansion of sustainable and adaptive management practices. Moreover, there are very limited numbers of professional in the area of SLM. Farmers and experts do not have access to the latest best practices, through lack of training programs or demonstrations regarding SLM. There is also little experience of putting acquired skills and knowledge into action.

1.7. STAKEHOLDER ANALYSIS

151. Various stakeholders have been identified and involved in project formulation and will be involved in the implementation of the project. They include local communities (farmers, women and youth's associations and religious institutes etc), civil society, district line offices, regional bureaus, relevant federal ministries, and donors. Detailed consultations with all major stakeholders have already been undertaken through community, regional and national consultative workshops. The purpose of these consultations was to design a full-sized project through a participatory approach.

152. The consultative workshops at national, regional and *woreda* level helped to raise thematic issues and discussion among the different level of stakeholders. The consultative process ensured their feedback on the proposed implementation arrangements and project components. The participatory nature of the consultative process helped to identify study sites, project partners, and major stakeholders. The regional consultations were followed by expert group discussions and individual meetings with the federal ministries and regional line agencies. A detailed stakeholder involvement plan was developed during project preparation (see Annex 6).

153. There are more than 80 stakeholders relevant to the project (local, district, zonal, regional, federal governmental organizations, multilateral, bilateral and local NGOs). However, their degree of involvement varies and the most important stakeholders, directly involved in project planning, implementation and evaluation, are discussed as follows (see Annex 7 for details).

1.7.1 Local Level Stakeholders

154. There are a number of local level stakeholders, who directly benefit from the land and land resources and are at the same time affected by its degradation. More than 16 local level stakeholder groups have been identified, and the most important ones, namely farmers, *kebele* administration, youth's associations, women's associations, *kebele* land administration and use committee, and religious organizations are discussed here.

155. **Farmers:** The watershed is characterized by subsistence and mixed farming systems. The farming population of the project area is directly involved in the *management* of the area's natural resources, and success in combating land degradation, through the introduction of sustainable land management, is therefore directly dependent on their action and genuine involvement. They are, in turn, heavily dependent on the *condition* of the area's natural resources, as land degradation negatively affects agricultural productivity and therefore their livelihoods. In addition, farmers are dependent on the *function* of the area's ecosystems, and especially the provision of goods and services such as fuelwood, water supply and the reduction of environmental risks. As part of the project, they will contribute to SLM through sustainable agricultural production mainly by allocating local labour and local resources. In addition, their indigenous knowledge will be helpful in upscaling SLM.

156. **Kebele administration:** The *kebele* is the lowest governmental administrative unit responsible for administering the socio-economic development issues at grassroots level. *Kebeles* have their own councils and systems of social courts for settling disputes within their jurisdiction. They have the power to issue locally operational guidelines regarding social affairs and to formulate, implement and follow up development plans of interest to their inhabitants. The *kebele* administration is composed of sections dealing with different issues, namely rural development, community mobilization, dissemination of information, security, capacity building, and youth, culture and sports. Under each *kebele*, the communities are organized into different local institutes at village level. It is intended, under the proposed project, that people's participation in sustainable development and the management of natural resources will be ensured by closely working with the *kebele* administration. As the local project owner, the *kebele* administration will mobilize human and local resources for the success of the project. In general, the *kebele* administration will facilitate the whole implementation process of the project.

157. **Youth and women's associations:** These are voluntary based local level organizations organized to come to terms with the issues of youth and women. Among other factors, these CBOs are critically important in addressing land degradation through community-based SLM practices including communal tree planting, soil and water conservation. Women, who have historically been marginalized from access to markets, finance, education and technical and organizational support, are especially important and require particular attention to ensure equity and equality within the community. Youth's and women's associations serve as one form of platform for organized community development intervention in project implementation.

158. **Kebele land administration committee:** These local institutes set up by the government are primarily organized for facilitating the land administration and certification process. Members of the committee are elected by the community and are accountable to the *woreda* Office of Environmental Protection Land Administration and Use. The committee usually has five to seven elected members, of which two or three are women. The *kebele* land administration and use committee is the grassroots level decision-maker with respect to land administration and use. Decisions at the lower level of the local community are made at *kebele* level, such as conserving certain wetlands for sustainable reed harvesting or setting aside grazing areas for closure until they recover. Communal lands of the *kebele* are held in trust by its community and administered by the *kebele* committee. These include forest, grazing lands and wetlands. *Kebele* land administration committee provides assistance and information on land issues.

159. **Religious organizations:** These organizations, taking various forms, are fundamental for conservation and management of indigenous tree species - primarily around churches and monasteries. Religious institutions have played immense roles in shaping the cultural, socio-economic, political and environmental aspects of the country. There are a number of religious organizations in the watershed (see section 1.3.4). Churches have their own land resources that are protected by sanction. As a result, the natural and cultural resources have been conserved jealously over generations. This is clearly evident in the vicinity of old churches and monasteries, which are conspicuously surrounded by patches of remnant forests today.

1.7.2 Woreda Level Stakeholders

160. There are a number of district level stakeholders that have been identified to take an active part in SLM. The major three (*woreda* administration, *woreda* Agricultural and Rural Development office, and *woreda* EPLAUA office) are discussed as follows (see Annex 6 for stakeholder involvement plan and Annex 7 for stakeholder analysis matrix).

161. **Woreda Council and Administration:** The *woreda* council is the highest body of the state authority within *woredas* and is accountable to the regional government as regards adherence and respect to policies, laws (regulations and directives) of the regional state organs. The mandates of the *woreda* council include taking decisions on, and preparing, socio-economic development plans. The *woreda* administration approves plans of activities of development offices, collects and allocates budgets and assembles manpower for activities and then monitors and evaluates performance. The *woreda* administration is political leadership at the *woreda* level. The cabinet is formed from selected *woreda* office heads, and serves as the executive body. It coordinates the overall project implementation in the *woredas* of the LTW.

162. **Woreda Office of Agriculture and Rural Development (WoARD):** This office is accountable directly to the *woreda* administration. It is responsible for disseminating technologies to farmers. Support to, and giving technical advice about, natural resource conservation and development, livestock development and health care, crop and horticultural production and extension and training services are among the major duties of the agriculture and rural development office. Three development agents (DAs; in the areas of livestock, agronomy and natural resources) are assigned to every *kebele* for effective implementation of the objectives of the office. There are farmers' training centres (FTC) in every *kebele* for skills development amongst small-scale farmers. Mainstreaming of SLM will be facilitated if the project uses this structure and works in collaboration. WoARD coordinates project activities among the line office, the community and the project. Furthermore, it gives technical assistance and follow-up on the project implementation mainly through its development agents posted at *kebele* level.

163. **Woreda Office of Environmental Protection Land Administration and Use (WooEPLAU):** This office is accountable directly to the *woreda* administration and its responsibilities are of a regulatory nature. The main duties of the office are developing local level land use plans, environmental protection and implementation of land administration system in the *woreda*.

The land administration and use committees at the *kebele* level are accountable to the office and to the people in their respective *kebeles*. WoEPLAU gives technical assistance and follow-up on project implementation and assists in land use plan preparation and implementation. In addition the office will realise tenure security in the project area.

1.7.3 Regional Level Stakeholders

164. The most important regional level stakeholders relevant to SLM are the Regional Council, BoARD, EPLAUA, BoWRD, ARARI and all its centres, BoFED and BDU. These have already been discussed in section 1.3.2, but here we consider their functional relevance to SLM.

165. **Regional council:** The regional council, being the legislative organ of the region, is the supreme organ, entrusted with political powers, and is accountable to the people it represents thereof. The highest executive organ of the region is the regional state. The regional council sets out the economic and social development policy, strategy and plan of the regional state and works towards their implementation. The regional state executes the regional constitution and other laws of the region, and it administers land and natural resources, in accordance with laws enacted by the federal state. Members of the regional council are elected by the people for a term of five years. The regional council is responsible for issuing proclamations, policies and strategies regarding regional development, including policies in SLM. It links the project with federal and international organizations. In general it is responsible for creating an enabling environment for SLM.

166. **ANRS Bureau of Agriculture and Rural Development (BoARD):** BoARD was restructured by proclamation No.107/2004. The BoARD is directly responsible for implementation of the Rural Development and Agricultural-Led Policy and Strategy. BoARD is the largest regional organization, and has equivalent mandates and responsibilities to federal line ministries. It has six different bureaus and offices under its umbrella, namely (1) BoRWD, (2) FSPCDPO, (3) MRERDEO, (4) Bureau of Cooperatives' Promotion), (5) ARRA and (6) ARARI. By virtue of this, implementation of the regional development plan effectively falls under BoARD. Addressing land degradation and biodiversity conservation depends on the commitment, integrity and capacity, as well as the integration and coordination of these entities. BoARD gives technical assistance throughout the different stages of the project and endorses the project plan and incorporates it at different levels - from the regional to *kebele* level.

167. **Environmental Protection Land Administration and Use Authority (EPLAUA):** In response to the regional conservation strategy, EPLAUA has been established as the agency of competence. In each *woreda* and zone it has branch offices to implement the duties and responsibilities vested by proclamation. EPLAUA is responsible for ensuring that matters pertaining to the region's social and economic development activities are carried out in a manner that will protect the human welfare as well as sustainably protect, develop and utilize resources. Furthermore, it creates a conducive atmosphere under which the management, administration and use of rural land of the region can be appropriately decided, pursuant to federal and regional regulations. Moreover, EPLAUA coordinates the preparation and implementation of land use plans, endorses the project plan and integrates it through out the different levels from the regional to *kebele* level. Furthermore, it facilitates awareness creation on land use, and administration policies and proclamation. It also undertakes studies and research to develop action plans in the area of combating desertification.

168. **ANRS Bureau of Finance and Economic Development (BoFED):** BoFED reviews the annual production and service plans to be implemented under the regular budget, as well as annual development plans and the capital budget proposal. Furthermore, it prepares planning methodology, standards and indicators of overall economic and social condition. Upon approval, it follows up the implementation of the same. One of the responsibilities of BoFED is to collect, analyze and disseminate regional socio-economic data required by various stakeholders for planning and decision making purposes. Moreover, BoFED coordinates activities and work, in cooperation with concerned

governmental and non-governmental organizations, with regard to population policy. BoFED also assists the project in planning and financial transactions.

169. ***Bureau of Water Resources Development (BoWRD)***: Water resources are covered by sectoral policies in the RCS. The Board has been established and is directly responsible for the long-term water resource conservation and management in the region. It is legally mandated to achieve the following four major objectives: to provide potable water and sanitation services; to collect and develop water for irrigation; to produce electricity, industrial and various other services; and to ensure that a reliable system is designed and relevant data is collected. Finally it is charged with the responsibility of imbuing a sense of responsibility regarding the value of water as a cultural and recreational resource. Moreover, BoWRD conducts studies on water resources management and utilization. It is also responsible for irrigated agricultural development on a watershed management basis: this directly relates to SLM.

170. ***ANRS Agricultural Research Institute (ARARI)***: ARARI was established by proclamation No 48/2000 and has the following responsibilities: to generate and adapt agricultural technologies; to coordinate the research activities of agricultural research centres; to encourage higher learning institutes and other related organization to give attention to agricultural research; to provide assistance and publicize agricultural research results for utilization; and to build up research capacity and establish a system to make the region's agricultural research activities efficient, effective, demand-driven and focused on solving core agricultural problems. Furthermore, ARARI conducts targeted research and disseminate technologies feasible within SLM.

171. ***Bahir Dar University***: The University in Bahir Dar is one of the oldest and the largest in the region and it has started offering courses in agriculture and environmental management at BSc and MSc degree levels. There are also on going research activities in the areas of natural resource management, biodiversity and fisheries at Lake Tana, which will contribute to upscaling SLM.

1.7.4 National Level Stakeholders

172. Sixteen federal level stakeholders have been identified, among which the three most important are: the Environmental Protection Authority (EPA), the Institute of Biodiversity Conservation (IBC) and the Ministry of Agricultural and Rural Development (MoARD).

173. ***Environmental Protection Authority (EPA)***: In response to the UN Convention on Biological Diversity (CBD), EPA was established by proclamation. EPA has the following major mandate and responsibility, which is vested in it, in consultation with other competent agencies: to formulate, or initiate and coordinate the formulation of policies, strategies, laws, and programs to implement international environmental agreements. The authority has also a mandate to take part in the negotiations surrounding international environmental agreements leading to the governmental process of ratification. In other words, EPA is delegated to act as the national operational Focal Point for GEF projects.

174. ***Ministry of Agriculture and Rural Development (MoARD)***: The powers and duties vested in the ministry include, among others, conservation and utilization of forest and wildlife resources; soil and water conservation, food security, water harvesting and small-scale irrigation; monitoring events affecting agricultural development and early warning systems; enhancing market-led agricultural development; issuing guidelines and procedures for agricultural input evaluation and release; ensuring the distribution of high quality agricultural inputs to users; and establishing and directing training centres of agriculture and rural technology. The ministry is working to solve chronic problems associated with natural resource and rangeland degradation, deforestation, inadequate land use planning and decline in crop and animal production, dependency on biomass fuels, and lack of alternatives livelihoods. Moreover, MoARD brings international experience in sustainable land management to the project.

175. ***Institute for Biodiversity Conservation (IBC)***: In response to the CBD, the Ethiopian Institute for Biodiversity Conservation was established. It is the focal institute for conservation and sustainable use of biological resources with local, national and global significance. Besides this, IBC provides expertise for the identification of areas for in-situ and ex-situ conservation of biological diversity.

1.7.5 Multilateral and Bilateral Stakeholders

176. ***International Fund for Agricultural Development (IFAD)***: IFAD is a specialized agency of the United Nations established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference.

177. IFAD is dedicated to eradicating rural poverty in developing countries, where 75% of the world's poorest people - 800 million women, children and men - live in rural areas and depend on agriculture and related activities for their livelihoods.

178. Working with rural poor people, governments, donors, non-governmental organizations and many other partners, IFAD focuses on country-specific solutions, which can involve increasing rural poor peoples' access to financial services, markets, technology, land and other natural resources. IFAD has a goal to empower poor rural women and men in developing countries to achieve higher incomes and improved food security. It has the following objective:

IFAD will ensure that poor rural women and men have enhanced access to:

- - Natural resources- land and water;
- - Improved agricultural technologies and effective production services;
- - A broad range of financial services;
- - Transparent and competitive agricultural input and produce markets;
- - Opportunities for rural, off-farm employment and enterprise development; and
- - Local and national policy and programming processes

179. Through low-interest loans and grants, IFAD works with governments to develop and finance programs and projects that enable rural poor people to overcome poverty themselves. IFAD tackles poverty not only as a lender, but also as an advocate for the rural poor. Its multilateral base provides a natural global platform to discuss important policy issues that influence the lives of rural poor people, as well as to draw attention to the centrality of rural development to meeting the Millennium Development Goals. IFAD has been chosen by the Ethiopian government to implement the project. IFAD as an implementing agency, mobilises and allocates funds for the project.

