Global Environment Facility

GEF

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July 02, 2009

Dear Council Member,

The UNDP as the Implementing Agency for the project entitled ***Eritrea: SIP-Sustainable Land Management Pilot Project*** 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 UNDP procedures.

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

We have today posted the proposed project document on the GEF website at www.TheGEF.org for your information. We would welcome any comments you may wish to provide by July 30, 2009 before I endorse the project. You may send your comments to gcoordination@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,

Monique Barbut
Chief Executive Officer and Chairperson

Attachment: Project Document

Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee

REQUEST FOR CEO ENDORSEMENT/APPROVAL
PROJECT TYPE: FSP
THE GEF TRUST FUND **S**

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Submission Date: 15th Oct 2008
Re-submission Date: 26 February 2009
Re-submission Date: 15 June 2009

PART I: PROJECT IDENTIFICATION

GEFSEC PROJECT ID: 3364

GEF AGENCY PROJECT ID: PIMS.2979

COUNTRY: Eritrea: **GEF AGENCY:** UNDP
TITLE: SIP SLM Pilot Project
OTHER EXECUTING PARTNERS: GoE; Norad
GEF FOCAL AREA: LD
GEF-4 STRATEGIC PROGRAM(S): SP 2
UMBRELLA PROJECT: SIP

INDICATIVE CALENDAR	
Milestones	**Expected Dates**
Work Program	June 2007
GEF Agency Approval	June 2009
Implementation Start	July 2009
Mid-term Review (if planned)	July 2011
Implementation Completion	July 2014

A. PROJECT FRAMEWORK

Project Objective: To create the enabling environment (policy, capacity, knowledge, alternatives) necessary for adoption of sustainable land management practices and alleviate environmental degradation while improving livelihoods of the farming communities of the Central Highland Zone (CHZ)

Components	Type	Expected Outcomes	Expected Outputs	GEF Fin		Co-fin		Total
				$	%	$	%	
SLM model developed and applied to reduce land degradation SIP IR 1	TA	Replicable models of SLM are developed and representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation ***SIP indicators:*** *More than 200,000 ha under direct SLM (project area) and another 2 million impacted by upscaling: land degradation rate reduced by 70% in project area; biological productivity of land (vegetation cover enhanced with rainfall use efficiency) increased by at least 75% in project area and by at least 25-50% in adjacent areas. % change in*	**Output 1.1:** Sustainable models for agriculture, grazing lands and forested lands developed and piloted in 28 villages covering 140,000 ha; **Output 1.2:** Systems of incentives and penalties are developed and applied at multiple levels to further the adoption of SLM practices; **Output 1.3:** Regulations and standards for land redistribution of agricultural lands under the 1994 Land Proclamation are developed, approved and applied; **Output 1.4:** Community-based, village-level land use planning and land redistribution methodologies are developed and piloted in more than 28 villages; **Output 1.5:** Alternative income generating options piloted and linked to markets in more than 28 villages; **Output 1.6:** Feedback from pilot villages used to finalize the SLM model, LUP and land redistribution methodologies and	727,800	43	981,500	57	1,709,300

		soil carbon in project area and adjacent areas; at least 50 % reduction in vulnerability and food insecurity for communities in project area	an integrated extension package to facilitate replication – potentially over 2 million ha; SLM extension package successfully replicated in adjacent sub-zobas in Zoba Maekel.					
Knowledge management systems forms bedrock of SLM **SIP IR 2, 4 and 1**	TA	A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation ***SIP indicators:*** *at least 50% increase in numbers of trained farmers, land managers and personnel in extension, (agriculture, forestry and livestock); at least 40% increase in quality, availability, demand and use of SLM servi**ces** (from extensionists, commercial or NGO providers) in targeted communities; at least 30% increase in SLM applications adopted by land users.*	**Output 2.1:** Knowledge management (KM) network formed of institutions and projects concerned with SLM in the country; **Output 2.2:** Capacity for research on SLM supported; **Output 2.3:** SLM M&E established and linked to SLM country program and SIP; **Output 2.4:** SLM is mainstreamed into relevant programmes, policies and legislation, and is integrated throughout development planning and budgeting processes.	534,800	50	526,500	50	1,061,300
Capacities for replicating and adapting SLM models developed and applied to halt land degradation **SIP IR 1,3**	TA	Capacity building programs and adaptive management systems are developed at all levels for improved governance of SLM, particularly enabling grass root community to implement and improved SLM ***SIP indicators****: at least 65% score on Composite Index for the SLM Enabling Environment against*	**Output 3.1:** Training programmes on SLM for different groups (farmers, land managers, technical officers) available and training conducted (with a focus on pilot site). **Output 3.2:** Extension package updated with SLM best practice provided and other relevant materials developed through KCAS successfully delivered to key target groups and intended impacts on awareness and skills base achieved. **Output 3.3:** Service providers	289,500	34	568,000	66	857,500

		the baseline; this includes policy changes and availability of financial resources to address SLM at national level	(incl. e.g. agricultural input suppliers, extension services, financial service providers) strengthened to provide effective and relevant SLM support to community level. **Output 3.4:** SLM actions linked to adaptation and mitigation measures.					
		Learning, evaluation, and adaptive management increased	**Output 4.1** Effective project management and implementation structures are established and function **Output 4.2** Project M&E system established, adaptive planning takes place and project performance on track	135,500	51	132,500	49	268,000
PM				132,500	76	41,400	24	173,900
Total				**1,820,000**	**45**	**2,250,000**	**55**	**4,070,000**

B. FINANCING PLAN SUMMARY FOR THE PROJECT ($)

	Project Preparation	*Project*	*Agency Fee*	*Total at CEO Endorsement*	*For the record: Total at PIF*
GEF	50,000*	1,820,000	168,300	2,038,300	2,000,000
Co-financing	15,000	2,250,000		2,265,000	2,680,000
Total	65,000	4,070,000	168,300	4,303,300	4,680,000

*** THE** PDF from GEF3 and therefore not included in the total project calculations.

C. SOURCES OF CONFIRMED CO-FINANCING, INCLUDING co-financing for project preparation for both the PDFs and PPG.

Name of co-financier (source)	*Classification*	*Type*	*Amount Mio US$*	*%**
Government of Eritrea	Govt	In-kind	250,000	11
Norad	Bilateral	Cash	1,000,000	44.5
UNDP	GEF agency	Cash	1,000,000	44.5
Total Co-financing			2,250,000	100

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

E - TABLE 1: PROJECT MANAGEMENT BUDGET/COST[1], [2]

Component	**Estimated staff weeks**	**GEF ($)**	**Other sources ($)**	**Project total ($)**
Local consultants	780	104,400	-	104,400
International consultants	-	-	-	-

[1] In accordance with both UNDP and GEF policies no GEF project resources will be used to pay any government, agency, or NGO staff or personnel

[2] Excludes project M&E budget of US$ 107,000

Office facilities, equipment, vehicles and communications		90,000	6,400	96,400
Travel		25,000	25,000	50,000
Contingency		-	-	-
Total		219,400	31,400	250,800

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated staff weeks	GEF ($)	Other sources ($)	Project total ($)
Local consultants	322	37,500	284,500	322,000
International consultants	34	81,500	3,500	85,000
Total	356	119,000	288,000	407,000

G. DESCRIBE THE BUDGETED M&E PLAN:

1. The Project Results Framework is cross referenced to the SIP Results Monitoring Plan[3]. The project specific draft M&E framework as set out in the Strategic Results Framework (SRF) in Section II of the FSP brief will therefore include collection of data that can be fed into the overall SIP monitoring process. Where feasible, project monitoring will also report against the indicators presently being developed for the GEF Land Degradation Focal Area, and those identified by the Global GEF MSP on KM Land. The references made to Key Indicators on the title page of this project document concern the preliminary indicators that are currently available[4], and have been "operationalised" in the SRF. As currently specified, these indicators overlap across the two LD Strategic Objectives and SIP/TerrAfrica, and the most pertinent ones have been selected to represent the intended achievements of this project.

2. A supplement for monitoring Global Environmental Benefits (GEB) is also provided as Annex A. the supplement provides indicators specific to the measurement of the GEB and provides the baseline (where available), targets, means of verification and costs. It should be noted that sample and control plots to measure these indicators will be established during the project inception and more accurate data will be provided on them. The PDF A used to develop the original MSP was inadequate to establish this level of detail. Non GEB key indicators are indicated in Part I, Section A, and include the following:

   - Objective indicators:
     1. 75% decrease of degraded land area in Serejeka sub-zoba as indicated by reduced erosion, improvement in the condition of grazing land and % change in soil carbon in project area and adjacent areas
     2. 50% increase in biological productivity of land as indicated by improvement in vegetation cover, increase in rainfall use efficiency, improvement in soil fertility and land productivity (crops and wild vegetation)
     3. At least 50 % reduction in vulnerability and food insecurity for communities in pilot areas, measured by increase in household income and access to food (decrease of population living below the poverty line) in Serejeka sub-zoba

   - Outcome 1:
     4. Hectares of land under new (private) land tenure arrangements;
     5. % increase in land (ha) managed through community-level SLM plans (target is more than 200,000 under direct SLM and 2,000,000 hectares indirectly influenced through extension services);

[3] Annex 1 of the SIP Programme Brief, 26 September 2006.
[4] FSP Project Identification Form, approved March 2008.

6. % increase in Ratio of households accessing household incomes from SLM related businesses in the 28 pilot villages - income from agriculture versus other alternative income sources;
7. % increase in households in 28 pilot villages benefiting from application of Land Proclamation

- Outcome 2:
  8. At least 50% increase in numbers of trained farmers, land managers and personnel in extension, (agriculture, forestry and livestock);
  9. At least 40% increase in quality, availability, demand and use of SLM services (from extensionists, commercial or NGO providers) in targeted communities;
  10. At least 30% increase in SLM applications adopted by land users;
  11. Evidence of successful mainstreaming of SLM principles in key policies;
  12. Zoba and sub-zoba annual budgets (in target area) include allocations for replication/adoption of SLM models to new villages and for the extension and implementation of SLM activities.

- Outcome 3:
  13. At least 65% score on Composite Index for the SLM Enabling Environment against the baseline; as measured by:
    - Formulation of the Country Strategic Investment Framework (CSIF) for SLM;
    - National dialogue and extent it involves relevant stakeholders in SLM discussions;
    - Changes in policies, rules and regulations governing SLM
    - % annual increase in budget available for implementation of Capacity Support Strategy and Action plan (CSSAP) on SLM
    - Amounts of money leveraged through SLM relevant carbon finance project (s) and reinvestment into adaptation to climate change in pilot areas

- Outcome 4:
  14. Level of performance score achieved in scheduled evaluations

3. A full draft M&E plan is included in Section I, Part IV of the project document. However the measurements for the indicators provided in the framework will be further developed and operationalised during the project inception phase. The M&E process includes detailed ongoing monitoring and reporting procedures and external mid-term and final reviews. These reviews will be supplemented by the conventional annual Tripartite Reviews, Mid-term Review and the Terminal Tripartite Review required by UNDP procedures.

4. Key guidance and support to project M&E will be provided by the UNDP Country Office and by the UNDP-GEF Regional Coordination Unit. The detailed and rigorous monitoring, reporting and evaluation procedures specified in the M&E plan are not intended to obstruct the application of adaptive management in execution of the project. Adaptive management will be a key operational principle throughout this project, as will be full participation of project beneficiaries and stakeholders in all M&E activities. The project Steering Committee will facilitate such participation and will ensure that it also takes place at other levels of project structure and operations.

5. Without detracting from the required rigour, an adaptive approach will also be applied to project monitoring in order to optimize linkages to the still emerging M&E frameworks for the SIP and the GEF Land Degradation Focal Area. Additional indicators may be adopted for the project from these frameworks during implementation.

6. The implementing agency will ensure that project execution complies with UNDP's monitoring, evaluation, auditing and reporting requirements, as specified in the UNDP Programming Manual. Progress and other reports will be submitted through the Ministry of Agriculture (MoA), in coordination with the Maekel Zoba Administration, to the UNDP CO. They will provide brief summaries of the status of activities and output delivery, explaining any variance from the work plan and presenting a new work plan for the subsequent reporting period.

7. The implementing agency will also work with MoA and Maekel Zoba Administration and the UNDP CO to produce the required Annual Project Reports, Project Implementation Reviews and Project Terminal Report, as explained in outlined in the table below.

8. Additional reporting requirements by NORAD will have to be adhered to. NORAD will be a partner in the various schedules M&E activities, as relevant.

TABLE 2: DETAILED M&E PLAN

Type of M&E activity	**Responsible Parties**	**Budget US$** *Excluding project team Staff time*	**Time frame**
Inception Workshop	▪ Project Coordinator ▪ NORAD ▪ UNDP CO ▪ UNDP GEF	3000	Within first two months of project start up
Inception Report	▪ Project Team ▪ UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	None; to be determined at IW	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	▪ Oversight by Project GEF Technical Advisor and Project Coordinator ▪ Measurements by regional field officers and local IAs	None	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF	None	Annually
TPR and TPR report	▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit	None	Every year, upon receipt of APR
Steering Committee Meetings	▪ Project Coordinator ▪ SC members ▪ UNDP CO	None	Following Project IW and subsequently at least once a year
Periodic status reports	▪ Project team	5,000	To be determined by Project team and UNDP CO
Technical reports	▪ Project team ▪ Hired consultants as needed	15,000	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	▪ Project team ▪ NORAD ▪ UNDP- CO ▪ UNDP-GEF Regional	20,000	At the mid-point of project implementation.

	Coordinating Unit ▪ External Consultants (i.e. evaluation team)		
Final External Evaluation	▪ Project team ▪ NORAD ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team)	30,000	At the end of project implementation
Terminal Report	▪ Project team ▪ UNDP-CO ▪ External Consultant	None	At least one month before the end of the project
Lessons learned	▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc)	15,000 (average 3,000 per year)	Yearly
Audit	▪ UNDP-CO ▪ Project team	4,000 (average $1000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	▪ UNDP Country Office ▪ NORAD ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives	15,000, 4 times a year 2 times a year	Quarterly Bi-annual
TOTAL INDICATIVE COST *Excluding project team staff time and UNDP staff and travel expenses*		US$107,000	

D. GEF RESOURCES REQUESTED BY FOCAL AREA(S), AGENCY (IES) SHARE AND COUNTRY – N/A

PART II: PROJECT JUSTIFICATION

A. ISSUES, PROPOSED SOLUTIONS AND EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:

9. Eritrea is amongst the poorest countries in the world, experiencing food insecurity as a result of high poverty levels, overall low development and acute insecurity triggered by drought and conflict. The Crop-production and livestock carrying capacity of Eritrea's semi-arid to arid climate is subject to natural limitations, aggravated by severe land degradation. Improving food security through improved land management is critical if Eritrea is to achieve the MDG targets, especially those of environmental sustainability, eradicating extreme poverty and reducing hunger.

10. Land degradation is prevalent throughout the country but is particularly manifested in the central and northern highlands, with a degraded area covering 2.4 million hectares, constituting 19% of the total area of the country. The central highland AEZ loses between 2 and 25 tons of soil per ha annually. Productivity levels are declining drastically, including crop and livestock yields, and water is becoming increasingly scarce. Natural resources are

central to the livelihoods of the Eritrean population in general, with over 80% of the rural population dependent on land and natural resources for their livelihoods. This dependence is particularly critical in the Central Highland Ecological Zone, where 65% of Eritrea's total population lives.

Threats

11. Land degradation is arguably the most critical environmental problem facing Eritrea in the immediate-term. The main direct causes of land degradation in the CHZ of Eritrea are unsustainable agriculture, overgrazing, and the unsustainable use of woodlots and natural forests. A detailed matrix of land degradation threats and their root causes in Eritrea is presented in the SRF of the FSP (Section II). This FSP takes a broad view of the SLM challenge, which is significant in a country like Eritrea, currently emerging from years of war and depending strongly on its land and natural resources base for sustainable development. The analysis applies to most areas in Eritrea, however, it has been focused on the CHZ and the Toker catchment area in particular.

12. Unsustainable agriculture is, by far, the greatest threat to land in Eritrea. There is very little investment in erosion control measures and productivity declines after a few cropping cycles. More land is cleared to compensate for the loss of productivity; leading to a vicious cycle of clearing and abandoning land, further exposing it to wind and water erosion. Overgrazing has resulted in reduced vegetative cover, increased soil erosion and decreased soil fertility and productivity. High value, nutritious forage species have been replaced with low value species of low nutritional value. A decrease in livestock productivity is observed, as well as increased susceptibility to diseases and parasites because of poor nutrition.

13. Overgrazing has led to a loss in soil cover, thereby exposing the land to wind erosion and the loss of high nutrient-content topsoil, further fuelling decline in crop yields. Farms are already very small and fragmented, and the degradation of agricultural lands and the reduction in crop yields has increased poverty and food insecurity in the country.

14. Whilst is has been confirmed that Eritrea has never been heavily forested (FAO), a recent study by Africa Environments Programme5 concluded that there has been a change in tree cover in the CHZ, albeit characterized by a kaleidoscope of different processes both in time and space. The study confirmed that there has been qualitative deterioration in the type of vegetation available. In particular, economically useful trees such as olives, euphorbia, and juniper trees have been replaced in many instances by the far less versatile acacia, and by increasing numbers of small eucalyptus plantations on communal land. This has been economically costly, to farming families in particular, who rely on a variety of woods and tree products for tools, ploughs, and household uses. It is also deleterious to ecosystem health because it often leads to substitution with ecologically inappropriate exotic species such as eucalyptus, leading to change in habitats for small organisms and pollinators.

Root causes

15. The root causes driving unsustainable agriculture, overgrazing and unsustainable use of forest resources include inappropriate resource management practices, inherently poor, infertile and poorly developed soils, relatively limited rainfall and generally naturally limited productivity, increasing demands and poor knowledge of alternatives which lead to overutilization of nearly all natural resources. Root causes specifically causing unsustainable agriculture include the expansion of agriculture onto ever more marginal lands (such as steep slopes with shallow erodible soils) in part as a result of population increase, inadequate soil and water conservation (SWC) practices or no SWC practices whatsoever, inappropriate tillage practices, removal of crop residue for fodder, insufficient use of manure and chemical fertilizer, use of dung for fuel, shortening or elimination of fallow periods within the cropping cycle and soil compaction in arable cultivated land due to long continuous tillage at the same depth and overgrazing of crop residues by livestock. Poverty is a major underlying cause of land degradation in the CHZ. Many resource-poor households are preoccupied with satisfying their immediate needs and have little capacity to invest in soil and water conservation technologies and to adopt specific sustainable farming practices.

[5] Pauline Boerma, 1991. Assessing Forest Cover Change in Eritrea—A Historical Perspective. Africa Environments Programme, Oxford University, Centre for the Environment.

16. The key root causes driving overgrazing is that most farmers practice mixed farming, which includes the raising of goats and sheep. Every village in the highlands has its own communal land which all members of the community are free to use to graze their livestock. However, grazing lands have shrunk over time as more and more land has been converted to agricultural use and the human population and livestock numbers have increased tremendously. Traditional grazing systems have been weakened and there are no limits on livestock numbers, resulting in severely overgrazed lands. Communal grazing lands are closed during the rainy season, so there is some level of communal management authority on which to build.

17. The root causes of unsustainable use of forest resources include high population pressure, with the consequent high demand for forest resources for subsistence and commercial use. Other root cause is the weakening of social capital and indigenous institutions for the management of forest resources, and poverty, which leads to heavy reliance on natural resources (forest). Low levels of environmental awareness compounds the problems.

Barriers:

18. Land tenure is a major, cross-cutting issue behind land degradation in the CHZ. The Diessa tenure system provides equal access rights to all village members where user rights for land are transferred every 5-7 years. This traditional land tenure system is characterized by an extreme form of insecurity of tenure which effectively prevents farmers from making long term investments in sustainable agricultural practices. Knowing that the land they cultivate will be given to someone else after 5 to 7 years robs farmers the incentive to make the types of investments needed to prevent soil erosion or to build up and maintain soil fertility. The Government recognized the need to change the old Diessa[6] land tenure system and consequently proclaimed a new land law in 1994. The long-term land redistribution to be undertaken under this new law was supposed to provide incentives for farmers to invest in sustainable agricultural practices and increase productivity. However, there have been major delays in the implementation of land redistribution under the new law, as undertaking permanent land distribution has been considered to be politically risky. To date, no one has attempted it although virtually everyone agrees it needs to be done. It was only during the preparation of this project that a consensus was developed amongst decision makers that time has come to move forward on the development of equitable, participatory methodologies for implementing permanent land distribution under the 1994 Proclamation.

19. <u>Poor and uncoordinated land use planning:</u> Permanent land redistribution must be preceded by a community-based land use planning process that will form the basis for the redistribution. Currently local land administration bodies led by representatives from of the Department of Lands implement the allocation of usufruct rights, monitoring of land use and maintenance of land registries. However, this largely by-passes the participation of communities at the lowest level. This has deprived the system of intimate and detailed local knowledge of land use capability and social organization – and has deprived the system of the community approval that is absolutely essential if redistribution is going to succeed. A land use policy is currently being formulated and is expected to be finalized in 2008. The new land use policy will mainly focus on how to sustainably use different categories of land for different purposes. The new land use policy will provide a legal basis for proper land use planning and community participation. Overall the absence of tested methods, models and capacities for participatory land use planning for community-based land use is a key barrier, which is one of the main reasons for the delays in implementing the 1994 land proclamation.

20. <u>Lack of research information, know-how, knowledge management and dissemination systems and therefore proven models for sustainable agriculture:</u> Although there is a wealth of experiences, best practices and lessons learned on sustainable agricultural in the highlands of Eastern Africa, sustainable agricultural models have never been developed for the Central Highlands of Eritrea because of the land tenure constraints. There is limited research on sustainable agriculture (e.g. best crop varieties, tillage practices, pest and weed control, soil erosion rates, soil and water conservation measures for farmlands). Farmers have limited knowledge of modern/appropriate agricultural

[6] ***Diessa:*** Land in Village ownership. The Village land is periodically redistributed amongst the Village inhabitants by the Village *Baito* (*q.v.*), generally every 5-7 years.

practices including moisture conservation techniques. They have poor skills and capacity in water harvesting or moisture conservation techniques and technologies, and adaptive management for SLM is scarcely developed. The know-how for grazing, agricultural and forest resources management is inadequate at all levels, and needs to be improved. There is inadequate gender responsive programming in extension services, which is a major capacity bottleneck towards SLM. In Eritrea, where a significant number of households are women-lead and where the cultural circumstances clearly disadvantage women, it is essential to develop gender sensitive programming to reduce poverty.

21. Inadequate incentive measures, including financial capacities and markets: Poor access to agricultural inputs and markets for agricultural and forest and non-timber forest products constrains the profitability and, therefore, the level of investments made in sustainable resource management. Market constraints include, for example, high and variable agricultural input prices and shortages of agricultural inputs, coupled with inadequate access to credit, limiting investment and profitability from improved agriculture. These are exacerbated by poor marketing information systems, poor road networks[7] and limited transportation. The poor financial performance of smallholder agriculture fails to generate enough return for adequate investment in agriculture and SLM technologies. The strategy adopted by most farmers is low input, low output agriculture. There are insufficient service providers for market information and provision of credit. Degraded grazing lands are not believed to yield a high return on investments in their management or restoration, but actual analysis is lacking. Investments in the management of communal grazing lands must be made by local institutions responsible for communal lands, but they lack the know-how and the capital to invest in these lands. There are no opportunities for individuals or households to invest in communally owned grazing lands.

22. The proposed project will remove these barriers and contribute to the goal "*Better managed land provides the basis for ecosystems services and for meeting national development needs*". The project will develop and promote sustainable land management practices in agriculture, rangelands and drylands forestry providing techniques suited to the potential of the land and are in line with sound ecosystem principles in order to increase productivity while reducing the need for further encroachment into new fields. This will reduce degradation, biodiverity loss and conflicts over resources. It will then support the application of the techniques to control the increasing severity and extent of land degradation in the Central Highland Zone. The objective of the MSP therefore *"To create the enabling environment (policy, capacity, knowledge, alternatives) necessary for adoption of sustainable land management practices and alleviate environmental degradation while improving livelihoods of the farming communities of the CHZ."*. A core element of the project will will be to identify capacity and institutional arrangement for the implementation of the 1994 land declaration that allows a more secure land tenure, but that has not been adopted for lack of the same.

23. Working with government decision-makers, technical agents from ministries and non-governmental organizations (NGOs) and donors, the project will support existing and new community-based stakeholder groups to adopt and disseminate appropriate cultivation and livestock management practices.it will focus its local level interventions within the Toker catchment, which is representative of the ecological and socio-economic conditions prevalent in the CHZ, and situated in the Serejeka sub-zoba, Zoba Maekel. The project will be implemented in 30 pilot villages, of which 10 have been identified in the preparation phase. An additional number of villages will be included in an "up-scaling" approach, testing the tools and models developed at the initial sites. Over 30,000 beneficiaries in 30 villages throughout Zoba Maekel will be reached through the interventions.

Outcome 1: Replicable models of SLM are developed and representative communities use them to manage land in 15 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation.

24. *Sustainable models for improving agriculture, grazing lands and forested lands developed and piloted in 28 villages covering 140,000 ha and a suite of technologies made available.* Under this outcome sustainable

[7] The government of Eritrea is presently making strong investments in road construction.

agriculture, rangeland and woodland management models will be described based on the results of landscape functionality analysis and other cutting edge concepts, and building on traditional management systems and knowledge. Local authorities will be faciliated to use the results of the assessments to undertake a participatory zoning of the common lands into appropriate forms such as sustaianble use, protection, restoration, grazing, mixed use, etc. and set management objectives and activities such as the introduction of watershed conservation measures, as well as measures to counteract siltation of dams. They will also identify key techniques required for optimum management (including utilisation and rehabilitation/restoration) for each zone. Techniques for watershed protection, reducing soil erosion, improving soil fertility and productivity of the land, improving quantity and quality of range resources and of rehabilitating/restoration of badly degraded lands and woodlands will form the core of the SLM models. Actual techniques will include conservation agriculture, water harvesting, inter-cropping with right mixes such as agro-forestry trees and legumes, rotational grazing, replanting with a combination of indegenous and fast growing exotic woodland species, etc. Model description will include an ellaboration of conditions necessary for its successful implementation, in particular resource governance, technical and technological capacity as well as economic, socio-cultural and livelihood elements. A strategy for the participatory, land users/managers-centered SLM model implementation will be developed and its implementation tested in the pilot villages.

25. To enhance adoption of the selected techniques, a system of incentives and penalties will be developed and applied at multiple levels to further the adoption of SLM practice. Testing local level application of the 1994 Land Proclamation will be the key incentive measure put into place supported by a number complementing rules, regulations and by-laws. Penalties for inappropriate land use and systems of enforcement will be agreed by relevant stakeholders.

26. *Regulations and standards for land redistribution of agricultural lands under the 1994 Land Proclamation are developed, approved and applied.* The change of land ownership from the Diessa system is critical to promoting SLM in Eritrea. At present the 1994 Land Proclamation is not implementable due to lack of clear guidance on regulations that could support its practical application at the local level. The project will therefore work with the local communities to assess the optimal institutional arrangement, rules and regulations necessary for the practical application of the land declaration and conversion of land ownership to the more secure form provided for by the declaration. It will then facilitate the communities to establish these requirements and to test application of the land law. Lessons learned will be shared and used by the government and other stakeholders to provide guidance in the rest of the country.

27. *Community-based, village-level land use planning and land redistribution methodologies are developed and piloted in 28 villages.* The successful implementation of the 1994 Land Proclamation forms an important pre-requisite/incentive for SLM. In order to undertake just and sustainable land redistribution it is essential – and required by law – to undertake systematic land use planning, the outcomes of which guide land allocation. Currently no systematic local level land use planning tools are in place and need to be developed. The project will develop land use planning tools such as landscape functionality analysis and facilitate their application to produce land use zones and plans for practical application in support of the 1994 land declaration.