180. Therefore, the IFAD-led rural financial intermediation programme (RUFIP): which is co-financed by the AfDB has assisted micro-finance institutions to increase their delivery of financial services to more than 1.5 million households. Similarly, the main thrust of the Agricultural Marketing Improvement Programme (AMIP) is to increase the effectiveness and efficiency of the agricultural marketing systems and enhance smallholder engagement with the marketing chain, *inter alia*, through better post-harvest management of farm produce. Hence, this IFAD-GEF project will use the marketing support infrastructure and systems being established under AMIP as the basis for improving agricultural marketing, including micro-finance. There is also an IFAD financed program, the PASIDP, which is helping to reform the way in which small-scale irrigation development is being carried out in the country. This program has the objective of establishing a participatory process for small-scale irrigation by reinforcing a sense of ownership of the schemes. Even though the PASIDP is outside the watershed, its watershed management and irrigation development experience can feed into to this project

181. **Global Environment Facility (GEF):** The GEF has been providing incremental grant financing to assist developing countries and countries with economies in transition to address land degradation, a major global environment and sustainable development issue, since its establishment in 1991. Until October 2002, the GEF's support focused on addressing land degradation issues as they were related to its focal areas of biological diversity, climate change, international waters, and ozone layer depletion.

182. To improve further GEF assistance, the Second GEF Assembly in Beijing, October 2002 designated land degradation, primarily desertification and deforestation, a focal area of the GEF as a means to support the implementation of the United Nations Convention to Combat Desertification (UNCCD). This designation makes sustainable land management a primary focus of GEF assistance to achieve global environment benefits within the context of sustainable development. The current project was prepared with the grant allocated by GEF in the form of a PDF-B.

183. **World Bank (WB):** The World Bank has long experience of involvement in Ethiopia's economic development. Currently, it is involved in the country program for Sustainable Land Management (SLM) and is designated as a lead agency to coordinate the SIP. The WB/GEF operation leverages GEF-SIP financing to develop mechanisms for scaling up SLM best practices in high potential areas while improving enabling conditions (e.g. improving land tenure security, strengthening knowledge management mechanisms for SLM). It also helps to establish a country program and institutionalize a partnership vertically and horizontally (e.g. strengthening inter- and intra- sectoral cooperation, establishing mechanisms for investment coordination and donor alignment). More specifically, this operation seeks to contribute to: (i) facilitation of the investment in SLM through a strengthened enabling environment; (ii) increasing and sustaining agricultural productivity through improved integrated land and water management practices; and (iii) reversing and transforming selected degraded rural landscapes into sustainable and productive ecological systems; by strengthening the enabling environment for SLM upscaling; establishing and implementing a methodological framework for the implementation of watershed-based SLM activities, in line with the participatory watershed planning and management guidelines developed by MOARD; and through supporting the consolidation and institutionalization of the national SLM platform.

184. **United Nations Development Programme (UNDP):** UNDP will play the primary role in ensuring the development and management of capacity building programs and technical assistance projects. Through its global network of field offices, UNDP will draw upon its experience in capacity building (human resources development, institutional strengthening), and non-governmental and community participation to assist countries in promoting, designing and implementing activities within the SIP portfolio, and ensuring these are consistent with the purpose of the SIP and national sustainable development strategies. Drawing on its inter-country programming experience, UNDP will also contribute to the development of regional and transboundary projects within the SIP portfolio, in cooperation with the other implementing agencies.

2. PROJECT STRATEGY

2.1 PROJECT RATIONALE

185. With a per capita income of only US\$ 120 per annum, Ethiopia is one of the poorest countries in the world. Agriculture generates approximately 50% of the GDP and 90% of export earnings. Despite its importance, agricultural performance has improved little over the past 50 years and food security has deteriorated. There is growing evidence that, at the core of such low agricultural productivity and chronic food insecurity, is degradation of the natural resource base in the Ethiopian highlands on which the overwhelming number of the rural population depend for their survival and livelihoods. Rough estimations indicate that, on average, 2-3% of the agricultural GDP is lost annually due to land degradation. About 85% of the land surface is considered prone to moderate to very severe soil degradation. Land degradation - coupled with high climate variability - is considered one of the factors leading to food insecurity and rural poverty. Simultaneously it contributes to climate change through the loss of carbon dioxide from the soil and through vegetation losses.

186. Despite the existence of a number of best practices, past efforts have failed to comprehensively address the problem. Some of the key reasons that may explain past failures include: (a) lack of coordination and cooperation among development partners and among different sectoral branches in the government, and (b) a narrow, project-specific or ad-hoc approach to the problem, which does not capture the cross-sectoral nature of land degradation and cannot systematically address its root causes. In response to these challenges and to leverage the scope and impact of existing and planned SLM interventions, the Government of Ethiopia (GoE) is committed towards adopting a more programmatic approach to address land degradation and promoting sustainable land management (SLM). The GEF component to the LTW project will ensure that SLM is seen as a key element in achieving global environmental benefits; something that would not have received priority otherwise. This operation, co-organized by IFAD and the Regional Government of Amhara, will be part of the GEF/SIP operations in Ethiopia supporting the GoE in its effort to tackle land degradation.

2.2 PROJECT IMPLEMENTATION

2.2.1 Goal and Objective

187. This community-based integrated natural resource management project in the LTW will build on the baseline and provide incremental funding to ensure sustainable land management, delivering both local and global benefits. The goal of the project is to contribute to poverty eradication in the watershed through improving ecosystem integrity and livelihood. The immediate objective is to increase household incomes through sustainable land management practices in the LTW. Simultaneously, improvements to ecosystem function will be beneficial for biodiversity conservation and will protect against negative climate change impacts. The project's immediate objective will be achieved through the following three outcomes or "components".

2.2.2 Project Components and Outputs

Component 1: Community-based integrated watershed management

188. This component will address adoption of best practices in SLM to improve land productivity and the livelihood of communities. Technologies and management practices for integrated farming and watershed management systems encompassing agroforestry, crop production and livestock/pastureland management will be demonstrated and promoted. This approach will enhance ecosystem integrity and conservation of biodiversity within the LTW.

189. To achieve maximum benefits and effectiveness in meeting the land degradation challenges of the LTW, a participatory integrated watershed development approach that applies physical, biological,

social and economic aspects in problem solving will be adopted. This will be more effective than isolated and scattered interventions under a conventional project approach. Integrated watershed management can play a critical role in bringing components together to foster ways to achieve mutual goals involving watershed resources planning, development, protection and management. The project will promote a participatory community-based approach, informed by lessons from experience in Ethiopia with Community-Based Participatory Watershed Development; and from elsewhere in Africa.

190. As noted under 1.5, although the project covers the whole watershed, and many of its activities are spread over the whole area (capacity building and land certification for example), the participatory micro-watershed plans and associated training focus on two of the four main sub-watersheds, namely Gilgel Abay and Megech. The other two sub-watersheds, Gumara and Rib have been left out of this activity as they are receiving some attention under “business-as-usual” project interventions. Thus these activities are concentrated in 13 of the 21 woredas (districts). Selection criteria for the microwatersheds to be supported will be developed.

191. Towards achieving this outcome, due emphasis will be given to a number of activities to be accomplished including: producing participatory integrated watershed development plans; developing grazing land management and forage production systems; developing soil improvement practices; identifying, demonstrating and stimulating upscaling of appropriate agroforestry practices; introducing and adopting participatory forest management (PFM); developing and implementing a community-based strategy for conservation of biodiversity; and identifying and facilitating upscaling of indigenous knowledge and innovative practices for SLM. Moreover, study tours within and outside the watershed will be facilitated too. Organizing and running farmers’ field schools, upgrading farmers’ training centres and developing SLM curricula are also amongst the activities to be implemented. These are set out in the detailed project description (Annex 2).

192. To achieve these outputs, the approach will be based on carrying out development activities through the principle of facilitating and stimulating of the local community to upscale appropriate land management by offering training, and demonstration. In this regard, communities will be expected to contribute labour and local materials for implementation including day-to-day management activities, which will account for about 20% of the project cost.

193. Technology demonstration sites will be selected mainly near and around the compounds of Farmers’ Training Centres. The project will also focus on an on-farm demonstration approach. This strategy facilitates the dissemination of appropriate technologies among the farming community. Moreover, it helps for practical training purposes. The project will follow defined principles in the implementation of the various activities (see Annex 11).

Output 1.1 Participatory watershed management achieved

194. Participatory watershed development planning and management will be employed to improve the livelihoods of community/households in rural areas and optimize the use of existing natural resources and untapped potential – in both already degraded areas, and in the remaining high potential areas of the LTW. Watershed development planning will be moved away from conventional land use-planning exercises to a logical interpretation of the potentials of the land as a function of the needs, demands for, and aspirations of, the people living in the watershed. The unit of intervention for the participatory micro-watershed plans will be the *kebele*, in other words the local community, rather than a strictly defined hydrological entity. During the course of the project, lessons from some of IFAD’s initiatives elsewhere, namely “RUPES” (Rewarding the Upland Poor for Environmental Services”) and “GWC “ (“Green Water Credits”), will be learned, and their potential for the LTW area examined.

Activity 1.1.1 Participatory preparation of a database of existing land use patterns and natural resources

195. This output will address one of the constraints to SLM, which is absence of reliable data on existing land use within the watershed. The current land use in the watershed will be mapped to monitor the dynamics of land use pattern in the course of project implementation and to evaluate impacts of the project.

196. Moreover, the project will establish a natural resource database of the watershed. Mapping and making an inventory of the natural resources and extent of land degradation in the watershed will be a crucial element of this output. It will be achieved by gathering baseline information, developing performance and impact indicators on land degradation prevention and control, and through assessing and predicting sustainability of SLM interventions. Available modern technologies will be employed to be cost-effective.

197. Enhancing appropriate agroforestry systems focusing on the existing traditional practices – mainly dispersed trees in farmlands – will be stimulated to achieve upscaling in order to secure integrated and diversified benefits. Highland species, for example bamboo, will be demonstrated and propagated to improve livelihoods, and simultaneously rehabilitate degraded lands and sequester carbon. This will integrate conservation and production: a basic SLM principle. Species adaptability trials focusing on propagating multipurpose trees/shrubs is also important under this component. Perennial horticultural crops within homegardens will be introduced in order to increase income and improve the food security status of the rural poor.

198. Better agronomic practices will be introduced and promoted under this component through improving the fertility of the soil using appropriate crop rotation, and using organic and inorganic fertilizers. This will be achieved by promoting sustainable farming practices including composting, green manuring, use of farm yard manure and crop residues for mulching. These are cost-effective measures for enhancing fertility and soil organic matter – and thus carbon sequestration, in turn conferring global environmental benefits.

Activity 1.1.2 Upgrade and/or develop integrated watershed management and treatment plans

199. Local level participatory integrated watershed management planning will be tailored to local conditions. It will be adapted to suit different sizes of watersheds and accommodate community and *kebele* administrative boundaries. Planning will involve the local farmers, other land users and the wider community – from the very beginning of the planning process – since it is they who will live with the results.

200. Many countries have developed national watershed programmes. China, Nepal, The Philippines, and Indonesia have introduced and practiced the concept of watershed-based development. Participatory conservation and watershed-based development approaches have also been introduced and expanded in various countries in Africa, particularly in Kenya, Niger, Burkina Faso, Namibia and Mali. Various failures and successes from these countries will be important lessons to be drawn. The project will also build on the lessons learned from experience of national line agencies and NGOs in addressing land degradation issues. This project will build capacity through training of community members and relevant experts in participatory integrated watershed management approach. Moreover, watershed committees will be formed and bylaws developed.

Output 1.2 Improved pasture and participatory forest management in place

201. The responsibility for the management and conservation of grazing lands is in the hands of the resource users – and the same will pertain for existing tracts of indigenous forest. This will be recognized by the project, which will stimulate the establishment of grazing land users' associations and participatory forest management groups. These associations/ groups will be oriented towards the

objectives and practices of improvement and management of pasturelands and forests. Communities will be empowered to develop and enforce rules and regulations governing communal grazing lands and forests. Simultaneously, the project will look for any evidence of local innovative initiatives – whether technical or social – which may act as models to build upon.

Activity 1.2.1 Promotion of improved pasture management and forage production systems

202. In addition to efforts on the improvement and management of pasturelands, under this component the development of supplementary feeds using different forage development strategies that need little land and deliver high quality forage will be focused on. Training of beneficiaries using technical/ practical demonstration will enhance their management capacity. Moreover, due emphasis will be given to stall feeding, to minimize grazing pressure, through the proven cut-and-carry system.

203. Supporting women and youth via organizing and training in livestock fattening, beekeeping, poultry keeping as well as sheep production and dairy farming by linking to credit services such as the ACSI will be another innovative approach undertaken by the project. Dairy farming has not received significant support in the LTW – yet its potential importance as an alternative livelihood is considerable.

204. In this regard, the Integrated Livestock Development Project (ILDP) which is operational within LTW in the North Gongar zone has successful experience in forage production, natural pasture development, genetic improvement and in livestock market promotion (meat and milk). Thus, this valuable experience will be drawn upon, and upscaled by the LTW project.

Activity 1.2.2 Community forestry

205. In addition to management of existing forest, the project will facilitate the establishment of plantations for rehabilitation of degraded lands and timber production. Due attention will be given to indigenous species, which are found around churches in the watershed; and churches and monastery communities will be stimulated and assisted in further upscaling of church-owned forest resources. Communities will participate/contribute in terms of labour.

206. This output also focuses on fuelwood plantations. Building on a current trend in the LTW, the project will further stimulate the planting of individual woodlots to provide sufficient fuelwood. Individuals will establish their own nurseries to produce seedlings and plant these themselves. This is vital to minimize the pressure exerted on remnant natural forests. Moreover, fuelwood plantations contribute to global environmental benefits through carbon sequestration (note: although carbon is lost when trees are harvested through coppicing, their rooting systems remain intact, and quick regrowth effectively recaptures the carbon lost). Considering the severity of the fuelwood shortage, and the continued interest of land users, the supply of seedlings to meet the demand is essential. The project will provide incentives in the form of tree seeds/seedlings and training to enhance nursery management and the establishment of fuelwood plantations.

Activity 1.2.3 Participatory forest management

207. The vegetation cover in LTW is very sparse and requires restoration by reforestation, and by conserving and improving (through “enrichment planting”) the remnant natural forests through a Participatory Forest Management (PFM) system. PFM involves the legal transfer of forest resources (user rights) from the government forest services to community management groups. Upon establishment of PFM, a community forest management group is then legally enabled to sustainably manage forest resources. This transfer is enabled by, and is dependent upon, a negotiated and documented forest management agreement, which will be made prior to commencement.

208. The rehabilitation of degraded lands using forest vegetation can, potentially, provide simultaneous financial benefits through remuneration schemes based on carbon sequestration. This

highlights the need for promotion of rehabilitating through species which are proven to have the ability to conserve and improve soil while efficiently sequestering carbon: these must, naturally, also be profitable and easily managed by the farmers. Carbon payment mechanisms will add value to carbon sequestration in remote areas where the high transport costs of timber and other forest products penalize farmers in these locations. Thus, rehabilitating degraded lands in this watershed can simultaneously be a direct income source for rural communities through paid-for carbon sequestration schemes. Farmers will be trained and organized to benefit from the international carbon trade.

Activity 1.2.4 Demonstration and promotion of alternative energy-saving technologies

209. More than 99% of the people in the project area depend on biomass as their sole source of household energy (firewood, cow dung and crop residues). The use of kerosene, electricity and other alternative energy sources is negligible. The dependence on biomass has a negative impact on the environment and on the productivity of agriculture. The cow dung and crop residues which otherwise should have been left on farmlands to maintain/improve fertility is burned, resulting in decline of soil fertility. Cutting trees for fuelwood is also increasingly threatening the remnant patches of original, biodiverse forests.

210. Thus, one of the critical problems in LTW is the imbalance between fuel consumption and its supply. Sustainable land management is not possible unless this imbalance is redressed. Furthermore, carbon is removed from the landscape and burnt: a local loss with global implications. Various alternative energy sources will be identified and demonstrated. While promoting woodlot plantations, measures will be taken to demonstrate and disseminate information about energy saving technologies (e.g. fuel saving stoves), and alternative energy sources (e.g. biogas; solar energy). In order to succeed in scaling up, locally adaptive technologies will be identified and stimulated by providing training to selected beneficiaries.