28. *Alternative income generating options piloted and linked to markets in 28 villages*. Although the improvement of productivity is one of the main goals of the land redistribution effort and also of this SLM project, it is clear that there is a need to develop off-farm economies. Land is a limited resource, and so is its ability to support continually increasing populations purely on agricultural and/or forest land production. In addition, successful adoption of SLM techniques will require local level investment in labor and perhaps finances. It is important that the local economy provide financial incentives for the application of SLM model through returns on such investments. Sustainable income generating activities (IGAs) could re-energize local economies if the right products are identified and matched to markets and local capacity for market participation. The project will therefore identify potential IGAs and investigate the conditions necessary for effective local level adoption and sustainability. It will then facilitate the provision of the required enabling environment such as training on entrepreneurship and business

management, business administration and improved harvesting and processing. In addition, selected entrepreneurs will be supported to set up or improve existing enterprises.

29. *Feedback from pilot villages used to finalize the SLM model, LUP and land redistribution methodologies and an integrated extension package to facilitate replication – potentially over 2 million ha; SLM extension package successfully replicated in adjacent sub-zobas in Zoba Maekel*. To support upscaling of the application of the 1994 land declaration and the accompanying land use planning, a local level M&E system will be set up to monitor process and impacts focusing on: (i) **Process** - optimal institutional set up, supporting rules and regulations and time required to successfully apply the declaration at the local level; (ii) **Impacts** - biophysical aspects such as changes in soil fertility and land productivity, management impacts such as erosion control and soil fertility maintenance, and livelihoods/socio-cultural components. Lessons from formulation, implementation and monitoring of the project initiatives will be synthesized and fed into the Knowledge Management system (outcome 3) to inform model replication.

30. The set of recommendations from the initial ten villages will be tested in a further 18 villages, where their application will take place with lesser inputs from the project. The testing will be documented and evaluated to ensure that the final recommendations on process and products will be applicable and produce the intended impacts, inter alia, security of tenure that provides a better incentive for investing in SLM. It is important to ensure that the models and methodologies developed become an integral part and set of tools routinely applied by the various extension services and institutions dealing with land redistribution, LUP and SLM and community outreach, and special provisions to promote such mainstreaming need to be made.

Outcome 2: *A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation.*

31. *Knowledge management (KM) network formed of institutions and projects concerned with SLM in the Central Highlands*. Access to information and knowledge has been identified as a key barrier to SLM and development in Eritrea. It is particularly the rural farmers who voiced their concern that they are not up-to-date with new management options, alternative agricultural practices, new developments in policy and other important information. But also amongst service providers and public servant staff accessibility of knowledge and information are identified as a bottleneck. This may be for a number of reasons, including e.g. poor access to the internet and other information sources, limited quality and content of radio and other media, language barriers, etc. The project will establish a Knowledge Management network that creates a platform for accessing existing knowledge and that will facilitate a systematic analysis of knowledge gaps and the development of a strategic approach to addressing them, taking all relevant stakeholder groups into consideration. It is recognized that the TICD, a local project/NGO, has already started the establishment of a Sustainable Land Management Forum (SLUF), which should be strengthened, if appropriate, as it is not necessary to establish parallel structures. On the community level peer mechanisms such as exchange visits within Eritrea and internationally, special training programmes and target group specific media development (e.g. theater, radio, using vernacular) will be considered. Three specific outputs will be delivered, described below.

32. *Output 2.1: Capacity for research on SLM supported*. The information base for decision-making needs to be strengthened in Eritrea, as well as building skills and capacity for research. A number of research institutions exist and individuals have been trained at local and international educational institutions including the University of Asmara. It is however critical to ensure that the education and training remain attuned to modern trends in science (bio-physical and socio-economic), policy and SLM. Research needs to be further interpreted not only to focus on a tertiary and secondary level, but to be particularly relevant in a Farmers' Action Research context, including the resource managers; who need to be engaged in local level research that informs decision making and adaptive management.

33. *Output 2.2: SLM M&E established and linked to SLM country program and SIP*. It is important to assess the extent of land degradation reliably and to monitor and evaluate (M&E) the successes of the practical application of the 1994 land declaration, in particular whether it indeed provides the security of tenure expected, and whether that security of tenure in return provides an incentive for investing in improved management practices in agriculture, livestock and woodland utilization. This information is critical to inform future decision-making on all levels, including the local farmers and land managers, regional administration and national governance and policy setting. The project will support the establishment of an SLM M&E framework as a decision-support system for Eritrea, based on the experiences gained and data collected from the pilot area. The system will be linked to other higher-tier SLM interventions, such as the IFAD led SLM country programme and the SIP.

34. *Output 2.3: SLM is mainstreamed into relevant programmes, policies and legislation, and is integrated throughout development planning and budgeting processes.* To support sustainability and upscaling of SLM, it is important to mainstream SLM considerations into the policy and planning processes at all levels, and to ensure that existing and newly emerging policy instruments promote it. Local, regional and national level rules, regulations and policy for NRM governance and management will therefore be reviewed for effectiveness in supporting improved practices within an SLM context. Gaps will be identified and regional and national authorities assisted to draft new policies, strategies and legislation that support adoption of SLM techniquerecommendations while discouraging or banning unsustainable land use practices, first in the pilot area, and then widely. In addition, guidelines for integrating SLM best practices and spatial planning into the preparation of local development plans will be developed and local planners assisted to integrate SLM into their Development Plans. Finally, data, experience and lessons from the project will be fed into the Eritrea SLM Investment Framework8 through the National SLM Platform. This will be to support the country to address mainstreaming of SLM in a broader environmental context, as most key environmental concerns are related to SLM, such as climate change, water management, biodiversity e.g. in a ecosystem services and agro-biodiversity context, to name a few.

35. **Outcome 3:** *Capacity for adoption of improved land management techniques and for upscaling to non-project areas provided at all levels:* Capacity is critical to the successful implementation of the SLM model, yet capacity constraint is a key barrier to adoption of improved land management practices in Eritrea. The project will therefore improve capacity for all aspects of SLM (spatial planning, modeling, implementation and governance) largely at local level but with some key aspects of regional and national level capacity9.
36. *Output 3.1: Training programmes on SLM for different groups (farmers, land managers, technical officers) available and training conducted (with a focus on pilot site).* Although already the two foregoing outcomes address SLM capacity shortcomings, this specific output highlights and supplements other activities through a specifically developed capacity support strategy and action plan (CSSAP). The CSSAP will be developed at an early stage in the project implementation horizon as it one of the 'back-bone' pieces. It is important that the CSSAP is needs based and developed in a consultative and participatory manner with all relevant stakeholders and target groups. Capacity support and training programmes may well incorporate "hard ware" components, i.e. the required implements and investments that are needed for example for afforestation activities.

37. *Output 3.2: Extension package updated with SLM best practice provided and other relevant materials developed through KCAS successfully delivered to key target groups and intended impacts on awareness and skills base achieved.* It is not only important to develop relevant training and awareness materials, but it is essential to ensure effective dissemination and application in the long-term. An awareness baseline will be developed at the onset of the project to ensure that the intervention impacts can be measured in future. It is critical to determine the impact of the investment made to ensure that the most effective measures are being replicated and up-scaled in the future. The approach will build on existing extension services and strengthen them for sustainable future service delivery, especially in the pilot area.

[8] Development of the Eritrea SLM Investment Framework is led by the country's government, facilitated by the IFAD via a SIP SLM project.

[9] Another SIP project (through the IFAD) has a component on National level capacity building. Any national level capacity building work under this project will therefore be closely coordinated with IFAD's watershed management project, through the national SLM platform.

38. *Output 3.3: Service providers (example agricultural input suppliers, extension services, financial service providers) strengthened to provide effective and relevant SLM support to community level.* A key bottleneck to SLM is the mismatch between available support services and the service needs by communities. Usually service delivery should be demand driven. In a country such as Eritrea, this mechanism has been disrupted in various ways, including an absence of service providers and goods. To ensure that productivity in agriculture, range and forest lands can be improved a great deal of inputs are required, including fertilizers, seeding material and tools. An effective trading system needs to be promoted that allows the farmers to generate enough income to be able to reinvest into production. The implementation of the 1994 Land Proclamation is seen as a first step in this direction; however the support for development of a functional service system is critical. Actions may have to take place primarily at the national level and may then be implemented with a focus on the pilot area. Cost-effectiveness of service delivery is another important concern; extension is costly and needs to be well planned and coordinated to ensure that scare resources are not going to waste.

39. *Output 3.4: SLM actions are climate change proof, mainstreaming adaptation and mitigation.* The Eritrea NAPA predicts that water scarcity and changed weather patterns will affect all parts of the country, even though in different nuances. The productivity of the CHZ, the agriculturally most productive zone in the country, critical to food supply in Eritrea, may be severely affected if farmers do not start to increase resilience of the system now. It is important to develop a strategy of how to deal with climate change and to develop the local and national capacity to cope with it in the future. Additionally Eritrea should attempt to contribute to cc mitigation and benefit from CDM investments. This output will be coordinated with the GEF Adaptation project for Eritrea.

Outcome 4: *Learning, evaluation, and adaptive management increased.*

40. *Effective project management and implementation structures are established and function.* This output will ensure that the project is effectively managed and delivers impacts.

41. *Project M&E system established, adaptive planning takes place and project performance on track.* Project management M&E is an important management tool which will be established at the inception of the project. Performance contracts will be used at various project implementation levels to ensure staff and partner delivery. There are M&E components of various kinds interspersed throughout the planned activities and these will be linked to overall project M&E.

B. GLOBAL BENEFITS

42. Sustainable management of large land areas will improve the maintenance and rehabilitation of structure and functions of ecosystems. In addition to products and services that will be directly harvested from the farms, better managed land will provide a range of critical environmental functions that sustain human life, including carbon sequestration, erosion control, habitat for species breeding and nursery – a function closely linked to biodiversity maintenance. Other global benefits include better ground water storage (drought control), soil fertility regeneration, and pollination services to crops and other plants: This function is closely linked to maintenance of pollinator populations.

C. CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS:

43. The project primarily addresses critical elements identified in Eritrea's National Action Program (NAP) to Combat Desertification for priority action and not addressed currently by baseline activities in Eritrea. It will make tangible contributions to a number of other national policies and programs focusing on poverty reduction, environmental management, and food security, and contribute to the improvement of synergies and compatibility amongst such policies and programs. In its Interim-**Poverty Reduction Strategy Paper (I-PRSP),** the Government of Eritrea has formulated a comprehensive economic revival program aimed at reinvigorating economic growth. The I-PRSP recognizes that the achievement of rapid, broad-based and sustainable growth and poverty reduction requires enhanced investment in sectors such as agriculture, fisheries, manufacturing and tourism, where Eritrea has a

comparative advantage. Focus has been given to increased farm productivity by introducing modern farming techniques and sustainable land management methods. The adoption of soil conservation measures is identified as one of the priority measures necessary to improve soil fertility and productivity. The Government's **agricultural sector review** conducted in 2001/02 recognized the importance of agriculture to the reduction of poverty, to the enhancement of national food security and increased exports earnings and as a support for industrialization. The **National Environment Action Plan for Eritrea (NEMP-E)** adopted in 1995, provides the basic policy for action in the environment sector and lays out a strategy for action on conservation activities. Its guiding principles include the strategic importance of conserving natural resources and maintaining environmental quality as part of the national economic growth and development process. The project focuses on mitigating the causes and effects of land degradation through institutional strengthening and sustainable land management interventions while contributing to poverty alleviation and improving local livelihoods and economic well-being. Specifically the FSP will provide support to the implementation of the **1994 Land Proclamation** (on land tenure). Overall the Land Proclamation is considered a land mark piece of legislature in Eritrea, however due to a number of barriers it has not bee applied widely. Barriers relate, for example, to capacity shortcomings, e.g. the absence of an integrated approach to the application of the Proclamation, which would also support local farmers to improve land and natural resource management practices, whilst gaining tenure rights.

C. CONSISTENCY OF THE PROJECT WITH GEF STRATEGIES AND STRATEGIC PROGRAMS:

44. The project satisfies the requirements under the Strategic Priorities for SLM I. It is part of the GEF TerrAfrica's Strategic Investment Program for SLM in Sub-Saharan Africa (SIP) and will contribute to the SIP's Goal, by reducing land degradation in Eritrea - thus supporting the country in improving its natural resource based livelihoods. More specifically, the project will foster system-wide change through the removal of policy, institutional, technical, capacity and financial barriers to SLM, in line with the LD Strategic Objective (SO) 1, 2 and 3. It will build capacity for achievement of SIP Intermediate Result 1 (IR 1): SLM applications *on the ground are scaled up in country-defined priority agro-ecological zones.* It will work directly towards Intermediate Result 2 (IR 2): *effective and inclusive dialogue and advocacy on SLM strategic priorities, enabling conditions, and delivery mechanisms established and ongoing.* It will contribute to Intermediate Results 3 (IR 3) and 4 (IR 4): *Commercial and advisory services for SLM are strengthened and readily available to land users*, and T*argeted knowledge generated and disseminated; monitoring and evaluation systems established and strengthened at all levels* respectively.

D. COORDINATION WITH OTHER RELATED INITIATIVES

45. GEF-SIP support in Eritrea is channeled through two partner agencies in the country, UNDP and the IFAD, together promoting a strategic package of investment designed to catalyze SLM scale up, build operational alliances, and improve enabling environments. IFAD is focusing on the upland watersheds linked to priority production zones, while the UNDP is working in the central highlands where land degradation has reached critical levels. Both interventions address local institutions to improve the enabling conditions for SLM up-scaling. The Government of Eritrea, with assistance from the Global Mechanism, IFAD and other SIP Partners is in the process of forming a National SLM Platform (comprising of a multi-sectoral and multi-stakeholder National Steering Committee and Technical Committee, and supported by a Secretariat). This Platform will oversee and coordinate the development and implementation of the National Framework for SLM, which this project will be a part. The SLM platform will also be a critical tool for coordinating all other development partners support to SLM, through the national level dialogue process which will support the government to adopt a coordinated programmatic approach to SLM articulated in a CSIF (Country Strategic Investment Framework). This project will coordinate very closely with other partners investing in SLM through the Platform. The project will also coordinate closely with other GEF initiatives, particularly the developing GEF Biodiversity and IFAD's Catchments and Landscape Management projects to ensure no duplication. The output on adapting SLM initiatives to climate change will be coordinated with the GEF project on Adaptation to Climate Change, also implemented by UNDP.

E. INCREMENTAL REASONING

46. Without the GEF investment, unsustainable agricultural practices and deforestation will continue to threaten ecosystem integrity and function in Eritrea. Resource management will continue under the current land tenure regime, inadequately using knowledge and with poor extension support to land managers. Further reduction in productivity, loss of biodiversity (as well as agro biodiversity) and loss of household income will continue to aggravate overall poverty and further diminish the livelihood base of million's of people who depend on the natural resources for their survival. The sedimentation of major rivers such as the Gash and the Setit will continue with consequent impacts on down stream communities, as run-off is often the only source of water in these areas. If soil erosion and soil loss in the CHZ continues severe negative impacts on lowland communities will worsen. The risks of increased land degradation are therefore substantial if nothing is done.

47. The GEF alternative is to increase the effectiveness of land management by strengthening incentives for sustainable land management, particularly land tenure and the required technical and institutional capacities. This will complement the considerable effort by government and its development partners currently being directed at improving land management practices and improving agriculture as the basis of economic development. Sustainable land management models adapted to the CHZ, and applicable at the local level will ensure improved land management practices. Capacity building investments including into knowledge management and sharing support at all levels contribute to developing a critical mass of informed land managers and natural resource decision makers. The GEF investment will ensure global environmental benefits by improving ability of the soil and vegetation to sequester carbon and reducing soil erosion and the related nutrient loading of water bodies. Further details are given the table below.

Baseline	Alternative	Increment
▪ Ecosystem function and integrity are strongly degraded throughout CHZ ▪ Loss of the structure of the natural forest and loss of habitat for wildlife ▪ Loss of biodiversity – including genetic erosion of potentially global significant agro biodiversity ▪ The amount of carbon sequestered is being reduced ▪ The sediment concentration of trans-boundary rivers like Gash and Setit significantly increase. Wider part of their drainage is within the central highland and soil loss in this area affect their sediment concentration	▪ Sustainable land management models are being developed, adopted and replicated throughout the CHZ ▪ Capacities for replicating and adapting integrated natural resources/ ecosystem management are built within a range of local, regional and national institutions incl. civil society organizations ▪ Sustainable agricultural practices and reforestation undertaken through out the CHZ, so that significant reduction in rate of soil erosion from crop lands and barren lands will be attained and carbon sequestration will be maintained/ increased ▪ Lessening of pressure on biodiversity and minimized genetic erosion of local cropland races by increasing yields through SLM	▪ Rehabilitation efforts as part of sustainability models leading to the reestablishment of ecosystem integrity and function ▪ Strengthening and empowering communities to sustainable manage local level resources, supported by the implementation of a new land tenure system ▪ Improvement of capacities in Government and beyond through improved know-how and knowledge management systems

F. RISKS, INCLUDING CLIMATE CHANGE AND RISK MEASURES THAT WILL BE TAKEN:

	Risk description	Degree	Mitigation/ Comment

1	Competing priorities at national level lead to reduced political support to SLM	Low	Government showed highest degree of commitment during project preparation and has set into place relevant enabling policies and country strategies such as NAP
2	Potential country conflict with neighboring Ethiopia	Low	Current commitments by Government suggest that Eritrea maintains stable political relationships
3	Climate change	Moderate (in terms of project time horizon)	Mitigated through integrating CC concerns into the project design (i.e. CCA "proofing"; CDM investments) and formulation and implementation of SLM strategies and activities per se
4	Short term decisions of survival instead of longterm investment into SLM good practice at local level	Moderate	Investments into longer-term strategic development planning incl. at the local level are a priority of the Eritrean Government. This project provides tangible support to empowering local communities to start engaging in such longer-term strategic planning and the project will assist local communities in leveraging the required investments for more sustainable livelihoods.
5	Insecure land tenure	Moderate	It is one of the key strategies of this project to assist the Government of Eritrea with the demonstration of the successful implementation of the 1994 Land Proclamation that would allow for more secure tenure systems to be implemented in the project pilot area. The Government is committed to roll out the implementation of the Proclamation, based on the tools developed and tested during the project phase.
6	Low capacities for SLM	Moderate	Strong knowledge and awareness as well as capacity support strategies and targeted action plans
7	Unsustainable markets (of agricultural and alternative income generating activities/ products)	Moderate	The creation of alternative income opportunities as well as the establishment of sustainable pricing/ marketing mechanism for agricultural products are critical to the long-term success of SLM strategies in Eritrea. It is important that relevant enabling economic, trade and other related policies and strategies are put into place to create the necessary enabling environment for SLM.
8	Severe drought or other extreme (weather events)	High	Eritrea, or the Horn of Africa per se, is prone to the occurrence of frequent and severed droughts. Although droughts are expected and partially foreseeable events, they can place very difficult frame conditions onto the local population and the Government, which may negate project and SLM successes at least in the early phase of SLM interventions.

G. COST-EFFECTIVENESS OF THE PROJECT:

48. An analysis of past and ongoing experiences and lessons learned shows clear evidence that land degradation can be reversed through sustainable land management. This project will focus on addressing the key barriers identified through the development of SLM models and governance systems in targeted communities. The development of knowledge management for SLM will be accomplished in an integrated and collaborative manner working with other field partners and donor programs across the Central Highland. The Project will work within Toker catchment, which is representative of ecological and socio-economic conditions of the Central Highlands Agro-ecological Zone. It will be implemented within thirty villages within the Sub-Zoba Serejeka in Zoba Maakel administrative unit, and replicated in a number of villages throughout the Zoba, putting more than 1 million ha of land under SLM and affecting more than 30,000 people in the pilot area and hundred thousands of people in the

adjacent areas, such as the downriver areas directly affected by the measures. At the operational level, project implementation arrangements will minimize bureaucracy, administrative and managerial wastage, and follow UNDP standard rules and procedures for procurement and recruitment. The project will build local capacity for replicating and adapting the new participatory management models; the most cost-effective approach for ensuring the sustainability and replicability of the project. The concepts of the proposed SLM models place a strong emphasis on financial sustainability. Sustainable, productive management of the lands incurs costs and yields benefits. All management systems will include the creation of community-managed funds under which a portion of revenues are reinvested into the management of the lands. Revenues may be generated from the sale of wood products, non-timber forest and rangeland products, grazing fees, watering fees, fines or other user fees. The management of community lands will be developed on basic business principles. Management costs will be covered out of revenues and the use of voluntary labor will be minimized

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. PROJECT IMPLEMENTATION ARRANGEMENT:

49. The project will be implemented over a five-year period, commencing in 2008. The GEF implementation agency (IA) for the project will be the UNDP Eritrea Country Office. The project will be executed under UNDP National Execution (NEX) procedures. The Maekel Zoba Administration will be the overall responsible Eritrean partners, with the Ministry of Agriculture providing the national framework.

50. The National Project Coordinator (NPC) will be the Head of the Ministry of Agriculture Zoba Maekel or his/her delegate. A Project Coordination Unit (PCU) will be established under his supervision, and be located in the Ministries' offices in the sub-zoba of Serejeka. The PCU will be composed of thee staff members, the Project Manager (PM), potentially seconded from Government, an Accountant/Administrative Manager and a Driver/Admin Support.
51. The performance of the project will be guided by a Project Steering Committee (PSC) with representatives from the national, regional and sub-zoba levels. A Project Management Group, a sub-section of the PSC and composed of the NPC, the Project Manager of the PCU, a representative of the Ministry of Finance and the UNDP will be established to provide guidance in the inter-sessional periods of PSC meetings. Technical Coordination Task Force (TCTF) composed of institutions actively involved in the implementation of the project activities will be established to aide the coordination responsibility of the PMU. A schematic diagram of the management structure is provided in Section I, Part IV, Figure 3 of the FSP document.

52. The various project activities will be carried out by a suite of partners, as specified in Section I, Part III in the FSP document (Table 3). Partners will primarily support the pilot communities, and are constituted by government, NGO and private sector entities, coordinated through the PCU. Performance contracts will be established with all key partners.

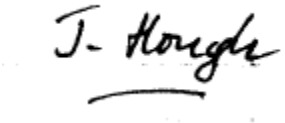
53. "In order to accord proper acknowledgement to GEF for providing funding, a GEF logo will appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF will also accord proper acknowledgment to GEF. The UNDP logo will be more prominent -- and separated from the GEF logo if possible, as UN visibility is important for security purposes".

54. The project will be audited annually for the financial year January to December, as per NEX procedures and GEF requirements. The auditors will be contracted by the Implementing Institution after pre-approval by UNDP and the GoE.

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

Project design is completely aligned to the original PIF.

PART V: AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.	
 John Hough UNDP-GEF Deputy Executive Coordinator,	Project Contact Person UNDP - Veronica Muthui, RTA - SLM Pretoria. Tel: +27 12 354 8124 Email:veronica.muthui@undp.org
Date: 15 June 2009	

Project Strategy	ANNEX A: PROJECT RESULTS FRAMEWORK Objectively verifiable indicators				
Goal	Better managed land provides the basis for ecosystems services and for meeting national development needs				
	Indicator	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
Objective – To create the enabling environment (policy, capacity, knowledge, alternatives) necessary for adoption of sustainable LM practices and alleviate environmental degradation while improving livelihoods of the farming communities of the CHZ.	1. % decrease of degraded land area in Serejeka sub-zoba	Relevant baseline values to be established during inception phase; measure of current extent of land degradation will include, but will not be limited to: - Land area (ha) of sub-zoba with signs of soil erosion - Ha of land area deforested, using long-term time series - Liters of water abstraction for agricultural use (irrigation) per ha (distribution map) - Soil fertility levels (baselines to be established at pilot village level); relevant measures to be determined - Level of NRM yields (e.g. crops)	Overall 25% decrease in degraded area; individual targets to be developed as per established measure during inception period	▪ Baseline report/ verification; of current (project start and project process) situation; GIS based and research based assessments (e.g. part of SLM models); link to Transects done by MoA/NARI a relevant ▪ Project progress reports (PIR/APR) ▪ Local level M&E and SLM resource tracking ▪ MoA annual assessment	▪ No prevalence of severe droughts
	2. Ha of land under new (private) land tenure arrangements	Currently the 1994 Land Proclamation is not applied and 0 ha of land in the Serejeka sub-zoba are under long-term private ownership/ tenure	More than 50% of land in the sub-zoba are under private title, following the provisions of the 1994 Land Proclamation	▪ Under the 1994 Land Proclamation registered Title deeds; registrar of the Land Administration ▪ Project progress reports (PIR/APR)	▪ Implementation of Land Proclamation rolls out to plan
	3. Decrease of population living below the poverty line in Serejeka sub-zoba	Currently 66% of the population in Serejeka sub-zoba live below the poverty line (according to the international definition of poverty; assessed in xxx through xxx)	The poverty rate is reduced to at least 40% in the sub-zoba	▪ Xxx (assessment report that provides baseline) ▪ Baseline report/ verification; of current (project start and project process) situation ▪ Project M&E Plan to be developed during inception phase	▪ No unforeseeable disasters occur such as extreme weather (e.g. severe drought) or war

Outcome 1 Replicable models of SLM are developed and representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for central highlands, reducing the rate of land degradation	4. % Increase in land (ha) managed through community-level SLM plans	Currently no community-level SLM plans are in place - No of villages with functional SLM plans in place - Area (ha) managed through application of SLM plans	The management of land in Serejeka sub-zoba is guided by community level SLM plans (the Serejeka sub-zoba constitutes approximately 240,000 ha and 28 villages are situated in the sub-zoba)	▪ Baseline report/ verification; precise ha and village nos through GIS assessment ▪ Community level SLM plans ▪ Project progress reports (PIR/APR) ▪ Mid-term review and end of project evaluation	▪ Communities are willing to participate
	5. Ratio of source of household incomes in the 28 pilot villages - income from agriculture versus other alternative income sources	Baseline to be established during inception phase for pilot villages (Survey)	Ratios clearly indicate income diversification (as a measure of resilience); final targets to be established during inception phase	▪ Socio-economic baseline survey to be conducted in the 28 identified pilot villages during inception phase ▪ Subsequently: Local level M&E and SLM resource tracking ▪ Project progress reports (PIR/APR)	▪ Enabling environment to allow communities to establish economically meaningful alternative incomes is given
	6. No. of households in 28 pilot villages benefiting from application of Land Proclamation	Currently the 1994 Land Proclamation is not applied and 0 households in the pilot area are currently benefiting from its application	More than 50% of rural/ land based households benefit from private tenure, following the provisions of the 1994 Land Proclamation	▪ Under the 1994 Land Proclamation registered Title deeds; registrar of the Land Administration ▪ Project progress reports (PIR/APR)	▪ Implementation of Land Proclamation rolls out to plan

Outcome 2 A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation	7. Increased knowledge about SLM practices amongst all project key stakeholders/ SLM platform members	Knowledge baseline to be established during KCAS development during inception phase (Knowledge & Awareness survey amongst representative sample of key stakeholder groups)	50% of population in 28 pilot villages and 100% of all extension personnel reach knowledge and awareness target (set after baseline survey)	▪ Knowledge and Awareness baseline survey to be undertaken at onset of project ▪ Periodic M&E; e.g. in line with mid-term and end-of project evaluations	▪ Baseline study to be undertaken at onset of project
	8. Coordinated SLM KM "platform" operational and self sustaining	No formal SLM-KM "platform" exists to date	A minimum of 7 SLM-KM "platforms" established (1 national, 3 regional and 3 sub-regional)	▪ Component reports (on KM; potentially outsourced and governed through contract) ▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	
	9. Evidence of successful mainstreaming of SLM principles in key policies	The existing draft land use policy does not integrate SLM principles and standards	SLM fully integrated (mainstreamed) into the new, approved land use policy	▪ Discussion paper on land use policy ▪ Final reviewed policy document	▪ Land Use policy process follows relevant timeline
	10. Zoba and sub-zoba annual budgets (in target area) include allocations for replication/adoption of SLM models to new villages and for the extension and implementation of SLM activities	Baseline information on Zobas and sub zobas budget allocated to SLM practices will be determined during the inception phase	40 % increment on their budget for SLM practices	▪ Annual budgets of zoba and sub-zoba	▪ Government/ zoba administration are transparent (e.g. allowing a review of their budget)