211. Use of modern/fuel saving stoves as efficient energy technologies is at an early stage in Ethiopia. Within the LTW, there are various development partners – for example GTZ in collaboration with Mines and Rural Energy Resource Development Expansion Office, - who are promoting fuel saving stoves. Furthermore, sustainable charcoal making (mainly from eucalyptus) will be supported as an alternative livelihood. Charcoal is more energy-efficient than fuelwood, it is cheaper to transport and is a renewable energy source when made from eucalyptus and other planted species. It is ideal for fuel saving stoves, and burns more cleanly than wood or dung.

Output 1.3 Off-farm soil and water conservation measures implemented

212. Soil erosion by water is one of the major threats in LTW. The main problems are expressed in both upstream and downstream locations. Upstream areas are affected by loss of fertile top soil, while downstream areas suffer from siltation (sedimentation) of the lake and reservoirs, and flooding of farms and wetlands. This problem contributes to the decline in land productivity and also affects the source of international water. Siltation also affects the integrity and functioning of ecosystems including loss of habitat and breeding spots of diverse fauna of global importance.

Activity 1.3.1 Rehabilitation of seriously degraded land

213. The project will address the issue of badly degraded and rapidly eroding land with especial attention because the negative impacts of erosion on the fertility and productivity of the soil, siltation of dams and reservoirs, the lake, and riverbeds (which can lead to changes in river courses), are serious problems throughout the watershed. So conserving the soil and water by combining physical and biological conservation measures is the main focus of this output. To address the immediate need of farmers, such as fodder and fuel, physical structures (bunds; stone lines; terraces etc) will be integrated with biological measures.

Activity 1.3.2 Establish gauging stations

214. In order to monitor change in sediment yield the outlets of selected sub-watersheds will be gauged. Moreover, erosion from small runoff plots will be monitored using *in situ* measuring techniques. In addition, the rate of silt deposition in the lake will be monitored at regular intervals to evaluate the impact of the project.

Output 1.4 Biodiversity and ecosystem conservation systems established

215. At the heart of the project is the urgent need to conserve biodiversity and secure/ re-establish ecosystem integrity. This will partially be achieved indirectly through sustainable land management, and partially directly through the activities listed below.

Activity 1.4.1 Conservation of landraces; central and community gene banks

216. In order to reduce the trend of losing local varieties of agricultural crops (“landraces”), a community-based agrobiodiversity conservation strategy will be designed and implemented. This involves organizing and training farmers for this purpose. Central and community-based gene banks will be constructed for storing and exchanging seeds between farmers. The seeds then will be distributed to farmers on a credit basis: seeds meeting the approved quality requirements will be returned in kind. A guideline on overall management of the seed banks will be produced and implemented. Finally, this conservation of land races will be linked with *ex situ* conservation of the National Institute of Biodiversity Conservation.

Activity 1.4.2 Community-based in-situ conservation of ecosystem and biological diversity including demarcation and legislation in 15 core zones:

217. Setting up an effective community-based management system will be introduced to minimize illegal resource use. These activities will mean involving local populations, in particular fishermen, fuelwood and reed collectors, religious leaders and farmers, in planning and management of resources. Involving these stakeholders will consist of training and organizing them into groups in villages surrounding their areas and giving them responsibility to patrol clearly delineated zones of the same. This protection system will be completed by establishing greater synergy and cooperation with law enforcement offices from the justice system and public order forces (police, etc.) to enforce penalties and discipline, particularly as they relate to illegal resource use operations.

218. The churches and monasteries which have protected and hosted the remnant isolated areas of significant biodiversity will be supported and strengthened to maintain and contribute to further enhancement of biodiversity conservation. In order to conserve endangered species due to habitat loss and fragmentation, selected tree species will be planted and managed in botanical gardens. Emphasis will be given to identification and design of conservation approaches to medicinal plants within and outside the protected areas.

219. Forest and wetland areas of global and local significance in terms of biodiversity will be identified for proper management and conservation. All relevant stakeholders, particularly the local communities, are key in allocation of such resources for sustainable management. Conservation areas will be legalized after being identified, delineated and demarcated.

220. The biodiversity resources of demarcated areas will be inventoried, comprehensive data collected, and then ecosystem maps produced. The communities will take an active part in designation of specific areas for biodiversity conservation. A consultative workshop with the main actors will be held to identify the threats and potentials to sustainable management of biodiversity, and especially the forest and wetland resources of global importance. Finally, a comprehensive management plan covering each conservation area will be produced.

221. Management plans will address the issues of how to manage the resources, make benefit-sharing arrangements, and provide alternative livelihood strategies in case of exclusion from use and other considerations. With the approval and endorsement of all stakeholders, the management plan will then be implemented. This output will capitalize upon on the existing traditional institutions and knowledge systems for conservation, and will also build capacity of both experts and leaders of CBOs. Ultimately the existing informal institutes will be institutionalized for co-management of the core areas for protection.

Activity 1.4.3 Economic valuation of biodiversity

222. All societies depend on biodiversity and biological resources either directly or indirectly, but their value is predominantly implicit rather than explicit. With increasing development pressures, biodiversity continues to be lost at unprecedented rates. For biodiversity and many biological resources, the absence of apparent value combined with absent or poorly defined property rights creates a problem of over exploitation and unregulated use. This activity emphasizes the need to assign value to biodiversity as a prerequisite to an efficient approach to resource management. This will focus on availing information, especially to decision makers, regarding how biodiversity can enhance economic development.

223. Biodiversity and biological resources offer vital environmental services, which are undermined through land degradation. In this output the value of spawning grounds for fish species will be demonstrated to give an insight on how land degradation in general and the wetlands in particular, can affect the fish harvest. It will be shown how much is lost in monetary terms and also in terms of livelihoods. The environmental services of wetlands in purifying water will also be valued. This will draw the attention of decision makers to how sustainable use of such resources can contribute to economic development.

Output 1.5 Land surveying and certification carried out

Activity 1.5.1 Land surveying and certification

224. One of the barriers to sustainable land management is tenure insecurity of land users. Recognizing this, ANRS, besides developing a land use and administration policy, is currently issuing land certificates to farmers. However, this is lagging behind the rate of land degradation. This output will enhance the land certification process by training local land administration committee, and employing and training contractual staff at grassroots level to complete certification. Up to 450,000 households will receive first level land certification and second level certification will be piloted in 5 centres.

225. The current practice of surveying and mapping is dominated by traditional area measurement, which leads to problems of accuracy in defining plots. A modern and multi-purpose cadastre that employs GPS for surveying of *kebele*, *sub-kebele* boundaries, commonly used lands, main roads and individual plots is essential for the provision of a secondary book of holdings with the attachment of map of plots that indicate sizes in international units. The increase in coverage of the secondary book of holdings will radically decrease boundary and settlement disputes.

226. The documentation of properties and holding rights in a land administration database creates the foundation for sustainability, security of registered data and other uses. However, the data are worthless unless processed and frequently updated: the data in the register must be up-to-date as these may be necessary as evidence to be presented to courts by the landholders to defend their rights. The data will be generated through full participation of people, and will be made open to the interested parties. Public hearings will be organized after each critical stage in the adjudication process.

227. Introduction of computerized technology – Information Communication Technology (ICT) – will be planned and handled in a cost-effective way. There is a need to initiate the development of such a system and train staff for its execution.

Component 2: Institutional, Legal and Policy Analysis and Reform

228. The project will create an enabling environment and institutional capacity at the local and regional levels to mainstream SLM principles into regional policies, strategies, and action plans pertaining to agriculture, forestry and water development. This will encourage sustainable use of natural resources through creating opportunities and incentives for individuals and communities to look after their land better. Further detailed gap analysis will be conducted to identify deficiencies in order to capitalize on those policies and legal issues already identified during the planning phase.

229. Security of tenure over resources is a prerequisite for land users' willingness and commitment to undertake long-term improvements to their land. SLM cannot thrive where there is insecurity over resource ownership and user rights. Considering and understanding the problems, the ANRS has put the land issue at the forefront of its development agenda. The regional government has decided that all farmers will have long-term rights to use land, and farmers can now register for lifetime entitlement. The government has also given due consideration to certification of communal lands – community forest and grazing lands – to assure communal use rights and judicious management of the resources. However, its implementation on the ground is weak and ineffectual at present. Hence, land tenure security needs to be treated with due concern as it has a significant impact on sustainability of other component areas and on overall performance of the project.

230. Creating an enabling policy and legal framework for sustainable land management is the main focus of this component. The lack of policies and legal framework regarding grazing lands, forests and wetlands, is one of the major barriers to SLM. Thus, the project will advocate and support development of policies and legislation on forests, grazing lands and wetlands which are relevant to sustainable land management. This will be realized by conducting a series of workshops for policy makers, professionals, civil societies and local communities, where the need for such legislation will be advocated and debated.

Output 2.1 Capacity for SLM Improved

Activity 2.1.1 Improve institutional capacity for SLM

231. This activity will focus on building capacity at local and regional level for effective implementation of sustainable land management. Drawing on the needs identified during the preparatory participatory planning process the project will organize training in community-based management of watersheds, including their constituent pasturelands, wetlands and forests. This will focus on institutional strengthening by enhancing technical capabilities of line agencies, research institutes, farmers' groups, community groups, and women's organizations in tackling land degradation, as well as creating awareness about threats and consequences of unsustainable land use practices in the LTW. This can be achieved using regional and national radio and television transmissions.

232. During project inception, training needs assessments will be conducted to analyse and assess capacity gaps amongst project staff and stakeholders. This will simultaneously provide information on the availability of sufficiently able and experienced trainers: gaps will be identified. Based on the assessments a comprehensive training strategy will be prepared in order to upgrade skills. The training will include "training of trainers" using senior experts. If and where necessary, extra training capacity will be mobilised from outside.

233. Functional researcher-extension-farmer linkages are vital for successful upscaling of soil and water conservation technology development and delivery. An improvement in linkages amongst

researchers, extension workers and those farmers with innovative practices in particular is important. This represents one of the most promising means of reaching land users and both developing and sharing technologies. Indigenous knowledge and innovative practices of farmers will be capitalized in this process. Continuing training and capacity building is required to fulfil the aforementioned output.

234. There are a number of community-based institutions within the watershed. *Idir, mehber, senbete, iquib*, churches, monasteries and mosques are some of the local institutions in LTW (see section 1.3.4). However, their current capacity to promote SLM is limited. Churches and monasteries on the Lake Tana islands have a sound environmental basis in their protected, surrounding forests. Therefore, these CBOs will be strengthened and supported to enable them to conserve and manage their natural resources. Strengthening existing and establishing new local institutions for SLM will be a priority entry point.

235. Out of the 2.5 million population of LTW 27% comprise the youth and nearly half of them are landless. On the other hand, there are currently a number of indigenous livelihood activities practiced by the local communities which have potentially important contributions to reducing land degradation. These include weaving, blacksmithing, carpentry, tailoring, petty trading (cereals, livestock and local beverages), selling souvenirs of cultural and religious origin, processing of bamboo, dealing in herbal medicines, eco- and cultural tourism, beekeeping and fishing. Demand-driven and feasible alternative livelihoods or income generating activities (IGAs) will be identified and promoted based on successes and best practices in the region and elsewhere in the country. Some examples of alternative IGAs that could hold potential in the LTW are: fishery groups; various cottage industries including local leather working; community-based nurseries for sale of seedlings; improved charcoal production from plantations; brick making; post-harvest processing and sales.

236. Hence, the project will assist at least 8% (over 20,000) of the landless youth to earn alternative livelihood from IGAs by facilitating, stimulating and upscaling the potential off-farm activities via organizing, training and by linking to credit facilities such as the Amhara Credit and Saving Institution (ACSI).

Activity 2.1.2 Update and develop regional strategies and policies on SLM

237. Various existing policies, legislations, strategies and action plans relevant to SLM are also poorly implemented and have not yet become effective tools. Several policies, including land administration and use policy, population policy and policy on women's affairs fall into this category. Therefore, while advocating for new policies and legislation, the project will simultaneously focus on the effective implementation of these existing policies. The project intends to mainstream and harmonize SLM principles within national and regional development priorities, as well as to integrate land degradation control measures into those national and regional development plans that aim to alleviate poverty among rural communities. To achieve this, the project will adopt an integrated and cross-sectoral approach for undertaking SLM interventions. Conservation and sustainable use of natural resources will be matched to the local ecological, economic and social context. This output will also include mainstreaming of the NAP and the RAP into national and regional policy frameworks and development programs.

238. The Lake Tana watershed is characterized as a development corridor by the federal and regional governments. Hence, a number of initiatives are expected to be implemented in the watershed. There are already a number of GOs and NGOs working on natural resource management in the LTW. However, their efforts are not well coordinated, nor collaborative. Therefore, a linkage mechanism should be in place wherever a gap in flow of information or resources is likely to occur. This output will help to minimize duplication of efforts, reduce information gaps and establish coordination and collaboration among relevant institutions. Linkages are required for planning and review, program formulation and priority setting, collaborative professional activities, exchange of resources to enhance capacity to achieve products, for dissemination of knowledge and information and for coordination of professional activities.

239. Public awareness and mass education are very important in the creation of an informed society. Radio/TV programs will be designed in such a way that the public itself is used as a major source of wisdom – encompassing both traditional knowledge and local innovative response – as a base for mass education. This mass education program will be a mechanism to listen to the people, learn from them, and share the experiences of different societies for the common good. Mass education will be implemented in conjunction with relevant organization and local institutions. The education programs will make use of electronic and print media and discussion forums. This initiative will be relevant and applicable to all project components: it is a cross-cutting theme.

240. The development of a complete legal framework for land administration is a time-consuming exercise. The legal system, which is under implementation in the region, was developed and amended in accordance with the law of the land. The task of this project will be in supporting the implementation of the developed legal system and checking effectiveness of the legal procedures developed. Valuation of holdings in the project area will be conducted using an acceptable methodology based on agreed criteria. Data from, and the opinions of, landholders on values will be taken into consideration.

241. Property planning is the process whereby changes to property can be brought about through formal procedures. Planning for rural areas and centres must operate in conjunction with the land administration system, since this involves measures that create new divisions of the land and new patterns of land use. The planning will be at the holding level and will be an input to land administration decisions. The result of the planning will contribute to avoiding subjective judgments on mismanagement of holdings.

Component 3: Efficient and effective project coordination and management

Output 3.1 Coordination and management system operational

242. Efficient and effective project implementation arrangements that provide in a timely manner the required financial, material and human resources is a prerequisite for successful achievement of the desired goal and objective of any project. The project will be managed across three administrative levels (Regional, *woreda* and *kebele*/community level) in line with the government institutional set-up. At regional level, project implementation arrangements will include a Project Steering Committee (PSC), a Project Coordination Unit (PCU) composed of the necessary professional team, and focal person in each prominent stakeholder organization. At *woreda* level, the *Woreda* Steering Committee (WSC) that comprises prominent stakeholders will manage the project. Technical committees at each of these levels (regional, zonal and *woreda*) will be established.

243. MoARD will have the mandate, responsibility and authority to carry out implementation of the project at regional level as host institution. The project will use the existing government institutional set-up in implementing planned activities to ensure sustainability and cost-effectiveness.