Outcome 3 Capacity building programs and adaptive management systems are developed at all levels for improved governance of SLM, particularly enabling grass root community to implement improved SLM	11. % of annual increase in budget available for implementation of Capacity Support Strategy and Action plan (CSSAP) (in pilot area)	Baseline value for CSSAP implementation to be determined during CSSAP	Annual increase of at least 15% (target value to be verified during baseline assessment) including from co-financing sources	▪ CSSAP baseline survey ▪ Project progress reports (PIR/APR) ▪ Co-financing figures (to be tracked as part of ongoing project management) ▪ Mid-term and end-of project evaluations	▪ (Increasing) Budget availability in Eritrea
	12. No. of individuals that apply the through the project developed extension packages	No extension package available; baseline of people who apply packages is 0%	80% of all land managers in the 28 pilot villages use the packages; additionally more than 150 land managers in "replicate" areas do so; 100% of extension officers in Maekel zoba are knowledgeable about the extension packages and use them in their extension work	▪ KCAS baseline survey; survey to be conducted as part of extension package dissemination strategy ▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	
	13. Ratio of U$ leveraged through SLM relevant carbon finance project (s) and reinvestment into CCA activities in pilot area	Currently no SLM relevant carbon finance project identified	At least one project identified, prepared and under implementation	▪ CC reports (UNFCCC focal point) ▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	▪ CDM successfully established in Eritrea
Outcome 4 Learning, evaluation, and adaptive management increased	14. Level of performance score achieved in scheduled evaluations	Project design: to establish performance score (use GEF BD score as guidance)	A minimum of satisfactory performance (approx. 50% of all scheduled activities implemented to plan) at mid-term of project ; at least 90% at end of project	▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	▪ Relevant performance score developed (e.g. based on BD SPs)

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)

No	QUERY FROM GEFSEC	RESPONSE FROM UNDP IA
1	It is unclear what mechanism will be put into place to ensure that the hoped-for upscaling will occur. This has been a problem in projects generally in NE Africa that pilot attempts that concentrate resources into a small number of demonstration areas have failed to show replication. How is this project to be different? In the context of GEF funding and the requirements to achieve global benefits,	A| specific upscaling element has been integrated into the project design. An initial number of pilot villages in the sub-zoba are targeted (30) and a greater number through upscaling thought the zoba Maekel. Specific outputs and activities are included in t eh project design that will ensure such "rolling out" of project activities. Further, through the Steering Committee and Technical Task Force as well as the well developed Knowledge Management component, "sharing" mechanism are created that will promote replication, and, as appropriate integration of relevant lessons learnt into national and zoba-level policy processes and instruments. It is further asserted that, should the implementation of the 1994 Land Proclamation be successful, there are strong incentives for GoE to upscale the experience nation-wide.
2	The outputs need to be detailed further in the project framework. Presently, some of the outputs are not sufficiently detailed. For example, approximately how many training programs will be developed for land managers, and technical officers?	Done – See Section I, Part II and Section II (SRF)
3	The global environment benefits are not defined explicitly in Section II. Furthermore, the proposal could provide details on how progress towards achieving the global environment benefits will be measured and monitored.	Done – See Section I, Part II and Section II (SRF)
4	The proposal could provide further details on the different activities for capacity building - for example, how does the project propose to strengthen market links, and what are the likely challenges the project may face in doing so? What will the training programs consist of, and how will the programs account for indigenous management systems? How will the alternative livelihood options be identified? Will this include on-farm, and off-farm options? And based on what measures will the pilot land management models be tested, and concluded to be sustainable?	Done – See Section I, Part II and Section II (SRF)

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT

Position Titles	*$/ person week*	*Estimated person weeks*	*Tasks to be performed*
For Project Management			
Local			
1) Project Manager 2) Accountant/Administrator 3) Driver/Admin support	250 125 60	280 p.p. (56 weeks 5 years)	This item constitutes the cost of a Project Management Unit (PMU) for 5 years at USD 1,740 per month. Three full time staff will be employed for the implementation of this FSP; a project manager, an accountant/administrator and a driver/admin support. The Project Manager will be responsible for overall co-ordination, implementation, administration and reporting of the project in consultation with the Steering Committee, UNDP-GEF and the implementing agency. The Accountant/Administrator and the Driver/Admin support will provide the required support services in the project office. Detailed TORs are included in the Annex of the FSP.
For Technical Assistance			
Local			
Consultant – Land use planning and land redistribution	1000	120	Technical background support on the implementation of the 1994 Land Proclamation, incl. LUP elements; preparation of relevant materials for community outreach
Consultant – Resource economics	1000	24	Various support studies on environmental and resource economics; Market study; including opportunities for alternative incomes
Consultant – Knowledge, Communication & Awareness	1000	36	Assist with establishing awareness baseline; assess SLM knowledge and awareness needs and develop KCA Strategy; assist with implementation of key components of KCAS
Consultant – M&E baseline and monitoring (biophysical)	1000	36	M&E expert on biophysical aspects of M&E plan; establish baseline, confirm targets and develop and carry out M&E plan throughout project phase
Consultant – M&E baseline and monitoring (socio-economic)	1000	36	M&E expert on socio-economic aspects of M&E plan; establish baseline, confirm targets and develop and carry out M&E plan throughout project phase
Consultant – Information Management System	1000	16	Establish IMS for Zoba Maekel ; support KCAS through technical expertise (e.g. setting up of relevant networking elements)
Consultant – Capacity Building	1000	36	SLM Capacity Building expert; tasked with the facilitation of the development of SLM Capacity Support Strategy and Action Plan (CSSAP); incl. needs assessment and baseline
Consultant – Improvement of Services	1000	12	Expert study on how existing services (governmental/ non-governmental, private sector) can be improved to ensure better service delivery at local level, promoting SLM
Consultant – Climate	1000	6	Expert study to identify key adaptation needs relating

Change Adaptation			to SLM in the study area, identification of current coping strategies and proposals for CCA mainstreaming throughout project intervention
Total	**9,000**	**322**	
International			
Consultant – SLM Models & Farmers Action Research Specialist	2500	12	Specialist inputs into the development of SLM Models especially based on participatory and FAR principles, incl. a review of international best practices and lesson learnt
Consultant – Environmental / Natural Resource Economics Specialist	2500	6	Specialist support to local consultant on resource economics; specifically address environmental economic dimension of the SLM models; integration of SLM related environmental economics in capacity building component
Consultant – Land tenure and NRM governance Specialist	2500	6	Specialist support to local consultant on land use planning and land redistribution; focus is on effective implementation of the 1994 Land Proclamation and application to the local level
Consultant – SLM M&E Specialist	2500	6	Specialist support to local consultants on M&E; primarily peer review and advisory function; quality control of M&E plan implementation
Consultant – SLM Capacity Building Specialist	2500	4	Specialist support to local consultant on capacity building; review and synthesize international best practices; provide detailed into development of relevant elements of the CCSAP, e.g. the development of curricular for tertiary education institutions
Consultants – Project M&E	2500	4	In line with presented project M&E process as required, e.g. at mid-term and final evaluations; overall M&E budget US$ 107,000
Total	**15,000**	**38**	

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 project had a PDF from GEF 3; all objectives were met.

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

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

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

D. DESCRIBE IF ANY FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION. N/A

E. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMTATION STATUS IN THE TABLE BELOW:

Project Preparation Activities Approved	*Implementation Status*	*GEF Amount ($)*				*Co-financing ($)*
		Amount Approved	*Amount Spent To-date*	*Amount Committed*	*Uncommitted Amount**	
Output 1: Assessment on threats, root causes, barriers, solutions, lessons learned and best practices, stakeholder participation matrix, SLM opportunities, draft log frame	Completed	20,000	20,000			1,000
Output 2: Pilot catchment Stakeholder workshop	Completed	2,000	2,000			4,112
Output 3: Capacity needs assessment, detailed baseline, draft implementation modalities, draft Brief	Completed	16,000	16,000			4,200
Output 4: National stakeholder validation workshop	Completed	0	0			3,000
Output 5: Incremental cost analysis	Completed	12,000	12,000			2,000
Output 6: LPAC Meeting Minutes						3,000
Totals		***50,000***	**50,000**			**17,312**

F: Comments from GEFSEWC and Council

GEF 3364/ PIMS 2979 - Sustainable land management systems that alleviate environmental degradation while improving livelihoods of the farming communities of the Central Highland Zones are adopted

UNDP Responses to GEFSEC Review

8	Coordination with other SLM activities incl PIMS # 3362 (IFAD SIP project) should be reflected in the results framework.	Done. An output for coordinating with 3362 (IFAD's project) and other development partners investing in SLM added to outcome 3;
10	Partly. Coordination with PIMS #3362 is addressed in the PIF, whereas coordination with other donor supported activities is not.	The government, with support of IFAD, the GM and UNDP will establish a National SLM Platform which will coordinate all partners investing in SLM to systematize approaches in order to help the government adopt a programmatic approach to SLM. This project will be linked (and coordinated) with other SLM initiatives through the platform. Text added in para 15 to reflect this situation
11	Possibly, but more information is required to assess cost effectiveness. Text and table are inconsistent on number of villages covered by the project, 10 or 15? PIF states that the project will put "x ha of land under SLM". Value of 'x' will determine cost effectiveness.	The project will initially pilot SLM in 15 villages covering 140,000 ha; it will replicate the SLM model in another 10 villages and the extension package and other outputs from the project will be available for nationwide application, potentially covering up to 2 million ha. It is noted here that the government intends to replicate the model that enables it to implement the 1994 land declaration which has been pending implementation due to lack of a model for implementation (and related capacities). The government is therefore eagerly waiting for the model to replicate it. The numbers of villages and hectares covered have been clarified throughout the document.
15	Partly. The description of the baseline scenario does not take into account SLM activities supported by other donors.	Text added to para 19
17	Overall mgt budget is appropriate, but GEF contribution to mgt costs should be proportional to overall GEF contribution.	GEF contribution to management brought in line with overall GEF contribution and is now 40% - in yellow in the results framework.
19	Yes, but there is a discrepancy between budget figures in tables B and C.	Figures harmonized
22	Text refers to the project as an MSP; number of villages and hectares covered inconsistent/unspecified;	All reference to MSP removed and replaced with FSP; numbers of villages and hectares clarified as explained in point 11 above.

UNDP RESPONSES TO STAP REVIEW

GEFSEC PROJECT ID: GEF AGENCY PROJECT ID: PIMS.2979

COUNTRY: Eritrea: **GEF AGENCY:** UNDP: **TITLE:** SIP SLM Pilot Project
OTHER EXECUTING PARTNERS: GoE; Norad
GEF FOCAL AREA: LD
GEF-4 STRATEGIC PROGRAM(S): SP 2
UMBRELLA PROJECT: SIP

STAPs Comment	*UNDP's Response*
Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency is "**Consent:**	Consent with minor technical modifications as stated in the columns below.
The project [headed as an FSP, but stated several times in the PIF to be an MSP] aims to tackle land degradation through piloting SLM approaches in 15 villages and a relatively modest area of 140,000 hectares It is unclear what mechanism will be put into place to ensure that the hoped-for upscaling will occur. This has been a problem in projects generally in NE Africa that pilot attempts that concentrate resources into a small number of demonstration areas have failed to show replication. How is this project to be different? In the context of GEF funding and the requirements to achieve global benefits,	1) All reference to MSPs removed 2) The project will be implemented in 28 pilot villages covering about 30,000 ha of land, and will be up-scaled through the TerrAfrica supported Country SLM Investment Framework; overall more than 30,000 villagers will benefit directly from the intervention 3) Mechanism for up-scaling - The proposed project will provide an enabling environment for sustainable land management through four outcomes that overcome the barriers, and are in line with the objectives of the GEF Strategic Investment Program for SLM in Sub-Saharan Africa (SIP) and UNDAF. The first outcome focuses on the development and testing of SLM models in a pilot areas; the Serejeka sub-zoba of the Maekel Zoba, one of Eritrea's major regions. A significant part of the model will be the testing of application of the 1994 Land Proclamation provisions, as an incentive to SLM. Outcome two will support the establishment of sustainable knowledge management systems to provide quality and timely information for decision making, as well as help disseminate lessons, thus directly contributing to the upscaling of the pilot investments. The third outcome is on capacity building, based on a long-term strategy, to establish a critical mass of skilled and empowered SLM actors in Eritrea. The fourth outcome will establish a natural resource management monitoring systems to add an additional layer to upscaling through the systematic documentation of the pilot intervention, lessons learnt and the sharing throughout Eritrea and worldwide. In addition, the project will together with other TerrAfrica partners support the development of the Eritrea SLM Programme with a Country SLM Investment Framework (CSIF). The CSIF will be the key vehicle of investing in SLM, thereby providing a mechanism for replication of SLM good practices.
The outputs need to be detailed further in the project framework. Presently, some of the outputs are not sufficiently detailed. For example, approximately how many training programs will be developed for land managers, and technical officers	Detailed outputs and activities are provided in the CEO endorsement (para 21-39). Further details are provided in Section II of the Prodoc (Strategy) paras 82-110. Targets are also provided in the Results and Resources Framework (Part IV section II).
The global environment benefits are not defined explicitly in Section II. Furthermore, the proposal could provide details on how progress towards achieving the global environment benefits will be measured and monitored	55. Sustainable management of large land areas will improve the maintenance and rehabilitation of structure and functions of ecosystems. In addition to products and services that will be directly harvested from the farms, better managed land will provide a range of critical environmental functions that sustain human life, including carbon sequestration, erosion control, habitat for species breeding and nursery – a function closely linked to biodiversity maintenance. Other global benefits include better ground water storage (drought control), soil fertility regeneration, and pollination services to crops and other plants: This function is closely linked to maintenance of pollinator populations.

	56. The project has an M&E system that will be linked to the TerrAfrica/SIP M&E; several indicators of impacts, including those of global benefits are provided in the CEO endorsement para 1-5 and further details are provided in the Prodoc M&E section and the Results and Resources Framework (Part IV section II).
The proposal could provide further details on the different activities for capacity building - for example, how does the project propose to strengthen market links, and what are the likely challenges the project may face in doing so?	1) Details on Capacity building and other activities are described in the CEO endorsement (para 21-39). Further details are provided in Section II of the Prodoc (Strategy) paras 82-110. Targets are also provided in the Results and Resources Framework (Part IV section II). 2) In order to strengthen market links, the project will link communities to marketing partners who deal with SLM/Biodiversity friendly products (and therefore can get premium prices) such as Phyto Trade and t he GET Foundation. Both organisations specialize in assisting small agricultural producers in developing countries to access markets for their Biodiversity friendly goods and services. GET Foundation also provides grants for producers to realize effective market access. They work closely with local NGOs and Coops who can provide capacity building to farmers so they can access local, national and global markets. 3) The Risk Matrix in section F of the CEO endorsement request identifies unsustainable markets (of agricultural and alternative income generating activities/ products) as a moderate risk (plus many other non-market risks). The creation of alternative income opportunities as well as the establishment of sustainable pricing/ marketing mechanism for agricultural products are critical to the long-term success of SLM strategies in Eritrea. It is important that relevant enabling economic, trade and other related policies and strategies are put into place to create the necessary enabling environment for SLM
What will the training programs consist of, and how will the programs account for indigenous management systems?	The training programmes will constitute of best practices in the country and in the region and will be based on two reviews: a training needs assessment and a review of best practices (national and regional). Traditional knowledge from both the country and the region will be part of the best practices review and will therefore be incorporated into the training programmes. See activity description in the prodoc.
How will the alternative livelihood options be identified? Will this include on-farm, and off-farm options? And based on what measures will the pilot land management models be tested, and concluded to be sustainable?	1) The alternative livelihoods will be based on an assessment of the potential business opportunities available in the pilot villages, coupled with an assessment of the markets and capacity to support viable businesses in the central highlands and the country. These assessments will determine whether the alternative livelihoods include on-farm and off-farm options. See activity description in the prodoc. 2) The greatest barrier to SLM in the Central Highland Zone is the failure to implement the land proclamation that would improve security of land tenure. Applying it successfully will therefore go a long way to ensuring sustainability of the project initiatives. The project indicators outlined in the Results Framework will be used to monitor the project. In addition, the TerrAfrica M&E initiative is developing sustainability indices (and enabling environment index) which will be incorporated into the project M&E. This will be complemented by a participatory M&E process through which local people will contribute to the determination of sustainability criteria.

ANNEX E – M&E SUPPLEMENT EXPLAINING INDICATORS, MEASUREMENTS, MEANS OF VERIFICATION AND COSTS OF MEASURING GLOBAL ENVIRONMENT BENEFITS

.Description of GEB	Indicators	Baseline situation	Expected situation (end of project)	Means/sources of verification	Budget in US$
Carbon sequestration	Change in soil carbon in the long run and change in soil organic matter in the shorter term10.	To be established during project inception period	Real changes expected long after the project duration, but perhaps 2-5% increase in soil organic matter	Measured annually using the ICRAF's soil spectrometer, reported in the project periodic and technical reports	500 – the ICRAF spectrometer is very cheap, costing cents per measurement
Reduction in soil erosion	• Amount of soil in flowing water (water runoff); • Rate of recovery for erosion rills and gulleys • Amount of soil contained in the streams (extent of brownness on rivers)	In general, the Central highlands are losing about 15 tons of soil per ha annually	50% reduction in soil erosion	Sample plots will be established during project inception, including control plots in non project area. More accurate soil erosion measurements will be taken and subsequently measured annually. This will be reported in the project M&E system and periodic reports	1000
Improvement in ground water storage	Reduction in water runoff after the rains as a measure of improved infiltration (proxy indicator)	Very little infiltration due to the fact that most land is bear, especially at the beginning of the rains when crops are not yet established. However more accurate runoff figures will be established during project inception period when sample and control plots will be established	At least 50% reduction in water runoff	Measurements taken bi-weekly during the rainy season only and reported in the M&E and annual/ periodic reports	1000
Increase in fertility	Rate of adoption of techniques (proxy indicator)	Soils are very poor currently as indicated by the very low yields. However, accurate measurements	At least 50% increase in soil fertility	Measurements taken per cropping season and reported in the in the M&E	1000

[10] It is noted that it possible that none of these indicators will show significant changes during the life of the project, but the government and TerrAfrica are interested in monitoring this indicator in the long run. The project will therefore establish the baseline and take annual measurements for the duration of the project but hand those over to both the government and TerrAfrica through the National SLM and CSIF processes.

	Change in yields (proxy indicator) Change in soil chemistry	will be taken during the project inception when sample and control plots have been identified		and annual/ periodic reports	
Pollination services	Change in the population of pollinators such as bees	Farmers currently report drastic decline in bee populations due to change in vegetation[11]	At least 25% recovery of the bee population	Measurements taken per cropping season and reported in the in the M&E and annual/ periodic reports	1000
Total					**4,500**[12]

[11] It should be noted that there is global trend in declining bee populations and the reasons for this are not yet understood (or there is no agreement on the reasons for this trend). It is possible therefore that even an improvement in the ground cover provided by return of a healthy ground cover (annuals, herbs, etc.) may not automatically facilitate a recovery of the bee population. However, this still needs to be monitored as it might provide information that could contribute to the global debate and understanding of what is happening with the bee populations.

[12] It should be noted that collection of monitoring data is part of the project implementation, budgeted for under outcomes 1 (participatory ecological M&E) and outcome 3 (Knowledge management).

UNDP Project Document

Government of the State of Eritrea

United Nations Development Programme
PIMS no 2979
Project title: SIP SLM Pilot Project

Brief description

A. Natural resources are central to the livelihoods of the Eritrean population in general, with over 80% of the rural population depending on land and natural resources for their livelihoods. This dependence is particularly critical in the Central Highland Ecological Zone, where 65% of Eritrea's total population lives. The country is amongst the poorest in the world, with high levels of food insecurity caused by poverty, overall low development and acute insecurity triggered by drought and conflict. The Crop-production and livestock carrying capacity of the semi-arid to arid climate is subject to natural limitations, aggravated by severe land degradation.

B. The main direct causes of land degradation in the central highland zone (CHZ) of Eritrea are unsustainable agriculture, overgrazing, and the unsustainable use of woodlots and natural forests. The root causes of all the forms of land degradation include inappropriate agricultural practices, inherently poor, infertile and poorly developed soils, insecure land tenure systems which act as a disincentive to investing in sustainable practices, poorly coordinated land use planning, overuse of many natural resources, as manifested in overgrazed rangelands and deforested forests and woodlands, and limited application of knowledge and technologies by farmers to enhance productivity. Although land degradation is prevalent throughout the country, it is particularly manifested in the central and northern highlands, with a degraded area covering 2,4 million hectares, constituting 19% of the total area of the country. This zone loses between 2 and 25 tons of soil per ha annually. Productivity levels are declining drastically, including crop and livestock yields, and water is becoming increasingly scarce. Improving food security through improved land management is critical if Eritrea is to achieve the MDG targets, especially those of environmental sustainability, eradicating extreme poverty and reducing hunger.

C. Sustainable land management is however hindered by capacity, knowledge, policy and economic incentives barriers. The current insecure land tenure system in particular acts as a disincentive to investing in sustainable practices. Although the 1994 Land Proclamation provided an enabling policy environment for secure tenure, the Proclamation and related regulations are not readily enforced. In addition, capacities for SLM are low, land use planning is poor and uncoordinated and relevant research information and data for decision making are either lacking or not applicable or accessible at the local resource user's level.

D. The proposed project will provide an enabling environment for sustainable land management through four outcomes that overcome the barriers, and are in line with the objectives of the GEF Strategic Investment Program for SLM in Sub-Saharan Africa (SIP) and UNDAF. The first outcome focuses on the development and testing of SLM models in pilot areas; the Serejeka sub-zoba of the Maekel Zoba, one of Eritrea's major regions. A significant part of the model will be the testing of application of the 1994 Land Proclamation provisions, as an incentive to SLM. Outcome two will support the establishment of sustainable knowledge management systems to provide quality and timely information for decision making, as well as help disseminate lessons, thus directly contributing to the upscaling of the pilot investments. The third outcome is on capacity building, based on a long-term strategy, to establish a critical mass of skilled and empowered SLM actors in Eritrea. The fourth outcome will establish a natural resource management monitoring systems to add an additional layer to upscaling through the systematic documentation of the pilot intervention, lessons learnt and the sharing throughout Eritrea and worldwide.

E. The project will be implemented in 28 pilot villages covering about 240,000 ha, and will be up-scaled; overall more than 30,000 villagers will benefit directly from the intervention. The project cost is 4,070,000 million US$, with 1,820,000 million US$ from GEF, and 2,250,000 million US $ from co-finance: 1 million US$ from UNDP, 1 million US$ from Norad and 250, 000 US$ co-finance from the Government of Eritrea (in kind). GEF: Co-finance ratio of 1:1.25.

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Acronyms

ADF	African Development Fund
AEAS	Association of Eritrea in Agricultural Science
AEZ	Agro Ecological Zone
AfDB	African Development Bank
APDD	Agriculture Promotion Development Department
APR	Annual Project Report
AWP	Annual Work Plan
CA	College of Agriculture
CAADP	Comprehensive African Agriculture Development Program
CB	Capacity Building
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CDM	Clean Development Mechanism
CHZ	Central Highland Zone
COA	Country Office Administrative fee
CSSAP	Capacity Support Strategy and Action Plan
CTA	Chief Technical Assistant
DoE	Department of Environment
DoL	Department of Land
EAP	Environment Action Plan
EC	European Commission
ELIS	Eritrean Land Information System
ER-SNRMF	Eritrean Sustainable Natural Resource Management Forum
ERI – CWP	Eritrea Country Water Partnership
ERTC	Energy Research and Training Center
EU	European Union
FAO	Food and Agriculture Organization
FSP	Full-sized Project
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographical Information System
GoE	Government of Eritrea
HAC	Hamelamalo Agricultural College
IA	Implementation Agency
IFAD	International Fund for Agricultural Development
I-PRSP	Interim-Poverty Reduction Strategy Paper
PM	Project Management
PMU	Project Management Unit
PSC	Project Steering Committee
IR	Intermediate Results
IR	Inception Report
IW	Inception Workshop
IWRM	Integrated Water Resource Management
KCAS	Knowledge, Communication and Awareness Strategy
KM	Knowledge Management
LDCF	Least Developed Countries Fund
LRDP	Livestock Rehabilitation and Development Program
LSMS	National Living Standards Measurement Survey
LUP	Land Use Planning
LWF/WS – ER	Lutheran World Federation/Department for World Service Eritrea Programme
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MoA	Ministry of Agriculture
MoJ	Ministry of Justice
MoEM	Ministry of Mines and Energy
MoLG	Ministry of Local Government
MoLWE	Ministry of Land, Water and Environment
MoND	Ministry of National Development
FSP	Medium Size Project
NAP	National Action Program to Combat Desertification
NAPA	National Adaptation Programme of Action
NARI	National Agricultural Research Institute
NBSAP	National Biodiversity Strategy and Action Plan
NC	National Coordinator
NEAPG	National Environmental Assessment Procedures and Guidelines
NEMP	National Environmental Management Plan
NEMP-E	National Environment Action Plan for Eritrea
NEPAD	New Partnership for Africa's Development
NEX	National Execution
NGO	Non Governmental Organization
NPC	National Project Coordinator
NORAD	Norwegian Agency for Development Cooperation
NOVIB	Netherlands Organisation for International Development Co-operation
PCU	Project Coordination Unit
PIR	Project Implementation Reviews
PTR	Periodic Thematic Report
PTA	Project Terminal Report
RCU	Regional Coordinating Unit

RS	Remote Sensing
SIP	Strategic Investment Program
SLM	Sustainable Land Management
SLUF	Sustainable Land Management Forum
SME	Small and Medium Enterprises
SO	Strategic Objectives
SRF	Strategic Results Framework
SWC	Soil and Water Conservation
TCP	FAO Technical Cooperation Programme
TCTF	Technical Coordination Task Force
TFES	Total Energy Supply
TICD	Toker Integrated Community Development (project)
TOR	Terms of References
TPES	Total Primary Energy Supply
TPR	Tripartite Review
TTR	Terminal Tripartite Review
UA	University of Asmara
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNDP-CO	United Nations Development Program Country Office
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

SECTION I: Elaboration of the Narrative

PART I: Situation Analysis

Context and global significance

Environmental context

1. Eritrea is located in the Horn of Africa between 12^0 22′ and 18^0 02′ north and 36^0 26′ and $43^0$13′ east. The country borders on Sudan to the west, Ethiopia to the south, Djibouti to the southeast and the Red Sea to the east (Figure 1 – Eritrea map). Eritrea has a total land area of 124,300 km^2 with a coastline of 1,900 km. Its territorial waters are around 120,000 km^2, stretching out to the Red Sea Central Rift. There are around 390 islands in the Eritrean Red Sea zone, the most prominent being the Dahelak Archipelago.

Figure 1: Map of Eritrea situated in the subregion (see https://www.cia.gov/library/publications/the-world-factbook/geos/er.html, accessed 12 March 2008)

2. Due to its high topographic variations, Eritrea has diverse climatic zones. The country is roughly divided into the Highlands (from 2000 m above sea level; a.s.l.), the Midlands (1500–2000 m a.s.l.) and the coastal Lowlands (below 1500 m a.s.l.). These topographic variations have considerable effect on the rainfall pattern of the country, with annual rainfall varying from about 100 mm in the Lowlands to about 700 mm in the Southern part of the Central Highlands. Certain areas in the Central Highland Zone (CHZ) benefit from bi-modal rainfall, receiving more than 700 mm of rain annually. Rainfall in the CHZ and the Western Lowlands is caused by south-westerly monsoon winds and takes place mainly between June and September, peaking in August. The Eastern Lowland and its escarpments receive rainfall between November and March due to the northeast continental winds blowing over the Red Sea. Irregular rain patterns and the recurrent drought are intrinsic features of arid and semi-arid lands in Eritrea and the Horn of Africa. During the past decade, the frequency of droughts increased, allowing for shorter recovery periods, and increasing intensity of negative impacts on vulnerable populations. Drought has indeed

become a chronic emergency of varying intensity; shifting from a slow-onset disaster to one that is ever-present in this region of Africa.

3. When climate, soil types and other parameters are taken into account Eritrea is divided into six agro-ecological zones: (i) the Moist Highlands, (ii) Arid Highlands, (iii) Sub-Humid Highlands, (vi) Moist Lowlands, (v) Arid Lowlands and (vi) the Semi-Desert. Elevation ranges from 100m (Semi-Desert) to 3018m (Moist Highlands). Mean annual temperature ranges from 15^0C in the Moist and Arid Highlands to 32 ^{0}C in the Semi-Desert. Annual precipitation varies from less than 200 mm in the Semi-Desert to 1100 mm in the Sub-Humid Zone.