Activity 3.1.1 Establishment of Project Coordination Unit

244. A Project Coordination Unit (PCU) will be established and will be responsible for coordination of the day-to-day activities of the project. The PCU will be established in BoARD comprised of a project coordinator; financial management specialist; procurement adviser; planning, monitoring and evaluation specialist; data and systems management specialist; training/gender specialist; and necessary support staff. The professionals will be recruited competitively from the market. Properly designed terms of references (ToRs), fully reflecting duties and responsibilities will be prepared with sufficient depth and breadth in relation to the subject matter. In brief, the Project Coordinator will be:

- responsible for recruitment of programme staff and consultants;

- coordinating the work of staff and consultants and providing guidance and quality assessment;
- overall financial management;
- monitoring and evaluation oversight at project level;
- reporting as per requirements of the GoE; IFAD and the GEF;
- supervising implementation.

245. The PCU will be provided with necessary mobility, office facilities, secretarial services and equipment. The PCU will operate directly under the guidance of the project steering committee and be technically supported by national/ external consultancy services.

Activity 3.1.2 Establishment of Project Steering Committee

246. A Project Steering Committee (PSC) will be established with representatives from all relevant institutions. This will be for the guidance and oversight of the project through its support to, and influence on, the PCU.

Activity 3.1.3 Establishment of Technical Committees at regional, zonal and woreda levels

247. In order to ensure the decentralisation of decision making, technical guidance and monitoring, technical committees will be set-up at various levels based on the administrative units.

Activity 3.1.4 Linkage to regional and national SLM platform

248. The project will establish appropriate linkages with relevant national institutions, specifically with the National SLM Platform and the EPA. These linkages will support the implementation of the proposed full-sized project by providing policy direction through the regional platform that will be established.

249. There will be a focus on creating favourable condition for mainstreaming of cross-cutting issues including gender, HIV/AIDS and environment in all development endeavours. To ensure gender participation and to strive towards equal benefits between the sexes, the project will – in all its activities – aim to better the GoE guideline of 25% of the beneficiaries being women.

250. The project will also document best-bet SLM practices (introduced; traditional and recent local innovations) both within and outside the watershed for scaling up throughout the region and to other parts of the country.

Output 3.2 Knowledge management system effective

251. The monitoring system under the project is intended to focus on providing an accurate and reliable progress assessment of the main outcome areas. The project will be monitored and evaluated in such a way that it can be verified whether its goal and purpose are being met or not. This follow-up of progress will enable corrective action and facilitate learning on the basis of experiences. The implementing partners will be accountable for what they do. A participatory monitoring and evaluation system will be designed and will be put in place with the involvement of community and grass-roots institutions, *kebele* and *woreda* institutions, and concerned women and men in the communities.

Activity 3.2.1 Establishment and operation of results-based monitoring and evaluation system

252. The existing MIS of the regional administration can be relied on to report on financial and physical progress of planned project activities. It is, however, inadequately prepared to report on outreach and impact. There is a good institutional framework in place which can be strengthened. At regional, zonal, *woreda* and *kebele* levels, there is a reasonably qualified cadre of staff performing

planning and monitoring functions mainly focused on monitoring budget utilisation. There are monthly reports on expenditure, and on outputs achieved.

253. At *kebele* and *woreda* levels, a large amount of information on operations are collected but not analysed to reflect outreach, outcomes and impact. Problems, constraints and lessons learnt have not yet been documented. These weaknesses were discussed with BOFED and agreement reached on strengthening the monitoring and evaluation system.

254. Provisions have therefore, been made under the project for short term TA to assist BoFED in the design, development and implementation of a results based management framework. The TA will, *inter alia*, critically review the exiting MIS, institutional arrangements, knowledge dissemination and management, and make recommendations for a comprehensive training programme both for staff at all four levels and beneficiary households. The study will also review and ensure that the logical framework accurately reflects commonly agreed performance indicators. It will also firm up the mode of data collection, analytical framework, reporting formats, information dissemination arrangements, etc. Consultants will be required to carry out the mid-term review, as well as the project completion report.

255. A baseline survey will also be carried out within the first year of implementation, building on the database of existing land-use patterns and natural resources, the recent population census, and regular socio-economic surveys undertaken by BoFED. In addition to requisite half-yearly progress reports, the project will support impact studies, the Mid-Term Review (MTR), and Project Completion Report (PCR). The progress reports will provide the basis for the annual implementation review workshops to be held with participation of stakeholders including representatives of on-going projects in the region in order to share experiences and provide inputs into the AWPB for the following year. Further details are given in Annex 12.

Activity 3.2.2 Communication and information dissemination

256. Knowledge sharing symposia will form a cornerstone of spreading – and exchanging – information about better SLM practices. These will take place at various levels, from intra-community workshops to symposia at the overall watershed level. The LTW project does not view information dissemination as a one-dimensional, but rather as a sharing of ideas with an in-built feedback loop. In other words the project will not prescribe inflexible technological remedies, but guidelines that land users will test and adapt to their own circumstance. As mentioned previously, farmer's own technical innovativeness will one source of improved or adapted technologies. Knowledge sharing symposia will be supplemented by use of the mass media, particularly the local radio, to broadcast information more widely. Publications of various sorts will be produced in Amharic as well as in English.

2.3 EXPECTED GLOBAL, NATIONAL AND LOCAL BENEFITS

257. The project will achieve Global Environmental Benefits (GEBs) under the Land Degradation Focal Area (LD FA) whose purpose is to foster system-wide change to control the increasing severity and extent of land degradation. In addition to the direct social, economic, and environmental benefits that will be gained from addressing land degradation in LTW and beyond, the project, through the use of SLM practices, will deliver global benefits. Additional benefits will accrue in other GEF focal areas, namely Biological Diversity, International Waters and Climate Change. The global environmental benefits of the project, which will be lost under the business-as usual scenario, will result from upscaling sustainable land management practices within the Lake Tana watershed. These are summarised in table as follows:

Table 2. Global Environmental Benefits Framework

GEB	Key indicators		Means/source of verification	Method of measurement	Notes
	Baseline situation	Expected situation			
1. Improvements to the integrity of ecosystems (soil, water, etc) and their functions	824,285 ha in total of farmland of which at least 90% degraded; 155,735 ha in total of pasture land of which approx. 95% degraded; 134,250 ha of degraded scrubland; 16,410 ha of plantation forest; 5,910 ha of degraded/ degrading / diminishing natural forest (a negligible amount - in terms of area – well maintained around church and monastery compounds)	227,000 ha farmland treated with SLM measures under 650 participatory watershed management plans; 9,400 ha rangeland/ pasture improved; 32,500 ha land rehabilitated and brought back into production; 18,900 ha land under afforestation through participatory planting schemes; 2,000 ha natural forest under participatory forest management	Evidence of change in land use and land management, and of improvements in soil and water quality	Satellite imagery: eg tracking the greenness of vegetation thro' Normalised Differenced Vegetation Index (NDVI) Groundtruthing mapping surveys Soil and water sampling Participatory assessment with land users	Monitoring procedures to be developed in line with the TerrAfrica Results Framework and Monitoring matrix
2. Increases in carbon stocks above and below ground in treated areas	Soil organic matter levels in arable topsoils as low as 0.5 to 1.0% (with correspondingly low carbon). Sparse tree and bush cover	Over 700,000 tonnes of carbon* will be sequestered above and below ground through these achievements	Measurable increase in organic carbon levels in vegetation and soil	Soil and whole system carbon assessment	See above
3. Reduce sedimentation in rivers and streams and Lake Tana - waters of international significance	13.5 x 10 ⁶ tonnes annual average sediment delivered through water courses to the lake	Reduction in sediment generated by 50% on land to be treated by SLM: equivalent to an average of a 15% reduction in the overall watershed	Sediment load in rivers draining the SLM-treated sub-watersheds	Automatic water level recorders (AWLR) and sediment sampling	

**Basis of assumptions:*

0.25 tonnes of carbon per hectare per annum (mainly in the soil: though some in woody vegetation also) over 4-5 years for approx 227,500 hectares brought under sustainable land management;

2.5 tonnes of carbon per hectare per annum (in woody vegetation and the soil) over 4-5 years for approx 50,000 hectares of forest/ plantation and rehabilitated land

0.25 tonnes of carbon per hectare per annum (mainly in the soil: though some in woody vegetation also) over 4-5 years for approx 9,400 hectares improved pastureland

258. A further GEB will be achieved from the project as a result of the IFAD/ GoE co-financing. This is preservation and restoration of globally significant species through protection of their natural biodiversity habitats. 15 “core conservation sites” are to be established (100-1000 ha each). The baseline situation is that biodiversity of international importance is diminishing in richness and abundance in forests and wetlands – though this is as yet unquantified and will be the subject of an inventory in the project’s first year. Appropriate means of verification and assessment indices will be developed at that time.

259. Note that all the GEBs are derived from improved ecosystem function and integrity, and soil quality is a strong proxy for this - as recognised by the GEF.

260. A further indirect benefit potentially yielding GEBs elsewhere is the contribution to a more programmatic approach to SLM at national level, including more investment in SLM, through the National SLM Framework and Platform. These practices and lessons will be compiled and made available for adoption in other watersheds of the region and of the nation.

261. These GEBs will be monitored as closely as possible, using a wide range of parameters from satellite imagery to participatory assessments. However these monitoring procedures need to be developed in close collaboration with the TerrAfrica Results Framework and Monitoring Matrix, documents which were not finalized at the time of this resubmission (December 2008). The TerrAfrica Results Framework is built largely upon the SIP M&E framework (2007) and the TerrAfrica Business Planning Framework (2006), being devised to be appropriate to the logic and rationale of TerrAfrica being recognized by partners and sub-Saharan countries as a regional platform for action to implement CAADP Pillar 1 on SLM, NEPAD’s Environment Program areas 1 and 6, the REC action plans, the UNCCD regional and national action plans, and most critically, participating countries’ sectoral programs and national strategies. Outcomes, outputs, indicators and tools at project level are still being developed, especially for the SIP projects (SIP being a subset of TerrAfrica), but these strategic directions and documents will be used to align the project’s M&E and to refine its monitoring techniques during its inception phase. During this phase the project may also recourse to the STAP (if available), noting the STAP’s mandate to “*provide timely and relevant advice on scientific and technical matters related to M&E*”.

2.4 INCREMENTAL REASONING

Project Background

262. The Lake Tana watershed is important in ecological and economic terms, and it has both local and global significance. More than 89% of the rapidly growing population of 2.5 million people living in the watershed depend on subsistence agriculture for their livelihoods. The productivity and sustainability of these mixed farming practices depend on ecosystem goods and services, which in turn rely on the structural and functional integrity of the different components - the rivers, the wetlands, the lake, forests, pastures and soils - that comprise the watershed's ecosystems. However, the integrity of the overall ecosystem has been undermined and continues to be under serious threat, and this is manifested in the poor livelihood status of the people living in the watershed.

Business-As-Usual (Baseline Scenario)

263. The “Business-As-Usual” scenario is described in full within Annex 5 (“Incremental Reasoning”). Here only the most important aspects are highlighted. The Government of Ethiopia (GoE) follows the Agricultural Development Led Industrialization (ADLI) plan developed in 2001 as its economic development strategy. ADLI aims at increasing agricultural productivity, and is the main engine for both agricultural and industrial sector progress. It is reflected in the Rural Development Strategy, which continues to stress the role of increased agricultural production as the basis for the country’s development. The strategy is designed to fulfil food security and increase rural employment opportunities.

264. The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) developed in 2005 is Ethiopia's guiding strategic framework for the five year period from 2005 to 2010. It gives important strategic directions related to human resources development, rural development, food security and capacity building. The main objective during the PASDEP period is to accelerate the transformation from subsistence, to a more market-oriented, agriculture. However, this requires commercialization of agriculture and promoting much more rapid non-farm private sector growth.

265. The PASDEP sets the stage for providing a sound business-as-usual foundation to the LTW project. As far as environmental issues are concerned, the PASDEP policy is presented as building on the structure and strengths of the Sustainable Development and Poverty Reduction Programs SDPRP, 2002. As such, it aims to: increase the mainstreaming of the environment into development; strengthen city and regional governments for environmental protection; and develop regulatory frameworks and systems for improving air quality, solid liquid, hazardous wastes and chemicals management by developing standards and laws.

266. With respect to policy and legal framework, the GoE adopted a National Environmental Policy in 1997, which provides guidelines for environmental protection and sustainable management of natural resources. It also adopted a Biodiversity Strategic Action Plan (BSAP) in 2005. A National Forest law has been recently issued and the NAP (1998) and RAP (2002) for combating desertification have been developed and endorsed. These are important steps, but much more needs to be done to provide an enabling environment for SLM. With the exception of the NAP, policies lack specific measures for controlling land degradation. There is insufficient attention paid to local communities' indigenous knowledge and their innovative and adaptive practices in managing their land resources sustainably.

267. The country is already promoting a community-based integrated watershed development approach. The government prepared comprehensive community-based participatory watershed development guidelines in 2005 in order to serve every development intervention by government and non-governmental organizations throughout the country. Based on these guidelines, training to experts at all level has been given and so far as many as 95 micro-watersheds development plans have been prepared in the Lake Tana watershed. However, the implementation is very weak due to constraints of finance, skill and experience in integrated watershed development. The GEF alternative will therefore address these constraints and improve sustainable management of resources on an integrated basis. It will also draw lessons and contribute to updating and refining of the guidelines.

268. One business-as-usual activity, the land certification process, will need to be further assisted to ensure tenure security. Other business-as-usual actions such as the promotion of water harvesting technologies will need to be coordinated and expanded, based on activities which have recorded success stories.

269. Irrespective of many promising current and proposed activities across a number of sectors to address SLM (see Annex 5), they are insufficient, scattered and inadequately coordinated to have the adequate impact at the ground level. Therefore, an overarching intervention by GEF is required to mobilize additional resources, build capacity, harmonize and coordinate efforts across sectors and demonstrate innovative ways for SLM in order to ensure ecosystem function and integrity that are of local and global significance – and to attract co-funding.

270. In summary, land degradation will continue under “business as usual”. It results from unsustainable agricultural practices, overgrazing, deforestation and mismanagement of water and wetland resources threaten ecosystem integrity and function in the LTW. These practices – a result of poverty and population pressure obliging the inhabitants to search for short-term solutions – lead to a decline in land productivity, loss of biodiversity (as well as agrobiodiversity) and reduction of household income. This also threatens the health of important trans-boundary water resources and globally significant biological diversity within the watershed. The situation in turn aggravates overall

poverty and further diminishes the livelihood base of million's of people who depend on the natural resources for their survival.

GEF Alternative

271. The IFAD-GEF alternative scenario will build on the baseline actions by promoting integrated, cross-sectoral management of natural resources, mainstreaming SLM into policy and land use planning, strengthening institutions and removing bottleneck barriers. The watershed management and experience on irrigation schemes development of the PASDIP will be fed into to this project. The IFAD-GEF operation will also use the marketing support infrastructure and the credit and saving systems being established under the AMIP and RUFIP as the basis for improving agricultural marketing, including micro-finance. The alternative approach will help introducing incentive measures to encourage local communities to adopt various new sustainable livelihood options. It will enhance the knowledge base and raise awareness among policy makers and the public. The IFAD-GEF alternative will also enhance innovation and the scaling up of good practice through a participatory and replicable approach on the ground. Moreover, the GEF alternative will help to mobilize additional resources for investment in SLM. The alternative will deliver, applying the TerrAfrica-SIP principles and the SLM approach, the global benefits described under 2.3 and quantified in Annex 1. The incremental monies made available through the GEF are focused on both on and off-farm SLM and land rehabilitation to achieve the GEBs described in section 2.3 above. This is where the bulk of the GEF input (75% of the US\$ 4.4m) is targeted.

272. The success of the GEF alternative depends heavily on advocacy and developing new and viable policies and proper implementation of existing policies and the legal framework relevant to SLM. It also requires strengthened institutional capacity – amongst institutions that have strong political and financial backing from the government of Ethiopia and the ANRS. This fact contributes to the likelihood of success.

273. The 2.5 million people living in the 21 *woderas* of the watershed are directly or indirectly touched by the project. National and local benefits are expected from poverty eradication due to the increase in incomes obtained through sustainable agriculture, and income-generating activities (IGAs). The following benefits are also expected at the local and national levels:

- Improvement in living conditions and poverty eradication;
- Mitigation of population pressure on land and out-migration;
- Minimization of social conflicts by enhancing land use security;
- Enhancement of alternative income generation activities; and
- Improved conditions for agricultural production

274. Sustainable management of natural resources leads to increased income and reduced food insecurity. Thus, an important share of the income could be reallocated to productive re-investment rather than to consumption. Effective participation by the local communities and officials will increase their capacities for natural resource management. The capacity of local communities, local institutions and government organizations will be enhanced for sustainable management of project activities that further reduce land degradation.

275. Finally, the basic value-addition aspect of the GEF contribution, in relation to the IFAD co-financing for this project, is to mould that contribution into a Land Degradation Focal Area project, ensuring global environmental benefits through SLM. The GEF adds specific extra value through its support to ecosystem protection/rehabilitation and the other environmental focuses: these will deliver incremental global environmental benefits, and would not normally have been the primary focus of a solely IFAD-financed project

2.5 COUNTRY ELIGIBILITY AND DRIVENNESS

Country eligibility

276. Ethiopia is eligible for Global Environment Facility (GEF) assistance since it has ratified various conventions related to the environment. The country ratified the United Nations Convention to Combat Desertification (UNCCD) on 27 June 1997 and developed a National Action Program (NAP) to Combat Desertification in 1998. Similarly, the Amhara National Regional State (ANRS) prepared its Regional Action Program (RAP) to Combat Desertification in 2002.

277. The country also ratified the Convention on Biological Diversity (CBD) on 4 April 1994; and developed its Biodiversity Strategy and Action Plan (BSAP) in 2005 to meet the planning requirement of Article 6 of the convention. In addition, the Cartagena Protocol on Biosafety was ratified on 10 September 2003.

278. Ethiopia signed the United Nation Framework Convention on Climatic Change (UNFCCC) on 5 April 1994 and issued an Environmental Policy in 1997 to improve and enhance quality of life of all Ethiopians through sound management and use of natural resources.

279. The country has ratified the Stockholm Convention on Persistent Organic Pollutants, which was signed on 9 January 2003, and The Vienna Convention for the protection of the ozone layer on 11 October 1994. National action on safe disposal of persistent organic pollutants was taken in collaboration with FAO, Italy, USA, Japan, The Netherlands and Sweden between 2001 and 2004.

Country Drivenness

280. Both the Federal and the Regional governments have consistently shown a strong commitment to addressing the issue of land degradation. There is a profound national and regional sense of urgency as Ethiopians become more and more aware of the imminent and serious ecological threats posed by land degradation and the subsequent negative impacts to national development and livelihoods. To create an enabling environment to address land degradation and associated cross-cutting themes, the federal and regional governments have enacted a wide range of policies, strategies, action plans and programs.

281. The inclusion of several articles in the federal constitution of 1995 has demonstrated the commitment of the country to environmental issues. For example, Article 44 of the constitution guarantees the right to live in a “clean and healthy environment,” and Article 92 requires that the design and implementation of programs and projects of development shall not damage or destroy the environment.

282. Prior to the ratification of UNCCD, the country developed the “Conservation Strategy of Ethiopia” (CSE) in April 1997 with the help of World Conservation Union (IUCN). This has proved the commitment of Ethiopian government to pursue sustainable conservation and management of natural resources and biodiversity in the country. In line with CSE, ANRS formulated and developed a Regional Conservation Strategy (RCS) in 1999 with the overall objective of conserving and managing the natural resources and environment of the region.

283. The National Action Program (NAP) to Combat Desertification was prepared through a participatory process, with consultation of relevant governmental and non-governmental organizations, civil societies, grassroots level communities and professionals in 1998. The action program includes managing natural resources, intensification and diversification of agriculture, promoting alternative livelihoods and rural credit to improve institutional capacity, particularly at the community level. To combat desertification, the Environmental Protection Land Administration and Use Authority (EPLAUA) of the ANRS prepared a Regional Action Program (RAP), within the framework of the NAP, in 2002.

284. Poverty is one of the causes - and results - of land degradation in Ethiopia. To alleviate this problem the country prepared the Sustainable Development and Poverty Reduction Program (SDPRP) in 2002, which is Ethiopia's version of a Poverty Reduction Strategy Paper (PRSP). Its overarching objective is reducing poverty by enhancing economic growth. This document was prepared inline with CSE and the Environmental Policy of Ethiopia (EPE). Its priority areas for action in environment and development are land degradation, strengthening of regulatory and institutional capacity, and enhancement and protection of biodiversity.

285. Later, based on the experiences gained from the implementation of SDPRP, the country prepared a Plan for Accelerated and Sustained Development to End Poverty (PASDEP) in 2005. The PASDEP also gives emphasis to combating desertification and land degradation through proper utilization of agricultural lands, recognizing that land is the essential resource for all farming activities. According to the PASDEP (i.e. the PRSP for 2005-2010), the Ethiopian economy must grow by at least 6-7% per year in order to achieve the Millennium Development Goal (MDG) of halving poverty by 2015. It aims to increase the mainstreaming of the environment into development, to strengthen city and regional governments for environmental protection and to develop regulatory frameworks and systems for alleviating deforestation and soil degradation, which are major causes of food insecurity and poverty in Ethiopia.

286. Cognizant of the serious deforestation and overall environmental degradation, the country issued the 20-year Ethiopian Forestry Action Program (EFAP) in 1994. Similarly, ANRS developed the Amhara Forestry Action Program (AFAP) in 1999. The main objectives of both the EFAP and the AFAP were increasing output of forest products on a sustainable basis; increasing agricultural production through reduced land degradation; increasing soil fertility; conserving forest ecosystems as well as genetic resources; and improving the welfare of rural communities.

287. Article 6 of the CBD demands the preparation of National Biodiversity Strategies and Action Plan (NBSAP) by each signatory country. As a party to the convention and in fulfilment of its obligation, Ethiopia prepared its NBSAP document in 2005 and prepared the final draft of its biosafety law in 2007. The NBSAP document defines the current status of, pressure on, options for, and priority action to ensure the conservation, sustainable use, and equitable share of benefits accruing from the use of biological diversity of the country.

288. In addition, the government enacted the National Livestock Development Programme (1997), the Rural Development Strategy (2002) and the National Food Security Strategy (2003).

289. The Government of Ethiopia (GoE) realizes that natural resource conservation and sustainable land management issues cannot be tackled effectively unless local communities participate in project planning, implementation and decision-making. As a result, rural communities are increasingly being involved in taking responsibility for projects undertaken in their area.

290. Ethiopia played an important role in the formulation of both the New Partnership for Africa's Development (NEPAD) and the African Union programme to attain sustainable socio-economic development of the continent. NEPAD's Comprehensive Africa Agricultural Development Programme (CAADP) – endorsed by African Ministers of Agriculture - is an important step towards achieving NEPAD's goal of fostering a broad-based agricultural-led economic growth in African countries by focusing on improving agricultural productivity and competitiveness. Many of the priority investments of the CAADP, such as improving land management and expanding water harvesting and reducing vulnerability of smallholders, are consistent with several components of the project.

291. Ethiopia is also a member of the Nile Basin Initiative, which is a transitional mechanism that includes the Nile riparian countries as equal members in a regional partnership to promote economic development and fight poverty throughout the basin. This transitional arrangement is basically guided

by a shared vision: “to achieve socio-economic development through the equitable utilization and benefit from the common Nile Basin water resources”.

2.6 CONSISTENCY WITH GEF POLICIES AND STRATEGIES

GEF Program Designation and Conformity

292. This full-sized project focuses on mitigating the root causes, barriers and effects of land degradation through institutional strengthening, capacity building and sustainable land management interventions while contributing to poverty alleviation and improving local livelihoods and economic well-being. It promotes cross-sectoral approaches for tackling land degradation and the creation of an enabling environment in terms of national and regional government policies, as well as ensuring effective participation of stakeholders. The proposed project is therefore in line with the global environmental concerns of the relevant strategic programs of the GEF-4 Focal Area Strategy.

293. The project will be a constituent part of the Strategic Investment Program for Sustainable Land Management in Sub-Saharan Africa (SIP). The expected project outcomes will contribute to at least three of the SIP Intermediate Results: IR1, through the identification and demonstration of innovative approaches and implementation of SLM schemes; IR2, via the development of skills of government and communities for dialogue and negotiation; and IR4, generation of knowledge at government and community levels.

294. The SIP is the response from the GEF to support Sub-Saharan African countries in pursuing the multi-sector, long term programmatic approaches needed to upscale SLM. The SIP will directly contribute to the implementation of the GEF land degradation focal area strategy. The SIP will amplify the catalytic and strategic role of the GEF and improve investment efficiency and effectiveness. Simultaneously the SIP will further allow implementing agencies and executing agencies to harmonise actions to strengthen joint work programming at all levels for increased impacts and cost-effectiveness. Seven key features form the backbone of the SIP’s innovative approach. These are in brief:

- i. Up-front commitment to an envelope of funds;
- ii. Agency commitment to joint programming at country level;
- iii. Commitments by SSA countries to use programmatic approaches;
- iv. Responding to critical investment needs;
- v. Integration within broader country policy;
- vi. Streamlined project processing; and
- vii. Common set of approaches for M&E design framework that learns from previous experience.

295. The SIP is a program informed by the GEF and by TerrAfrica – and the project will be fully aligned with the TerrAfrica initiative, following its principles and recommendations. TerrAfrica was established to “scale up the financing and mainstreaming of effective and efficient country-driven sustainable land management approaches”. TerrAfrica is a regional multi-stakeholder partnership that aims at scaling up SLM investments in sub-Saharan Africa. It was launched in 2005 by NEPAD. TerrAfrica provides a common platform for partners to mainstream and upscale cost-effective and efficient SLM. TerrAfrica focuses on regional partnership, knowledge generation and dissemination as well as investment development and alignment. The SIP is a priority program of TerrAfrica. It is financial mechanism that provides a specific entry point for efficiently mobilising the GEF resources. TerrAfrica recognizes the shortcomings of past SLM investments which it summarizes as:

- i. Insufficient and inefficiently targeted funding
- ii. Inadequate donor commitment and political will amongst governments
- iii. Inconsistent support for mainstreaming and scaling up known SLM successes
- iv. A narrow, project specific symptom-focused or *ad hoc* approach
- v. Fragmented stakeholder cooperation; and

vi. An isolated and unorganized body of knowledge

296. TerrAfrica fills critical and substantial gaps that exist in current efforts to combat land degradation, and, in effect, delivers a new business model for implementing SLM. TerrAfrica aims to increase the scale and scope of SLM financing (the SIP is the most noteworthy example) and improve the efficiency and effectiveness of SLM investments by supporting “integrated SLM governance” via analytical support and a region-wide programmatic platform.

297. With its firm footing within the principles and aspirations of the SIP, TerrAfrica and the GEF-4 Focal Area on Land Degradation, the project (though not officially multifocal) will, through its various activities and related impacts, also contribute positively to the GEF-4 focal areas of biodiversity (by addressing habitat degradation) international waters (through integrated watershed management at the source of the Blue Nile) and sustainable forest management

Fit with Focal Area Strategies

298. The Lake Tana watershed project fits fully within the framework of the GEF-4 land degradation focal area strategy. The purpose of the GEF-4 land degradation focal area is to “foster system-wide change to control the increasing severity and extent of land degradation in order to derive global environmental benefits”. The land degradation focal area will embrace a landscape approach with “ecosystem principles” – ensuring that ecosystem goods and services are provided to land users and others. The strategy accords with the Millennium Development Goals, especially poverty reduction and environmental sustainability. The goal of the land degradation focal area is to arrest and reverse current trends in land degradation. Its tool is sustainable land management.

299. Thus the project will improve land management and sustainable use options for natural resource management in the Lake Tana watershed while also conserving globally significant biological diversity, and enabling replication of these improvements within Ethiopia. In so doing, the project will create SLM impacts on ecosystems and on their functional integrity by demonstrating and upscaling community-based best practices in sustainable land management and prevention of further land degradation.

300. The project will promote Strategic Objective 2 of the Land Degradation Focal Area (*to upscale sustainable land management investments that generate mutual benefits for the global environment and local livelihoods*) and principally through Strategic program 1 (*supporting sustainable agriculture and rangeland management*) and Strategic program 2 (*sustainable forest management and production landscapes*).

301. The expected outcomes will include benefits for the communities from applying and disseminating SLM practices, and the systematic application, at national scale, of sustainable, community-based farming and forest management systems. It will also contribute to Strategic Objective 1 (*an enabling environment will place SLM in the mainstream of development policy and practice at regional, national and local levels*) and the expected outcome is the creation of an enabling policy environment and institutional capacity building. The proposal fits into Strategic Program 1, *Supporting Sustainable Agriculture and Rangeland Management*, working in areas of intense competition for land resources that are prone to severe soil erosion and loss of soil fertility.

302. The project is designed to contribute to the achievement of GEF’s strategic objectives by demonstrating SLM practices in the LTW and disseminating these good practices across the country. Activities will focus upon improving agriculture, pastureland, forestry, soil and water management which are the primary drivers of land degradation in Ethiopia in general and the LTW in particular. Implemented activities will be closely monitored and evaluated and successful practices will be documented, replicated and upscaled.

303. Therefore, the project provides for an intervention with high potential to create multiple global environmental benefits. Activities beneficial to SLM also bring positive impacts on biodiversity, international waters and climate change. For instance, the proposed project will contribute to CBD through the restoration of ecological balance in fragile ecosystems (forest, agricultural land and wetlands) and conservation of endemic and indigenous flora and fauna. It will also contribute to the UNFCCC through improved land use practices such as afforestation and agroforestry activities that will enhance carbon sequestration and reduce greenhouse gas emissions.

2.7 COORDINATION WITH OTHER RELATED INITIATIVES

304. As part of the SIP, the project is aligned to the TerrAfrica initiative for SLM in Sub-Saharan Africa, following its principles and recommendations, among them the coordination and sharing of information with other stakeholders at national and regional level, and the engagement and participation in a programmatic vision for the sector in Ethiopia (through the SLM National Platform). Under the TerrAfrica Business Planning Framework, Objectives 6 and 7 advocate the mainstreaming of SLM into development strategies and policy dialogues at various levels. This recommendation is addressed through project component 2.

305. With the current strategic move towards programmatic approaches which join efforts and resources to tackle land degradation problems, it is essential to highlight potential institutions with which the project will seek consultation, coordination and collaboration. The project will build partnerships by securing synergies and complementarity with other poverty reduction and pro-SLM programmes initiated by the government and donors. In this regard, some of the most important institutions and mechanisms are discussed below. In this regard, some of the most important institutions are discussed below.