Socio-economic context

4. Eritrea is still recovering from its thirty-year war of independence from Ethiopia which has left the country one of the poorest in the world. Although the war with Ethiopia ended in 1991, ongoing disputes over border zones again led to open conflict between 1998 and 2000. The Eritrean government is now actively working on rehabilitating and reconstructing the economy however there is a long way to go. Still, the recently launched Africa Report (2007) of the World Bank indicates that Eritrea is the most food insecure country in Africa, and that malnutrition is particularly high.

5. The population of Eritrea, which is estimated at 3.5 million (certain sources use higher estimates to up to 4.2 million), is growing between 2.7% and 3 % annually. Population is unevenly distributed, with settlements highly concentrated in the cooler climates of the CHZ, where about 65% of the overall population lives on only 16% of the land area of Eritrea (approximately 2.28 million people). This high population density has been the main cause of environmental degradation and overexploitation of natural resources in the CHZ.

6. About 80% of the population resides in the rural areas; according to the National Living Standards Measurement Survey (LSMS, 2003), 66% of Eritreans live below the poverty line (below Nakfa 240 (US$16) per capita/month). About 70% of the rural dwellers depend on low output agro pastoral farming systems as a main source of their livelihoods. More than 30% of rural households are female-headed, and most of these are considered poverty stricken, due to gender-based discrimination e.g. women being engaged in low-paying manual labor, women employees earning lower incomes. There is also a higher percentage of illiteracy in women as girls may be disadvantaged and may not go to school (Food Security Strategy Document, 2004).

7. Eritrea is a food-insecure country, experiencing both chronic food insecurity as a result of high poverty levels and low development levels and bouts of acute insecurity triggered by drought and conflict. The crop-production and livestock carrying capacity of Eritrea's semi-arid to arid climate is naturally severely limited, a reality which has been aggravated by the severe land degradation of the few past decades. The human and environmental implications of land degradation affect a number of public goods, depending on provisioning, regulating and supporting ecosystem services, which are degraded through unsustainable and unproductive land management practices. Improving food security through improved land management is critical for Eritrea to be able to move towards achieving the MDG targets, especially those of eradicating extreme poverty and reducing hunger.

8. In rural areas poor households cultivate only 0.9 hectares of land; due to their limited resources they are also less able to diversify their agricultural production and are thus more susceptible to economic and environmental shocks. The poor, in particular the rural poor, have larger families (average of 6 persons) compared to only 4.2 persons for the non-poor. The average family size in Eritrea is 5.1 persons.

9. Poverty, characterized by lack of sustainable economic alternatives, rapid population growth, and lack of educational and primary health care services, has always been considered to be an underlying cause – as well as a result of - land degradation, deforestation and biodiversity loss.

10. As a result of demographic growth, spiraling poverty, and more frequent droughts, there is a growing disequilibrium between evolving rural livelihoods and sustainable land management practices. In order to accommodate larger families, fallow periods for agricultural fields have either been shortened or eliminated altogether and thus soil fertility and stability continues to decrease.

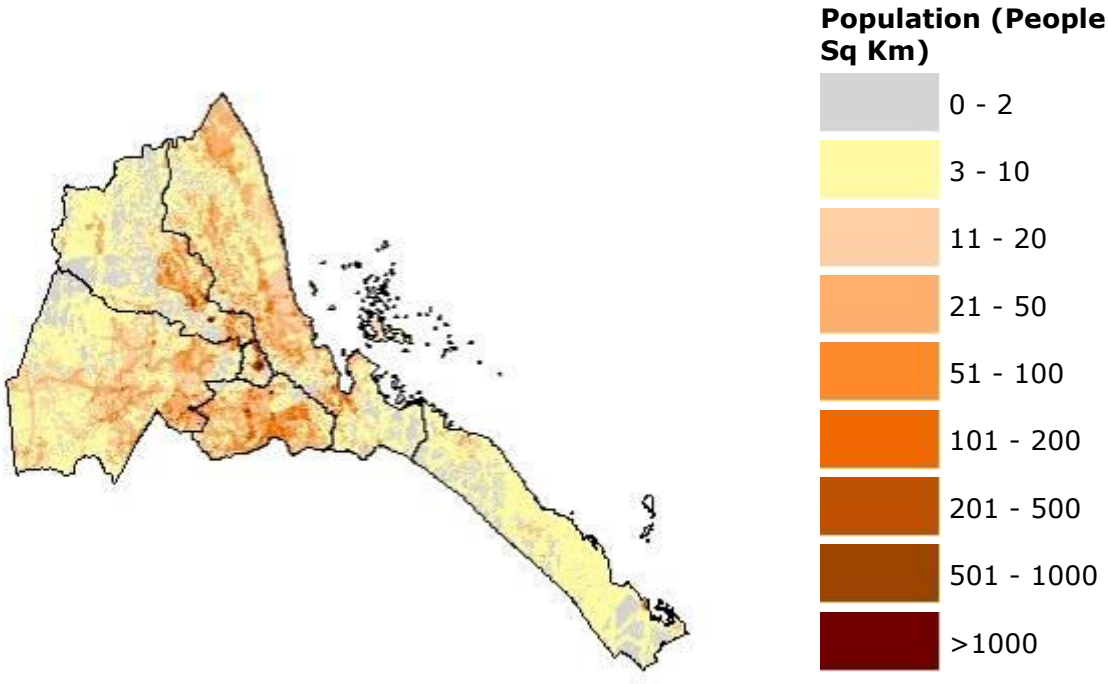


Figure 2: Population (FAO, www.fao.org , accessed 22 November 2007)

11. The Government has been actively working to rehabilitate and reconstruct the economy, which was severely damaged during the 1961-1991 war of independence. Focusing on the natural resource based sectors, according to the World Bank, the agricultural sector's contribution to Gross Domestic Product (GDP) was 17.5% in 2006; growth in the sector in the same year was 5.3%. Commercial agriculture is in its early stages and efforts are being made to develop and expand it. It is further anticipated that Eritrea has the potential to sustainably exploit its marine and coastal resources, particularly through the development of fisheries. Eritrea's current fish catch lies round 13,000 tonnes per year, but the Eritrean Red Sea zone could sustainably support a harvest of approximately 70,000 tonnes of fish. Its long and pristine coastline of 1900 km also provides a good opportunity for tourism.

12. Although Eritrea once had a good industrial base, the war has destroyed most industries. Moreover, the technologies that are still in use have become outdated and would require considerable investments to be modernized and rendered competitive. Nonetheless, within a relatively short period of time, the government has made much effort to rehabilitate the industrial sector. Gross output from the industrial base is accounted for mainly by medium-and small-scale industries, including food, beverages, textiles and leather. Industry contributed 23% to GDP in 2006, however there are no recent growth statistics for the sector.

13. Other important sectors with potential of further development are mining and energy. Mining has substantial potential to contribute to economic development, and a number of companies have been granted licenses for petroleum, gas and gold exploration. The potential of petroleum and gas is believed to be high. Developing the energy sector is critical to the expansion of the agriculture and industrial sectors. and the government has focused much attention on the issue. Energy use in Eritrea is currently dominated by biomass fuels, which accounted for more than 70 % of total energy output in 1994. The energy balance for 1996 (no similar data existed for 1994) indicated that 77.3 % of total energy supply (TFES) was covered by biomass, petroleum products covered 21.3 %, and the rest was covered by electricity. 77.8 % of the TFES was consumed by households, 14.9% by the transport sector, 4.8 % by the public and commercial sectors, and only 2.4 % was consumed by the industrial sectors. Of the total primary energy supply (TPES) biomass accounted for 75.5 %, while petroleum products accounted for 24.5 %. It should be noted that petroleum is the second major source of energy and the only fossil fuel used at present in Eritrea.

Policy and legal context

14. As discussed in previous sections, the main environmental issues that Eritrea faces are the degradation of agricultural lands, deforestation, and overgrazing, particularly in the CHZ where the majority of the population lives. Cognizant of the fact that environmental issues represent a fundamental obstacle on the road to sustainable economic development, the Eritrean government has classified environmental issues as "national critical concerns" and has committed itself to creating the conditions for sustainable economic development based sustainable use of natural resources guided by sustainable land management and careful management of the environment. In order to achieve this objective, the government has developed a number of policies and development frameworks that aim to address the country's environmental challenges. Considerable effort has gone into the formulation of these policies, demonstrating the Eritrean government's strong desire and commitment to improve the economic conditions of its people, based on sound management of its natural resources. The current Sustainable Land Management (SLM) initiative is, therefore, highly important to enhancing the country's endeavors towards reversing the negative effects of land and environmental degradation. The policies include the following:

15. Macro-Policy Paper issued in 1994. The paper clearly stipulated guidelines for assessing potential negative environmental impacts of all development projects prior to implementation. They include:

i. Introduction of proper land use practices in the implementation of agricultural projects, so as to avoid land degradation and loss of biodiversity;

ii. Regulation of water pollution from water use and water sources;

iii. Prevention of land and marine pollution as well as prevention of environmental hazards from industrial pollution; and

iv. Introduction and development of early warning systems, with the view of tackling environmental hazards (drought, earth quakes, etc.).

16. Moreover, the Macro-Policy directives promote a balanced approach between resource use and conservation for the attainment of sustainable growth and development.

17. **National Environmental Management Plan (NEMP-E) (1995):** The NEMP-E was developed in 1995 in accordance with the National Macro-economic Policy following a country-wide consultation process. This document tries to address the environmental dimension of the Macro-Policy by ensuring the protection of environmental resources and promoting sustainable development. The tenet of the NEMP-E is summarized as follows (NEMP-E, 1995: viii): "The Eritrean National Environmental Management Plan

is the blueprint for coordinating the protection and enhancement of Eritrea's natural resources, so that optimal social and economic development can be achieved in consonance with the rational and sustainable use of these resources, for current, as well as future, generations." The NEMP-E identified degradation of farmlands, deforestation, and overgrazing as the most critical environmental problems in Eritrea. Based on this finding, and recognizing the country's heavy dependency on agriculture, the NEMP-E suggests that safeguarding the productivity of land is a major concern for the country.

18. **Land Law, 1994, and 1997**: The old land tenure system was considered unfavorable in promoting proper environmental management systems and sustainable agricultural practices. The traditional tenure system is characterized by cyclical redistribution of land every five to seven years. The short-term nature of the tenure provides disincentive for investing in long-term land improvements. The lack of long-term security of land tenure was therefore recognized as the main drawback of the traditional land tenure system, and consequently a cause of soil erosion, fertility loss and environmental degradation. Moreover, the old land tenure system also led to excessive fragmentation of farming land, resulting in the proliferation of micro-holdings that do not meet subsistence requirements and force farmers to constantly migrate.

19. In order to halt further deterioration of the land and to improve land use, the government introduced a comprehensive land reform law in 1994, aimed at eliminating periodic land redistribution, increasing the duration of the land rights and enhancing exclusivity and transferability of rights, all with the aim of improving environmental management and reducing disputes over land rights. The provision of more secure land rights, should ultimately contribute to boosting long-term investment in land, improving land management and encouraging environmental conservation. The 1994 land law permits the classification and allocation of land on a more scientific basis, avoiding fragmentation, and ensuring the establishment of appropriately-sized reserves for woodlots, grazing, and communal, housing and urban facilities.

20. In order to enhance the implementation of the new land tenure law, the Eritrean Government also introduced Legal Notice No. 31/1997, which provides the legal basis for methods of land allocation and land administration. This Legal Notice mandates the Ministry of Land, Water and Environment, in collaboration with other ministries, to prepare land use and area development plans. The preparation of land use plans at national, regional and sub-regional levels is critical to the introduction of any proper land management practices. Although some progress has been made towards the implementation of the provisions of the new Land Proclamation, no usufruct rights over agricultural land have yet been allocated under it. This is largely due to lack of capacity and models to implement it. In the mean time, land tenure in Eritrea is stalled in a transition phase where, in large part, traditional systems of land tenure continue in sometimes modified form and the State has granted leasehold concessions to commercial ventures in some parts of the country. The main barriers towards implementing the new land law are inadequate institutional capacity and technical limitations. It is hoped that the current SLM initiative will contribute to removing the barriers towards implementing the new land law by enhancing the institutional and technical capacity of the various stakeholders involved in the process.

21. **National Environmental Proclamation (1995, Draft):** A draft National Environmental Proclamation has been in preparation since 1995, and aims at laying the foundations of national environmental management in Eritrea. It reflects the government's intention to address the country's environmental problems, and considers both institutional issues as well as substantive issues of environmental law. Unfortunately, due in large part to institutional instability and lack of technical capacity, this draft law has not been yet completed. A program proposal prepared by UNDP is now in place to support the review process of the draft National Environmental Proclamation and other Sectoral draft regulatory frameworks.

22. In the absence of finalized environmental law, efforts have been made by the Ministry of Land, Water and Environment to develop and introduce procedures and guidelines, known as the National

Environmental Assessment Procedures and Guidelines (NEAPG), for undertaking environmental impact assessments for all development projects. The NEAPG includes mechanisms to ensure an integrated approach to sustainable development, but its implementation process has been hampered due to many factors.

23. **Proclamation for the establishment of Local Government No.86/1996**: This Proclamation is a prime mechanism for the Government's policy of the decentralization of regional governance and development. Moreover, several provisions of this Proclamation have strong implications for the management of natural and environmental resources. Article 19 mandates the creation of an Environmental Protection office within the Economic Development section of the Regional Administrations. Article 20, 26 and 30 mandate the Regional Governors, the Sub- Regional Governors and the Village/Area Administrators, respectively, to "take the necessary measures to conserve and develop the natural environment". These provisions provide authority and responsibility for local governments and local communities to make decisions and actively participate in the proper conservation and use of their local natural resources including land.

24. **International environmental conventions:** In line with its strong commitment to environmental issues, Eritrea has ratified the United Nations Convention to Combat Desertification (UNCCD), the United Nations Convention on Biological Diversity (UNCBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

25. Following the ratification of the UNCCD in 1996, Eritrea prepared a National Action Plan (NAP) in 2000. The NAP document has identified a number of national priorities for action in combating desertification:

i. Exercising caution in expanding agriculture into woodlands and pasturelands
ii. Encouraging social forestry and fuel-wood and fodder plantations
iii. Adopting moisture retention, groundwater conservation and water recycling measures
iv. Expanding fuel substitution programs
v. Creating a national database to monitor, assess and evaluate land degradation and to use this as input to an early warning system
vi. Mobilizing civil society through participatory processes to increase awareness and shape policy.