306. Three GEF Implementing and Executing Agencies are currently preparing initiatives for SLM to be funded under the SIP in Ethiopia: IFAD, UNDP (“SLM Capacity Building in Drylands of Ethiopia”) and WB (“Sustainable Land Management Program”). The three agencies have coordinated closely the preparation of their future operations under the National Programmatic Framework for SLM, and they have agreed to formulate their proposals with a common background to show how the three operations will jointly contribute to the same broad objectives. The WB, as leading agency for the three Ethiopian operations under the SIP, requested a joint endorsement letter from the GEF National Focal Point, which was signed last 21 January 2008. The PIF of the IFAD operation was circulated among the main stakeholders, including WB and UNDP, before its submission. Representatives from the three agencies were involved in the preparation of the IFAD proposal, participating in two regional workshops in Bahir Dar, Amhara National Regional State, in November 2006 and July 2007, respectively. Progress made has been duly reported to the TerrAfrica Steering Committee, as the project is included in the TerrAfrica Work Program. The design of the M&E system was also consulted with the persons in charge from the TerrAfrica Steering Committee. Implementation of the project will be done in coordination with the Ethiopian National SLM Platform (see below), sharing information and discussing objectives and with the other two GEF agencies, the TerrAfrica Steering Committee and the SIP.

307. The National SLM Platform will align with the TerrAfrica’s business model and support the SIP’s objectives by: (1) developing an operational platform for donors’ alignment and coordination; (2) addressing key policy and regulatory bottlenecks and removing perverse incentives to SLM upscaling; (3) promoting an integrated and cross sectoral approach to land management; (4) developing mechanisms for upscaling of SLM best practices; and (5) supporting knowledge management and monitoring.

308. Furthermore, a national mechanism has been developed to coordinate all sustainable land management activities. This mechanism is facilitated through national platforms and a steering committee chaired by the deputy Prime Minister, and is responsible for mobilizing financial and technical resources to address land degradation. As LTW is situated in the Nile Basin, the project will

build partnerships by securing synergies and complementarity with the GEF-funded "Eastern Nile Watershed Management Project" (GEF ID 3398). This project is aimed at developing a sustainable, transboundary framework for watershed management in the Eastern Nile basin and at improving natural resource-based livelihoods and reducing land degradation. This close cooperation will help to establish the ground for a regional platform and steering committee.

309. The Global Mechanism of the CCD is expected to coordinate with the GEF Implementing and Executing Agencies and other donors in finance resource mobilization. The facilitation committee of the Global Mechanism could assist in supporting such coordination. Other committee members include IFAD, AfDB, WB, UNDP and FAO.

310. IFAD is dedicated to reducing rural poverty and food and nutritional insecurity in developing countries. Throughout the country, IFAD is currently implementing a number of projects and programs, including small-scale irrigation development, pasture land management, agricultural research and training, agricultural marketing improvement and rural micro financing. IFAD also has substantial experience in watershed management approaches. The GEF Implementing agency, IFAD and the executing agency, EPLAUA of ANRS worked together as co-leaders during the PDF-B preparatory stage to assist the GoE in general and ANRS in particular to develop the country partnership program framework. However, during the implementation period of the full sized project, other GEF agencies will be included. IFAD builds partnerships by securing synergies and complementarity with other donor-funded poverty reduction programs such as the ongoing Productive Safety Net Program, the IDA-led Ethiopian Rural Transportation and Travel Project, Rural Capacity Building Project, and the AfDB-funded Agriculture Support Project.

311. The African Development Bank (AfDB) has supported two relevant projects: (1) the Koga irrigation project (located in the LTW area) and (2) the Agricultural Sector Support project. Both have watershed management components, which will constitute part of the National SLM Framework. This confirms that SLM will be an important element of the next program cycle (2008-2010). The Koga project is sited within the LTW, covering an area of 26,000 ha, with the overall objective of improving agricultural production in the catchments and command areas of the Koga River valleys by 2008.

312. The WB Energy Access Biomass supply project is being implemented in 31 *woredas* in ANRS, and out of the 31 *woredas* 10 are located in the LTW. The Participatory Natural Forest Management System, has the overall objective of conserving and developing forests focuses on existing patches of natural forest - with the active participation of concerned communities. A participatory planning approach is used to determine the potential for development of community forests. Forest management support systems include agriculture staff training, field equipment supply and assistance to farmers to establish and manage their own nurseries. Another water supply and sanitation project is ongoing in some of the watershed areas under the same multilateral agency

313. UNDP has worked closely with GoE, is playing a key role on overall donor-government coordination, and was instrumental in creating the food security and Safety Net program for the most vulnerable people in the country. UNDP has a practical experience in the Second Country Cooperation Framework program in Ethiopia and in ANRS as well. In this aspect, UNDP has helped to implement major conventions on desertification, biological diversity and climate change through concrete action on the ground. It also works through a capacity-building approach supporting governments and encourages the creation of enabling environments for sustainable management of natural resources.

314. FAO specializes in providing policy, technical and thematic support services for the majority of SIP components and, in particular, through pursuing and promoting integrated approaches and frameworks to tackle land degradation, as well as in knowledge management via the TerrAfrica platform. FAO has also broad in-house specialized technical expertise on SLM-related issues such sustainable management of crops, livestock, grasslands, forest, water resources, bioenergy, and climate adaptation, on information systems and networks. FAO-Ethiopia is working in the framework of the implementation of the national SLM program by contributing to the dynamics and enabling

conditions that could provide the basis for the establishment of a regional platform for SLM in southern Ethiopia. Among institutions presented above - and others that have current activities on the ground - consultation, cooperation and collaboration is essential for the success of the project. IFAD, as both a United Nations agency and an international financial institution - through its long standing experience and on going programs - will provide essential strategic support in terms of investment and implementation. This in turn, will add value to IFAD operations in terms of partnership, policy dialogue and learning.

2.8 RISKS AND ASSUMPTIONS

General risks

315. The SIP (Program Brief, May 2007, pp 66 and 67) lays out four basic ‘critical risks’ pertaining to implementation of the overall programme – and these can all be taken as relevant to the Lake Tana watershed situation. They are as follows:

- i. The natural resistance felt by some institutions and stakeholders in shifting from a project based to programmatic based approach;
- ii. The need for sustained political will to improve enabling environments for multi-sectoral programmes in the face of competing priorities;
- iii. The time taken for alignment and mobilization of resources by donors and sectoral institutions; and
- iv. The ability of stakeholders and partners to manage and use information and knowledge at the time and place it is most needed.

316. To this list could be added the risk of “teething problems” with the implementation of the SIP itself causing delays to start-up of projects and country programmes, as those involved take time to become familiarised with the new procedures and requirements.

317. With specific respect to the Lake Tana watershed, it is expected that an enabling environment for sustainable natural resource management programs will be created by the federal ministries/authorities, regional line agencies and district (*wodera*) administrations. This assumes the political situation remains conducive to policy reform and line agencies collaborate in the introduction of SLM practices to combat environmental degradation, and are willing to mainstream SLM into national development priorities. It is further assumed that in raising awareness of land degradation issues, the regional government collaborates and participates in community-based integrated natural resource management, and, furthermore, concerned agencies will collaborate and share quality information to develop reliable baseline information for SLM.

318. Institutional capacity, from the community level to the regional level needs to be built in order to effectively address land degradation. It is taken that stable institutional set-ups at all levels will be in place and the regional government is willing to facilitate participatory land use planning methods and implement these to control further land degradation and to restore degraded landscapes. Besides, it is anticipated that district administrations and communities will fully participate and there will be timely delivery of inputs for the implementation of SLM practices in LTW. Local level coordination among line agencies, NGOs and community organizations are expected to facilitate the mobilization of resources to address land degradation and create favourable conditions for collective site specific planning and the active participation of local communities. The willingness of EPLAUA to house regional coordination units to ensure availability of adequate and reliable funds and put mechanisms to mediate in conflicts which may arise, is anticipated.

319. The achievement of community-based integrated natural resource management goals could be affected by the occurrence of changes in the priorities of local stakeholders. This is unlikely as local stakeholders will be provided with packages of support which balance technical and financial aspects with awareness-raising. Risks which could affect the successful implementation of technical solutions

include unforeseen pests, climatic fluctuations (see following section) and variations in input costs and availability. The project will mitigate these risks by promoting diversified low input production systems and alternative income generation activities wherever possible. SLM technologies – especially biological remedies – that can be further adapted by land users to their specific needs and in the light of changing conditions will be stressed.

320. Insufficient consultation between stakeholders at different levels or the tendency of one or another actor to use his/her administrative position or hierarchy to impose views on others comprises a significant failure risk to the project, especially at the decentralized, local, level. The establishment of a system of incentives for exemplary agents, sanctions for those who block the process and developing working modalities and allocating duties and responsibilities for each stakeholder is important to mitigate this. This would help to ensure that local stakeholders effectively own the project.

321. A challenge commonly met is hesitancy of the local communities to accept new knowledge and technical approaches. Moreover, the transition time and incentives needed to progress with alignment and harmonization are potential obstacles to be overcome. Continuous awareness creation, experience sharing and demonstration mitigate these risks – as indeed does the process of participatory technology development where land users are included in making decisions.

322. Another risk is that linkages and collaboration might remain poor among government agencies. To mitigate this risk, joint management committees with appropriate representation from key organizations will be formed to ensure maintenance and monitoring of linkages.

323. Delays in the financial commitments and disbursement may prolong implementation of physical action plan. To mitigate this, a disbursement plan for co-financing will be prepared as part of the project document and this will be reviewed every year, and release of project resources will be contingent on realization of the plan.

324. Moreover, the project will mitigate risks by investing in community-level social capital, including working with members of the younger generation in order to ensure continued local commitment to processes, and by implementing a program of communication with counterparts in order to promote their continued support. The risk of the beneficiaries of environmental services refusing to contribute to schemes designed to internalize their costs will be mitigated by the provision of support. Environmental education will ensure that schemes are not only appropriately adapted to local conditions, but also understood by all.

325. The GEF support will enable design, implementation and upscaling of appropriate technologies which are cost-effective, and easily handled and modified by farmers. It will also enhance appropriate ways and means of managing the project activities that will enable replication.

326. The GEF support furthermore encourages replicability since community-based approach emphasizes that interventions should be flexible to respond to various agro-ecological zones, local endowments, and farmers' capacity to invest in affordable soil, water, forest, and livestock management technologies rather than following prescribed packages. Principles are always replicable - while specific practices may not be.

327. The capacity of local government and local organization to address issues related to land use and land tenure security is very limited. There is generally a low level of awareness among farming communities, women and youth about the degradation of natural resources and its impact on their livelihood. GEF support will strengthen EPLAUA in its recently launched activities to enhance land tenure security, learn from the land use and land tenure experiences of other countries. This could provide valuable lessons to policy makers and enhance replicability of similar institutions and approaches in other regions.

328. Ethiopian rural society has many important traditional and indigenous institutions which are currently weakly involved in socio-economic activities. They lack the ability to plan and implement development initiatives for their communities. Women and the landless youth, who are marginalized, constitute the most affected parts of the community and have the most to gain from such arrangements. However, these CBOs can be strengthened and transformed to assume various self-help, conservation and natural resources management and development roles if properly organized and their capacity is built.

Climate Proofing

329. With respect to climate change, there is some likelihood that various impacts will be felt during the life of the project. These will possibly include more erratic rainfall and a negative impact on crop yields. However, rather than being a 'risk' to the project, this is more likely to have the effect of highlighting the positive effects of the SLM management techniques adopted, as these will help insulate production systems against the effects of climatic variability.

330. Thus, as described at length in the SIP Programme brief of May, 2007, there is a need to "climate proof" SLM investments. This, in simple terms, means making sure that the SLM practices, and the capacity built around those practices, take climate change into account. Techniques and thought-processes need to "adaptive". In other words, the practices should be (as far as possible) able to cope with situations where – because of climate change – temperatures are higher and rainfall less and more erratic, even if we are unsure about the precise degree of change. Simultaneously both SLM specialists and land users should be stimulated to think in an "adaptive" way so that they do not just operate prescriptively, applying blanket recommendations.

331. As is pointed out in the SIP, there are important differences between SLM to address land degradation with adaptation to climate change, mainly in terms of scale and types of solutions as well as in terms of actors at the national and regional level that deal with these issues. Adaptation is largely viewed as being local and unique circumstances of that place (local climate, social/ ecological/ political capital) versus SLM which tends to encompass a much larger spatial scale, and tends to emphasise the physical systems more (erosion, soil quality etc).

332. The methods to identify the solutions for the two are slightly different; however for most of SSA, the major issues addressed by adaptation to climate change are likely to revolve around production systems, landscapes, water management and infrastructure, issues that are equally important in considering SLM. The need for coordinated interventions is thus very obvious and a requirement. Both adaptation and SLM require planning that is integrated across sectors and vertically across scales of management.

333. Adaptation to climate change is a relatively new addition to environmental concerns that have been integrated into national planning, and major guiding principles are still under development and refinement, such as important topics of the nature of benefits in terms of funding obligations, questions of attribution of particular climatic events to either normal climate variability versus anthropogenic climate change, as well as what the nature of adaptation operations would be, as to whether adaptation operations and activities can be stand-alone , or that they are in fact, part of development operations.

334. Climate proofing will be in-built under the project by, precisely these two approaches of being adaptive and versatile. Technologies will be promoted that lend themselves to deteriorating rainfall/ temperature regimes (thus: water harvesting; soil organic matter amelioration; mulching). Land users will be encouraged to experiment themselves: local adaptive innovation is something land users have been involved in for millennia, yet this is largely overlooked in this current western-knowledge-based global society.

2.9 SUSTAINABILITY

335. The project will invest in institutional capacity upscaling and strengthening through the enabling environment creation component. This institutional capacity strengthening will be implemented at all levels, which includes community/local institutions, *kebele* administration, *wodera*/district level and regional level institutions. Achievements in this component will contribute to the sustainability of the practices

336. The GEF funding will be complemented by long-term parallel development activities that will be supported by the multilateral agencies that have indicated long-term development interest and commitment to this region such as the World Bank, African Development Bank, UNDP, bilateral agencies including SIDA, GTZ, USAID and Dfid, and several NGOs, ensuring financial stability to attain expected results and consolidation of achievements.

337. The GEF support will contribute to removing various of the main barriers to sustainability and by creating an enabling environment through policy instruments and institutional capacity building. Some of these barriers include government policy, the institutional and legal framework, human resource development, and awareness. Under current policy, all rural land is in public (state) hands. There is a debate in the country whether land tenure insecurity is a major disincentive to investing in land improvement and natural resources management in rural Ethiopia. Some argue that this restricts the development of a land market and optimal use of natural resources management. However, ANRS is the first regional state in the country to undertake land certification as a priority area in an effort to address issues of land tenure insecurity. GEF support will include documentation and analysis of this process of land certification and will disseminate widely some of the lessons that could influence regional and national policy and contribute to sustainability.

338. EPLAUA has initiated a Land Administration Project, where efforts are made to define boundaries of each *kebele*, communal land, and individual farm land. This project will establish methods for land registration, surveying, and transferring of property rights and examining alternative approaches to land administration and land security. This will help to mitigate some of the institutional constraints and will contribute to sustainability.

339. The GoE's commitment is evident - in issuing different policies, strategies, legislation, programmes and action plans including signing a number of international conventions related to natural resources conservation and SLM. These commitments contribute to long-term sustainability. In-line agencies will be used for execution, thus avoiding the establishment of a 'project enclave' which is unsustainable in itself and needs to be dismantled at project termination. Thus an important strategy to underpin the implementation of this project is use of the current government structural arrangements.

340. Inaccessibility of rural credit to support innovative practices and self-help activities could affect the sustainability of local innovations and adaptations to technologies. However, as noted already, Ethiopian rural society has many important traditional and indigenous self-help institutions that can be strengthened and transformed to assume various conservation and natural resources management and development roles. The GEF support will explore those indigenous institutions as a basis for loans and fund-raising to promote self-help conservation and development activities. This can be linked to the IFAD's Rural Financial Intermediation Programme (RUFIP) which is co-financed by the AfDB and has assisted micro-finance institutions to increase the delivery of financial services to more than 1.5 million households and provided improved access to credit for the landless youth, smallholder farmers, men and women, in the region.

341. The decision-making process in politics and development has traditionally been top-down in Ethiopia, as elsewhere in Africa, and a participatory culture has only recently being introduced and is as yet limited in scope and acceptance. By strengthening and empowering community organizations and enhancing stakeholder participation, the GEF support will provide insights into how to better

organize and bring changes to the current top-down extension service. It will also contribute to a more flexible and demand-driven extension approach in facilitating training, skills, and innovative technologies at community level.

342. Consideration of gender in development is very limited in Ethiopia and this has negatively affected women's participation, and is a potential risk to sustainability of some of the project outcomes. The GEF supported alternative has components that specifically aim to promote participatory approaches, to establish women's organizations at the grassroots level, and raise their level of awareness. This should lead to an improved management of natural resources and sustainability.

343. One of the benefits from the GEF support is that it will contribute to the long-term process of capacity building through initiating and strengthening community-based approaches in natural resources management and development activities. It will promote (a) participatory approaches and a culture of participation; (b) empowerment of local institutions; (c) women's role in SLM. This will all help to enhance a sense of ownership at the community level and will contribute to sustainability and replicability.

344. In line with government strategy, the project recognizes that a cross-sectoral and holistic approach combining indigenous practices and ecologically sustainable land-use management interventions from external sources are critical for combating land degradation. To achieve this, the project has been developed with the active participation of the community, relevant offices from federal to local level, and local, bilateral, multilateral and NGOs. This high level of participation has already created a sense of ownership and will contribute to sustainability of activities once the project is funded. A multi-sectoral approach will further contribute to mainstream sustainable land management practices in the major government strategies in agriculture, water resources, forestry, livestock, and biodiversity. It will also serve as a platform for building synergies among the various conventions most notably the CCD and CBD.

345. The project gives due emphasis to the exploration of indigenous knowledge to build on strengths and alleviate weakness in sustainable land management. This not only empowers land users but also encourages local adaptations of technologies to meet changing environmental situations – especially climate change. Moreover, it brings tangible benefit to the communities in enhancing productivity and improving livelihoods.

2.10 REPLICABILITY

346. The project will create an enabling environment in the area of policy and institutional capacity. This enabling environment goes beyond the watershed and will form the basis for replicability of best practices of the project within the ANRS in particular and the nation in general.

347. Best practices in sustainable land management and natural resources use will be demonstrated with GEF support. These practices and lessons will be compiled and made available for adoption and adaptation in other similar watersheds of the region and other parts of the nation. In particular, this experience will be highly relevant to other basins and watersheds in other regions that are part of the upper Nile Basin and will contribute significantly to the protection of the Nile River itself. The efforts to arrest natural resource degradation and reduce vulnerability to drought and climatic variations will also be very relevant to other parts of Ethiopia.

348. The project is designed to implement a long-term strategy for integrated, locally adapted SLM systems that can be replicated on a larger scale across the country through parallel and follow-up investments by the government and donor agencies. For example, a key element to enhance replicability is the preparation and implementation of local level land use plans with the involvement of local communities, district governments, and line agencies.

349. Experience sharing with respect to success will be an important means of ensuring replicability. Lessons learned from implementation of diverse interventions could be applied not only to the region but also at a national level.

3. INSTITUTIONAL COORDINATION AND IMPLEMENTATION ARRANGEMENTS

3.1 CORE COMMITMENTS AND LINKAGES

350. The Government of Ethiopia is fully committed to the project as has already been elaborated in section 2.5. At this stage it is important to demonstrate the linkage of the project to those commitments of the government. Furthermore, the project is strongly bonded to IFAD's commitment to the poverty eradication effort in the country.

351. The Government of Ethiopia (GoE) will be responsible for the country partnership program, as designated lead agency, in collaboration with IFAD. This development partnership is fitting in respect to achieving the Millennium Development Goals (MDGs): of these, goal 1 (poverty reduction), goal 7 (sustainable environment) and goal 8 (international partnerships for development) are especially relevant here. The partnership aims, through the project, to combat land degradation by community-based integrated natural resource management.

352. The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) is the National Action Plan for the GoE (2005-2010). The PASDEP being an umbrella action plan has the potential to coordinate all the initiatives that are linked to poverty reduction and environmental management. A number of basic principles underlie the strategy: these include a coordinated approach to reducing poverty and proper utilization of agricultural land. The PASDEP recognizes that land is the essential resource for all farming activities, and puts a dual emphasis on making sure land is available for production while protecting the productivity of land through environmental management and appropriate use of inputs. Improving farmers' capacity and upgrading technical farming skill through a strong extension and training service is one of the basic strategies incorporated in this action plan.

353. According to PASDEP, the Ethiopian economy must grow by at least 6 to 7% per year in order to achieve the MDG of halving poverty by 2015. To assist the country in achieving this goal, IFAD has spearheaded the development of small-scale irrigation schemes in Ethiopia, and the government is cognizant of the need to build on this experience and to learn lessons to promote appropriate sector-wide strategies and policies governing water resource use and management. IFAD focuses on rural poverty alleviation through direct investment aimed at achieving concrete change in the livelihoods of target groups.

354. Ethiopia receives bilateral and multilateral assistance from development partners and is currently the largest beneficiary of IFAD and International Development Association (IDA) funding in sub-Saharan Africa (SSA). A large number of NGOs are also active in the country. The validity of the IFAD country strategy and Ethiopia's long-term strategy of Agricultural Development-Led Industrialization (ADLI) has consistently been reaffirmed within the framework of the first and second generation of Poverty Reduction Strategy Papers. IFAD's Country Strategic Opportunity Paper (COSOP) calls for investment programs with the greatest potential for the sustained improvement in household food security, nutrition and incomes.

355. The COSOP also calls for IFAD to play an increasingly proactive role with a view to influencing the shape of emerging public strategies, policies and investments in favour of the rural poor. It further requires development approaches that increasingly enable rural communities to effectively and efficiently manage their own productive resources based on lessons learnt and best practices.

3.2 IMPLEMENTATION AND EXECUTION ARRANGEMENT

356. In view of the widespread capacity constraints on the one hand and pressure to get rid of parallel structures on the other hand, there is need to compromise on a coordinating entity whose task could be restricted in building implementation capacity within the government and focussing on *woreda* and *kebele* level structures.

357. In view of this, the project will be managed across three administrative levels (regional, *woreda* and *kebele*/community levels) in line with the government institutional set-up. At regional level, project implementation arrangements will include a Project Steering Committee (PSC), a Project Coordination Unit (PCU) composed of the necessary professional team, and focal person in each prominent stakeholder organization. At *woreda* level, the *Woreda* Steering Committee (WSC) that comprises prominent stakeholders will guide the project. In addition, the Environmental Protection Authority (EPA) and National SLM Platform will play important roles in establishing international linkages and give policy directions.

3.2.1 National Level

358. The project will establish an appropriate linkage with the National SLM Platform and the EPA will support the implementation of the proposed full-sized project by giving policy direction through establishing a regional platform and creating linkages with international partnership. It is also expected that EPA will be involved in mid-term and terminal monitoring and evaluation.

3.2.2 Regional Level

Bureau of Agriculture and Rural Development

359. BoARD will host the project. To ensure optimum cooperation, coordination and collaboration, BoARD will establish a Project Steering Committee (PSC) by pooling representatives from relevant partner institutions. The authority will also establish a Project Coordination Unit (PCU) that will be responsible for overall project coordination, supervision, and backstopping (see Annex 11).

Project Steering Committee (PSC)

360. It is expected that the established PSC for the development of the project under the PDF-B will continue for the implementation of the project. It will work together as a team on guidance of the project and meet at least on a quarterly basis. Additional members will be identified as deemed necessary to strengthen the existing steering committee. The main duties of the PSC will be to:

- Develop a common understanding of what is needed to expedite the implementation of the project and oversee the activities;
- Approve the detailed work plan and budget produced by the host institution;
- Provide overall policy advice on the implementation of the project;
- Review and advise on the main outputs of the project;
- Ensure that information on the implementation of the project as well as the outputs is brought to the attention of local and national authorities for follow-up;
- Assist in mobilising available data and ensure a constant information flow between all concerned parties;
- Allow for effective communication and decision-making between the project coordinator and other actors;
- Ensure that the environmental and natural resources policy of the government is fully reflected in the project implementation; and
- Provide technical support and policy advice.

Project Coordination Unit (PCU)

361. The PCU would have responsibility for commissioning activities identified under the PDF-B and approved under the project agreement. It would be led by a senior professional able to envisage the scope and ambition of the GEF project, but also able to realize the interactions necessary to integrate the overall GEF project with the considerations of other stakeholders involved in complementary projects –seeking synergies rather than competition. With this understanding, the PCU will be established within BoARD. It will comprise full-time highly competent professionals as deemed necessary. The professionals will be recruited competitively. Terms of reference, fully reflecting duties and responsibilities will be prepared with sufficient depth and breadth. Professionals will be paid from the proposed grant. The PCU will be provided with necessary mobility, office facilities, secretarial service and equipment. The PCU will operate directly under the guidance of the Project Steering Committee and be technically supported by external/ national consultancy services.

362. Duties and Responsibilities of Project Coordination Unit (PCU): The PCU will have the following general and specific duties and mandates:

General duties and mandates

- Liaise with international, national, regional, and local government institutions as well as non-governmental institutions including the private sector with the objective of providing information on appropriate interventions/investment, and promoting support for the project;
- Serve as a focal institution for all matters related to sustainable land management in LTW;
- Make sure that project implementation modalities are in line with regional, national and international standards, laws and regulations;
- Provide information to development actors within the watershed;
- Facilitate the resolution of conflicts related to project implementation, operational arrangement and overlaps between projects and programs;
- Help to coordinate all development activities in LTW;
- Connect all development activities with other similar endeavours in Ethiopia or abroad, and improve coordination mechanism with government, NGOs, UN agencies and donors working group on similar types of projects/programs; and
- Make sure that implementation between, and within, projects is compatible and in harmony.

Specific duties and mandates

- Carry out surveys and studies in the watersheds and establish a data base;
- Foster institutional strengthening and capacity building needs and facilitate the organization of training programs;
- Facilitate meetings that will help sharing common and individual experiences with the view to induce experience sharing and networking;
- Serve as a secretariat to the PSC;
- Facilitate targeted research and identify training needs and opportunities;
- Collect, analyze, store, documents and disseminate data covering the watershed;
- Monitor and follow-up implementation activities of the project, check if activities are integrated and performed according to the general development plan and government strategies;
- In consultation with the Project Steering Committee (PSC), and stakeholders, consolidate an integrated annual plan based on project components as approved and agreed in the project document and worked out by the *woreda* stakeholders;
- Monitor the proper utilization of approved budgets for project implementation;
- Monitor regularly the progress of the project with stakeholders;
- Ensure the training of project staff and local government officials in participatory planning implementation and evaluation methodologies and ensure a genuine participatory approach is applied during project planning and implementation;

- Develop smooth project phase-out and project handover strategies to the government together with stakeholders;
- Conduct regular and periodic field monitoring to facilitate the implementation of the project;
- Facilitate mid-term and terminal project evaluations; and
- Prepare all necessary reports.

In-country Project Management Team (In-country PMT)

363. The role of the in-country PMT will be twofold. First, PCU staff will be part of the in-country PMT from the outset. This will provide them with opportunities for participating in national and regional symposia with a view to learn from experiences gained under the country programme, particularly in programme planning and management, community sensitisation, organisation and empowerment. Second, PCU staff will be encouraged and supported to undertake joint supervision missions and study tours between and within the country programme. These initiatives will contribute to the development of appropriate linkages within the country programme so that unemployed youth can be sensitised, trained and organised by MFIs and the regional cooperatives agency into rural savings and credit groups or cooperatives, and rural communities assisted in establishing farmers' research and extension groups, watershed management committees, land administration and use committees, etc. The in-country PMT will also participate in the annual review of progress in project implementation.

3.2.3 Woreda Level

364. The Government of Ethiopia is committed to decentralization and devolution of power down to the lowest levels. Because of this political commitment, *woredas* are empowered to the level of planning and executing development activities based on their jurisdictional resource potential. This is done under the umbrella of the federal and regional general plans. Therefore, for this project too, *woreda* level coordination and decision-making entity is indispensable. Since the issues of land degradation are cross-sectoral in nature, a *woreda* level steering committee is essential. A *woreda* office head of the lead institution at regional level will chair the *Woreda* Steering Committee and guide the implementation of the project. The *Woreda* Steering Committee shall comprise representatives from the *Woreda* Administrative Office, appropriate line offices, and NGOs.

3.2.4 Community level

365. The *kebele* administration is the lowest level organization that deals with development activities and social services of the *kebele*. In addition, communities are organized into various committees, including a development committee that comprises farmers, women, teachers, and extension agents. There are also committees organized for specific purposes, such as the land administration committee. These committees are grassroots level institutions, which will be the engine of the project. The development team or committee, led by the chairman of the *kebele* administration, will be responsible for overall implementation of the project. The development committee may be split into smaller sub-committees in order to execute different activities of the project. An organizational chart that illustrates the level of decision-making and power relation is indicated in Annex 10.

3.2.5 Stakeholder Involvement

366. A project, which attempts to introduce or impose externally planned development activities, has slim chances of success. The genuine involvement of key stakeholders at all level on issues related to the project will lubricate the implementation mechanism, increase implementation speed, and assure success.

367. Extensive consultations made during the design phase must continue during implementation. As indicated above, different level of decision making entities have been identified following the legal government structure. These organizational arrangements will be used for stakeholders' involvement,

coordination, monitoring, and evaluation of the project. In addition to this, grassroots traditional, cultural, and religious institutions, such as *senbete*, *idir*, *mahber*, and *iqub* (as previously mentioned) will be used to enable stakeholders, specially the farmers, to have a greater chance of participation. A wide range of stakeholders, from government, development agencies, NGOs, international organizations, academic and research communities will participate in the implementation of the project. For detail, refer to Annexes 6 (Stakeholder Involvement Plan) and 7 (Stakeholder Analysis).

3.3 INSTITUTIONAL DEVELOPMENT AND OUTCOMES

368. The project will strengthen the institutional capacity of BoARD and EPLAUA to ensure sustainable natural resource and land management (SLM) at regional, zonal, *woreda* and *kebele* levels. SLM best practices to be identified/developed under the project will be mainstreamed into the agricultural extension services, which hitherto have tended to neglect land degradation and SLM issues. The project will also capacitate EPLAUA to undertake land surveying, mapping, registration and certification. First level certificates will be issued to all rural households in LTW. Second level certificates will also be issued in five communities where urban development has continued to encroach on agricultural land oftentimes to the disadvantage of poor rural households.

369. The capacity of both BoARD and EPLAUA will also be strengthened to undertake participatory integrated watershed planning and management. BOFED will also be capacitated to establish a region-wide, results-based management system and the Institute for Biodiversity Conservation will be supported in establishing community gene-banks, in addition to working with communities in the establishment of in-situ biodiversity conservation areas.

370. Additionally, the *kebele* and sub-*kebele* land administration and use committees will be empowered through training and experience sharing visits for their members. Community-based institutions (watershed management groups, grazing associations, community forest management groups, etc.) will be supported to strengthen their capacity in land-use planning, natural resource planning and management, and to engage in off-farm income generating activities.

4. PROJECT COST

4.1 TOTAL COSTS AND PROJECT FINANCING

371. The total cost of the GEF proposal over the seven-year implementation period is estimated to US\$ 25,424,500. The total GEF financing, excluding the preparatory grant (see section 4.2 below), is US\$ 4,400,000. IFAD will contribute with US\$ 13,016,000 (51.2 % of total project cost), and the remaining amount will be provided by the government (US\$ 2,775,500) and the beneficiaries (US\$ 5,233,000). The proportion of the total project budget met by GEF is 17.3%, with the remaining 82.7% provided through co-financing

372. The financing plan is provided in the budget breakdown by years and budget breakdown by source of funding (Annex 3). The budget summary is shown in table 9 below. Budget allocated for the 2nd year is higher than the other year. This is due to higher investment cost such as training in component one and procurements of materials in component three as a precondition for the activities in subsequent years.

373. The major cost of the project is for specific activities of the first outcome, Component 1, *Community-based integrated watershed management*. This amounts to US\$ 19,274,400, representing 75.8% of the total, to which the GEF will contribute US\$ 3,310,300 (17.2% of total component cost). Component 2, *Institutional, legal, policy analysis and reform*, will cost US\$ 3,125,600 (12.3% of total project cost), and GEF will contribute 711,100 (22.8% of total component). The project coordination and management cost, including monitoring and evaluation, amounts to US\$ 3,024,700, equivalent to 11.9% of the total cost, with GEF contributing with US\$ 378,800 (12.5 % of total component).

Table 3: Budget Summary by Source of Fund (US\$)

Ethiopia Community Based Integrated Natural Resource Management Project Components by Financiers (US\$ '000)													
	IFAD/Others		The Government		GEF		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Community-Based Integrated watershed management													
Participatory Watershed Management Planning and Land Certification /a	1 955.9	54.6	1 280.8	35.8	344.7	9.6	-	-	3 581.5	14.1	1 112.6	2 073.8	395.0
Improved Pasture and Participatory Forest Management /b	1 777.8	68.6	0.0	-	475.6	18.3	339.2	13.1	2 592.7	10.2	339.7	2 253.0	-
Off-farm erosion control through physical and biological measures /c	5 078.2	40.7	23.7	0.2	2 489.9	19.9	4 893.8	39.2	12 485.6	49.1	56.9	12 404.9	23.7
Protection of Ecosystem and Biological Diversity /d	614.6	100.0	0.0	-	-	-	-	-	614.6	2.4	28.6	586.0	-
Subtotal Community-Based Integrated watershed management	9 426.5	48.9	1 304.5	6.8	3 310.3	17.2	5 233.0	27.2	19 274.4	75.8	1 537.9	17 317.7	418.8
B. Institutional, legal and policy analysis and reform /e	2 330.2	74.6	84.3	2.7	711.1	22.8	-	-	3 125.6	12.3	596.2	2 445.1	84.3
C. Efficient and effective project coordination and management													
Coordination and Management /f	160.8	10.3	1 386.6	88.9	12.7	0.8	-	-	1 560.1	6.1	100.8	1 092.7	366.7
Knowledge Management /g	1 098.4	75.0	0.0	-	366.1	25.0	-	-	1 464.5	5.8	81.6	1 383.0	-
Subtotal Efficient and effective project coordination and management	1 259.2	41.6	1 386.6	45.8	378.8	12.5	-	-	3 024.7	11.9	182.4	2 475.6	366.7
Total PROJECT COSTS	13 015.9	51.2	2 775.5	10.9	4 400.2	17.3	5 233.0	20.6	25 424.7	100.0	2 316.5	22 238.4	869.8

/a Upgrade about 100 and develop approx. 700 (each estimated to cover 200-500 ha)

/b Promotion of Improved Pasture Management and Forage Production System

/c Community sensitization, training, experience sharing and materials

/d Study, demarcate and legalize 15 core areas; prepare and implement their management plans and associate monitoring system

/e Improve institutional capacity for SLM

/f Establishment of project coordination unit

/g Establishment and operation of a result-based monitoring and evaluation system

4.2 GEF CONTRIBUTION

374. The GEF budget for the project, as incremental cost funding, amounts to US\$ 4,400,000 (17.3 % of the total). The total GEF financing, including the preparatory grant (US\$ 352,116), is US\$ 4,750,000 (see table 3, below). Co-financing comprises US\$ 13.02 million from IFAD and US\$ 2.78 million from the Government of Ethiopia as well as US\$ 5.23 million from the communities within the LTW.

Table 4: Indicative Financing Plan Summary (US\$)

Concept	Project preparation	Project	Total
GEF grant	350,000	4,400 000	4,750,000
Co-financing	105,138	21,024,500	21,129,638
Total	455,138	25,424,500	25,879,638

4.3 COST-EFFECTIVENESS

375. The approach of using existing government structures at all levels - from the regional to the *kebele* level is the most cost-effective option and one that also ensures sustainability. The alternative, to set up a parallel project infrastructure, would be considerably more costly, would marginalise government (while failing to build institutional capacity) and would need to be dismantled at the end of the project.

376. The absence of effective coordination and collaboration has been identified as one of the key barriers to implementation of integrated and sustainable land management at local and national scales. The cost-effectiveness of this project is further enhanced given the potential to better align the baseline and associated funding with planned interventions under the GEF Alternative. In the longer term, the community-centred approach to land management being promoted will reduce the recurrent costs of SLM activities and enhance the prospects for success. This will ensure that scarce investment funds for SLM are used cost-effectively.

377. This project will be jointly implemented with the IFAD-GoE associated project (“Community-Based Integrated Natural Resources Management in the Lake Tana Watershed”), sharing resources and structures. This partnership will undoubtedly enhance the cost-effectiveness of both interventions. Some of the benefits expected are the improvement of coordination and communication, the application of common procurement and supervision procedures, and the implementation of complementary project interventions in the LTW.

378. The proposed project design also offers potential for a multiplier effect through its upscaling component and direct linkages with the other two GEF SIP operations in the country (WB and UNDP). The integration of the project in the National SLM Platform, that envisages harmonisation, synergies and less duplication for higher and differential impact from each GEF dollar, will also contribute to improved cost-effectiveness. Coordination and harmonisation will reduce transaction costs and duplication.

379. Furthermore, the project is cost-effective for the following specific reasons. First, since the project is a fully integrated conservation and development initiative over seven years it incorporates interventions across many sectors: participatory forest development, appropriate livestock production systems, land administration and proper soil and water conservation, all of which are components of sustainable land management within the LTW. To ignore these links and focus on land management alone would not bring the intended objectives. Second, the existing grassroots organizations which have been actively involved in the planning phase will be strengthened to implement SLM instead of creating and organizing new structures unless deemed necessary. Finally, as indicated in Annex 3,

Table 1, the budget breakdown shows that the project management cost is low, comprising about 12% of the total budget.

380. Considering the baseline, total increment (project costs) are just less than one third of the baseline costs yet will achieve far more than double the local benefits, and will also yield global environmental benefits as described. One of the key ways of achieving its results will be to pull together and coordinate related initiatives in the LTW, mirroring what the SIP is doing at the pan-African level.

381. The GEF contribution is 17.3% of the total increment (project costs) implying highly effective leverage on co-financing agencies. Taking into account the total area to be brought under SLM and the beneficiaries in LTW, about US\$ 10 per hectare per annum and approximately US\$ 2.5 per head of population per annum of the total increment (project cost) implies a low cost per unit indicator.

382. Having considered the alternatives carefully – looking at institutional capacity building and sustainability as well as short-term impact - the proposed project offers the most cost-effective approach to securing local benefits as well as the GEBs as described in this proposal.

5. MONITORING, EVALUATION AND REPORTING

5.1 RESULTS-BASED MONITORING AND EVALUATION

383. The description of Activity 3.2.1 (see paragraphs 250-253) covers the development of a Results-Based Monitoring and Evaluation System. Thus the following is a summary. The Management Information System (MIS) of the regional administration can be relied on to report on financial and physical progress of planned project activities. It is, however, inadequately prepared to report on outreach and impact. Problems, constraints and lessons learnt have not yet been documented. These weaknesses were discussed with BOFED and agreement reached on strengthening the monitoring and evaluation system.

384. Provisions have been made under the project for short term TA to assist BoFED in the design, development and implementation of a results-based management framework. The TA will, inter alia, critically review the exiting MIS, institutional arrangements, knowledge dissemination and management, and make recommendations for a comprehensive training programme both for staff at all four levels and beneficiary households. The study will also review and ensure that the logical framework accurately reflects commonly agreed performance indicators. Consultants will be required to carry out the mid-term review, as well as the project completion report.

385. A baseline survey will also be carried out within the first year of implementation, building on the database of existing land-use patterns and natural resources, the recent population census, and regular socio-economic surveys undertaken by BoFED.

5.2 GEF MONITORING AND EVALUATION PLAN

386. As noted, a results based management framework will be designed, and the following is therefore merely an indication of what may be within that framework. Monitoring and evaluation of the project will be conducted in accordance with established procedures laid out in the GEF's "Minimum Requirements for Project M&E" and will be provided by the project management unit under the guidance Project Steering Committee, with support from BoARD. The Project Results Framework (Annex 1) will form the basis for the project's monitoring and evaluation system. Note also that the M&E that focuses specifically on Global Environmental Benefits will also be refined at this stage, in coordination with the TerrAfrica/SIP Steering Committee (which is finalizing the M&E system for the partnership and SIP program) and the Ethiopian National SLM Platform, and in collaboration with the GEF's Scientific and Technical Advisory Panel.

387. The monitoring, evaluation and reporting plan, presented in Annex 12, including indicators, tracking tools and needs for specific baseline information against which to monitor changes, will be refined and finalized at the project's inception workshop. At this stage the itemised M&E budget plan will be finalised and SMART indicators developed.

388. The inception workshop will bring together the principal stakeholders of the project to familiarize them with the project staff, develop a detailed Annual Work Plan (AWP) and budget for the first year of operations, and agree on the information and timeframes for reporting project activities to the different levels, including project review meetings at regional, district and local levels. Finally, the inception workshop will provide an opportunity to inform the project staff about GEF-IFAD project-related budgetary planning, budget reviews, and reprogramming as necessary. In subsequent years, a brief annual workshop will be held to develop AWP's and make adjustments to the monitoring and evaluation system as necessary.

389. The inception report will be prepared immediately following the inception workshop. This will include a review of the project context, including any changes since the design phase which may affect implementation, and will detail the different levels of monitoring and evaluation that will take place throughout the project with specific information regarding the roles, responsibilities, activities,

and indicators to be monitored during the first year of operations, Annual Project Implementation Review (PIR), the Mid-Term Review (MTR) the Annual Project Report (APR), Tripartite Review (TPR) meetings, as well as the nature and timing of the mid-term and final evaluations.

390. The GEF project will rely on the information in its baseline study and on additional information collected by project development unit during the PDF-B phase. During the inception phase of the project, baseline information will be sought in each village to update the information and fill-in any gaps in the local information base. Much of the original baseline information is not disaggregated to a useful enough extent in order to track changes by gender, or by age groups. The current national census being conducted will be a significant contribution to provide baseline information. Additional information on rural credit, employment, and existing agricultural practices, as well as biodiversity status will be necessary to gauge the results of the project.

391. Measurements will be undertaken through project staff or external consultants. These will include specific studies or periodic sampling, such as soil erosion, sediment yields, and changes in biodiversity indices, populations of important species, crop yield, organic matter flow, carbon status, areas conserved/protected by SLM and change in livelihoods. As noted in the foregoing, for informing the review stages, the original baseline will be updated and further quantified by the project in the first year. Additional information will be needed on specific baseline interventions that are on-going or proposed, and their contribution to SLM.

392. *Day-to-day monitoring* of implementation progress will be the responsibility of the project coordinator with oversight by BoARD and the PSC. This will be based on the project's annual work plan and problems faced during implementation, so that the appropriate support or corrective measures can be adopted in a timely fashion. Targets and indicators will be based on those agreed upon at the inception workshop and will be redefined at a workshop to be held at the beginning of each project year.

393. *Periodic monitoring* of implementation progress will be undertaken by the BoARD through quarterly meetings and field observation with the project staff. This will allow reviewing and troubleshooting of any problems pertaining to the project to ensure smooth implementation of project activities. IFAD-CO, IFAD-GEF, PSC and the focal point will conduct yearly visits to field sites to assess project progress first hand. A field visit report will be prepared by the PCU and circulated to all stakeholders.

394. A terminal TPR meeting will be held in the last month of project operations. BoARD will be responsible for preparing the terminal report and submitting it to the IFAD-CO and the GEF. It will be prepared in draft at least two months in advance of the terminal TPR in order to allow review, and will serve as the basis for discussions in the TPR.

395. The Project Coordination Unit will be responsible for the preparation and submission to BoARD, IFAD and IFAD-GEF the following mandatory reports: Inception Report (IR), Annual Project Report (APR), Project Implementation Review (PIR), and the Project Terminal Report. Specifications for additional internal and external progress reports will be defined during the IW.

396. Care will be taken to involve the range of stakeholders from different levels as identified during project preparation. The Project Coordinator will submit quarterly reports to the Project Steering Committee and BoARD, with copies to relevant stakeholders that will be identified during the inception workshop. A quarterly debriefing to the PSC will be held to enhance the flow of information.

397. The project will be subjected to at least two independent external evaluations. The first will be an independent mid-term review (MTR), by the end of year 4. This will determine progress being made towards the achievement of outcomes and will identify course correction if needed, focusing on

effectiveness, efficiency and timeliness of project implementation; it will highlight issues requiring decisions and actions; and it will present initial lessons learned about project design, implementation and management. The timing of the mid-term evaluation will allow coordinators to make any modifications necessary to incorporate improvements or changes in the project's activities for the remaining project period.

398. An independent final evaluation will take place six months prior to the terminal review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals.

399. Financial audits are also required. The PCU will provide the IFAD-CO with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of IFAD (including GEF) funds according to the established procedures set out in the programming and finance manuals. The audit will be conducted by the legally recognized auditor of the Government, or by a private independent auditor.

400. To facilitate the sharing of information, the project staff will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects, and a report will be submitted to BoARD, the IFAD-CO and PSC at the end of each year. BoARD shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. If requested, the project staff will prepare project specific technical reports and technical publications. The technical reports will represent the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

401. Project publications will also be produced, including scientific or informational texts on the activities and achievements of the project, in the form of journal articles and multimedia publications, etc. The project team will determine if any of the technical reports merit formal publication, and will also (in consultation with IFAD, PSC, the government and other relevant stakeholder groups) plan and produce these publications in a consistent and recognizable format.

402. The SIP sets out its approach to M&E in its Programme Brief of May 2007. The M&E plan is results-based, and is intended to provide "timely, credible, and useful information on progress being made on SLM. The results-based M&E is: "first and foremost a management tool to help improve performance at all levels" and not an exercise done to satisfy compliance requirements. While the SIP's M&E is aimed at the overall program, the LTW project will use the same basic tools at project level. It is noted (para 230; SIP Programme Brief, May 2007) that the SIP M&E desk "will refine and disseminate the M&E tools for use across SIP investment activities via *learning by doing*". It is further noted that the SIP M&E desk will provide M&E capacity building services to individual SP activity teams where needed. The LTW team will keep up contact with the SIP M&E desk as it develops its own M&E mechanisms.

5.3 SUPERVISION ARRANGEMENTS

403. The project will be directly supervised by IFAD.