26. Similarly, based on its ratification of the UNCBD in 1995, Eritrea has now taken all necessary measures to prepare a National Biodiversity Strategy and Action Plan (NBSAP), following its adoption in July 2000. A "Biodiversity Stocking Assessment Report" i.e. a compilation of all existing national biodiversity information as well as an economic assessment of biodiversity was completed in 1999.

27. Eritrea is very vulnerable to climate change, due to its long coastline and its dry climate. Its vulnerability is especially acute in the areas of low precipitation and agricultural/forest productivity. The country formally joined global efforts to mitigate climate change when it ratified the United Nations Framework Convention on Climate Change (UNFCCD) on 25 March 1995. The National Action Programme for Adaptation (NAPA) was prepared and submitted to the UNFCCC in April 2007. The forestry sector element of NAPA has targeted the following: conservation and management of highland ecosystems; encouraging community hillside closures for natural regeneration and promoting agroforestry/social forestry/ community and private woodlands. The agricultural section of the programme has prioritized promoting soil and water conservation, improvement of conservation tillage and strengthening farmers' traditional adaptation practices. Based on the NAPA a FSP LDCF project addressing the immediate adaptation needs of pastoral communities in the North-Western Lowlands of Eritrea is currently being prepared.

28. Although the government has formulated and proclaimed a number of important policy frameworks related to land and environmental conservation, implementation is weak. Due to lack of human resources, limited technical skills, and inadequate institutional capacities to implement the relevant policies and development initiatives, it is unlikely that environmental problems, including land degradation will be reversed and sustainable land management be adopted without additional assistance. It is hoped that the resources provided by the current SLM will be a major step towards addressing some of these barriers.

29. The proposed project intervention is directly linked to the UNDAF 2007-2011for Eritrea and ties in with the Strategic Investment Programme for Sustainable Land Management in Sub-Saharan Africa (SIP), addressing all intermediate programme results in its design. Global benefits stemming from the project intervention include: the maintenance and rehabilitation of the structure and function of ecosystems and improved land use planning and land management resulting in the improved management of soils, including soil organic matter, promoting carbon sequestration, and contributing to conservation of biodiversity.

Institutional Context

30. The main stakeholders in the area of land use and land management in Eritrea are the rural farmers and pastoralists. Rural farmers have a greater role in the cereal/pulse production system of the CHZ while pastoralists are in the lowlands. In addition, a number of national institutions have mandates directly or indirectly affecting land use and land management.

31. The **Ministry of Agriculture (MoA)** is one of the key ministries in the struggle for sustainable land management. It aims to achieve food security through the promotion of improved technology; generating employment through the establishment of labor intensive activities; improving the supply of raw materials to domestic industries by encouraging farmers to produce industrial raw materials; increasing foreign exchange earnings through direct and indirect export promotion strategies; protecting and restoring the environment; and revitalizing forestry and wildlife resources. The two highest priority areas are ensuring food security and restoring the environment. To achieve its objectives the MoA engages in a wide range of activities including planning, input supply, planting material production, soil and water conservation (small dam construction, terracing, tree planting), feeder-road construction rehabilitation, installing irrigation faculties and research. In line with the decentralization policy of the government, the ministry is mainly engaged in the promotion and regulation of tasks related to the national agriculture development plan, while on-the-ground activities are planned and implemented by MoA Zoba (regional) offices with technical support from the ministry. The MoA consists of three departments and various divisions and units. The three departments are: 1) Agriculture Promotion and Development Department; 2) Regulatory department and 3) National Agricultural Research Institute.

32. The ***MoA-National Agricultural Research Institute (NARI)*** is a department within the MoA which conducts research activities that are linked to and highly relevant for the SLM. The research department is responsible for research on issues ranging from fertilizer trials, crop-rotation and the introduction of improved crop varieties, to soil conservation, and forestry. This department's research therefore can provide a major contribution to the understanding of sustainable land management in Eritrea. The department has also collaborative links with regional research organizations such as ASARECA and ICRAF/World Forestry Centre.

33. The **Ministry of Land, Water and Environment (MoLWE)** has three main departments, namely the Department of Land, the Department of Environment and the Water Resources Department. ***Department of Land (DoL):*** As stated in policy documents the vision of the Department is to establish a modern, efficient and effective land management and information system. One of the main goals of the department is to protect land resources against misuse, destruction and degradation. The land use and

cartography division has conducted a land use study and produced maps for tiesa[1] expansion, town expansion, and agricultural, industrial and other service expansions. Responsibility for implementation of the land proclamation lies mainly with the DoL. At this time, that Department is focused mainly on building its qualitative and quantitative human and institutional capacities. The establishment of functional land-administration bodies at a lower level is another ongoing task. ***Department of Environment*** was established with a mandate to protect, regulate, and monitor the environment. In 1999, the first operational guideline on environmental impact assessments, known as the National Environmental Assessment Procedures and Guidelines (NEAPG) was prepared and made public for use. DoE is also a focal point for the UNCBD and UNFCCC. ***Water Resources Department*** was established with a mandate to identify national surface and groundwater resources; establish a resource center for water-related data, and to improve the planning, assessment and management of the country's water resources.

34. **Regional (Zoba) Administrations** (there are six zobas in Eritrea). Zoba administrations are the executive bodies and the highest echelon in the Regions, responsible for integrating the plans of the line ministries and mass organizations at the zoba level. They are also responsible for co-coordinating and implementing the planned activities after the approval by the national legislative body, the Baito. The Regional Administrations also play a vital role in: (i) Ensuring the even distribution of socio-economic developments; (ii) Ensuring the active participation of communities in local affairs; and (iii) Encouraging local initiatives that guarantee a gradual decentralization as one of the bases for sustainable development. Establishment of this relatively new and decentralized structure has primarily encouraged the participation of local communities in the identification, preparation, implementation, and management of development programs. In particular, the new organizational set-up of the Sub-regional and Village Administrations has laid a good foundation for the concerted action of local communities, not only in environmental protection, but also in other development endeavors.

35. Other institutions like the Ministry of Education, Energy and Mines and the **College of Agriculture at Halhale** are directly and indirectly involved in sustainable land management. A wider ranging overview of stakeholders is presented in a later section, and in Table 3.

Land degradation in Eritrea: Threats, root cause and barrier analysis

36. Land degradation is arguably the most critical environmental problem facing Eritrea in the immediate-term. The main direct causes of land degradation in the CHZ of Eritrea are: overpopulation, unsustainable agriculture, overgrazing, and the unsustainable use of woodlots and natural forests. A detailed matrix of land degradation threats and their root causes in Eritrea is presented in the SRF (Section II). This FSP takes a broad view of the SLM challenge, which is significant in a country like Eritrea, currently emerging from years of war and depending strongly on its land and natural resources base for sustainable development. The analysis applies to most areas in Eritrea, however, it has been focused on the CHZ and the Toker catchment area in particular.

Threats

37. Eritrea has serious water and wind erosion, manifested in the widespread degradation of the agricultural and other landscapes. Land degradation is mostly manifested in the central and northern highlands, with a degraded area covering 2.4 million hectares. This constitutes 19 percent of the total area of the country (NEMP, 1995). Research (Aydeful) indicates that the CHZ Agro Ecological Zone (AEZ) loses between 2 and 25 tonnes of soil per hectare annually. Crop yield per unit area of land has declined drastically, and the vegetation cover is decreasing at an alarming rate. Water is becoming increasingly

[1] ***Tiesa:*** Land traditionally given by a Village to its inhabitants for residential purposes

scarce. In most areas, peasants lack wood for fuel and construction purposes. Many parts of the country have lost the top soil along with grass seeds, and grass has ceased to grow even after sufficient rainfall. As a consequence, livestock and wildlife population are on the decline, and productive landscapes and natural flora and fauna are threatened. Yet natural resources are central to the livelihoods of the rural populations, which earn their living from economic activities related directly to the exploitation of land. This dependence is particularly critical in the CHZ where food security is compromised compounding vulnerability due to arid climate and recent droughts.

Unsustainable agriculture

38. Unsustainable agriculture is, by far, the principal direct cause of land degradation. Agriculture is unsustainable when it causes or exacerbates soil erosion and declining soil fertility. Low soil fertility results in poor crop growth and hence poor ground cover that exposes soils to the erosive action of wind and rain. There's very little investment in erosion control measures and productivity declines after a few cropping cycles. More land is cleared to compensate for the loss of productivity; leading to a vicious cycle of clearing and abandoning land, further exposing it to wind and water erosion. More land is also cleared due to the increasing population. The impact of soil erosion includes physical loss of the soil, a decline in soil depth, and the loss of the most fertile topsoil with the highest concentration of organic matter and nutrients. Loss of organic matter decreases the ability of soils to retain water and essential nutrients for plant growth. It entails loss of good soil structure and may cause increased soil acidity which can cause nutrients like phosphate to become bound up in a form unavailable for plant growth.

Overgrazing

39. 93% of Eritrea (69,670 km^2) is considered to be under pasture and therefore available for grazing (FAO, 2005). Livestock units have steadily grown at an average rate of 2.7 (cattle) and 3.2 (sheep and goats) since 2000 (FAO 2005a). Overgrazing in the Central Highland Zone (CHZ) is a result of competition between livestock and cultivation, particularly driven by the need to continually clear new land to compensate for the poor soils and declining productivity. Overgrazing results in reduced vegetative cover, increased soil erosion and decreased soil fertility and productivity. Declining yields on old fields force farmers to encroach onto increasingly marginal lands. Farms are already very small and fragmented, and the degradation of agricultural lands and the reduction in crop yields has increased poverty and food insecurity in the country. The loss of arable land can and has led to migration and a total breakdown of social structures. Overgrazing also leads to the replacement of high value, nutritious forage species with low value species of low nutritional value, and can impede or eliminate the natural regeneration of woody species. This results in decreased livestock productivity and increased susceptibility to diseases and parasites because of poor nutrition. According to FAO (1994) inadequate nutrition is the second biggest constraint to livestock production after endemic diseases.

Unsustainable use of forest resources

40. Unsustainable use of forest resources is a direct cause of land degradation. Given its geographic location, Eritrea has never been heavily forested. In 1997, the Food and Agriculture Organization (FAO) estimated that medium and closed woodland comprised 7.3% of the land area in Zoba Debub and open forest and woodland a further 18.6% (FAO 1997). With an annual rainfall of up to 1400 mm the vegetation of most of the central highland plateau is characterized by scrubby Acacias, Euphorbia, and Dodonea. Towards the edge of the eastern escarpment, however, groves of olive and juniper can also be found, which tend to be particularly abundant in areas with higher rainfall. Trees are often grown in household compounds, while many villages also have small plantations of eucalyptus. Planted forest consists mainly of eucalyptus on former Italian concessionaires and in the vicinity of towns.

41. While overall forestry loss in Eritrea cannot be assessed with great accuracy[2], a recent study by Africa Environments Programme[3] concluded that there has been a change in tree cover in the CHZ, albeit characterized by a kaleidoscope of different processes both in time and space, with both loss and gain in tree cover being experienced at different points in history. The study further concluded that despite a 400% increase in population growth, community systems of tree management appear to have been more effective in regulating local wood exploitation than generally acknowledged, while the effect of war on vegetation cover has been ambiguous. Despite these facts and although absolute loss in forests may not be drastic in the CHZ, the study confirmed that there has been qualitative deterioration in the type of vegetation available. In particular, economically useful trees such as olives, euphorbia, and juniper trees have been replaced in many instances by the far less versatile acacia, and by increasing numbers of small eucalyptus plantations on communal land. This has been economically costly, to farming families in particular, who rely on a variety of woods and tree products for tools, ploughs, and household uses. It is also deleterious to ecosystem health because it often leads to substitution with ecologically inappropriate exotic species such as eucalyptus, leading to change in habitats for small organisms and pollinators.

Root causes

42. The root causes of all the forms of land degradation in Eritrea include inappropriate agricultural practices, inherently poor, infertile and poorly developed soils, insecure land tenure systems which act as a disincentive to investing in sustainable practices, poorly coordinated land use planning, overuse of many natural resources, as manifested in overgrazed rangelands and deforested forests and woodlands, and limited application of knowledge and technologies by farmers to enhance productivity. The low use of technology is due to a combination of facts; poor access to extension and information, compounded by inaccessibility of input markets (high costs and poor infrastructure). The traditional land tenure system is characterized by an extreme form of insecurity of land tenure for individual farmers. Knowing that the land they cultivate will be given to someone else after 5 to 7 years gives farmers no incentive to make the types of investments needed to prevent soil erosion or to build up and maintain soil fertility. Land tenure is a major, cross-cutting issue behind land degradation in the CHZ.

43. **Root causes of unsustainable agriculture** include the expansion of agriculture onto ever more marginal lands (such as steep slopes with shallow erodible soils) in part as a result of population increases, inadequate soil and water conservation (SWC) practices or no SWC practices whatsoever, inappropriate tillage practices, removal of crop residue for fodder, insufficient use of manure and chemical fertilizer, use of dung for fuel, shortening or elimination of fallow periods within the cropping cycle and soil compaction in arable cultivated land due to long continuous tillage at the same depth and overgrazing of crop residues by livestock. Most of the soils in the CHZ currently used for crop production are severely depleted in nutrients, particularly nitrogen and phosphorous. Over concentration on cereal production (barley, teff, wheat and maize) with continual mono-cropping is a major contributing factor to decline in soil fertility of the Central Highlands. The practice of removing the crop residues as well as the grain, and returning little if anything in the form of manure or inorganic fertilizer, combined with the reduction of legumes in rotation with cereals results in ongoing declines in soil fertility.

44. The traditional land tenure system is characterized by an extreme form of insecurity of land tenure for individual farmers. Knowing that the land they cultivate will be given to someone else after 5 to 7 years gives farmers no incentive to make the types of investments needed to prevent soil erosion or to

[2] Due to the poor record keeping during the years of the war

[3] Pauline Boerma, 1991. Assessing Forest Cover Change in Eritrea—A Historical Perspective. Africa Environments Programme, Oxford University, Centre for the Environment.

build up and maintain soil fertility. Land tenure is a major, cross-cutting issue behind land degradation in the CHZ.

45. Land fragmentation is driven by population growth without corresponding growth in industry or service sector. The additional population has to be absorbed by agriculture, resulting in ever smaller farm and field sizes, contributing to poverty and land degradation. The area of arable land available to an individual rural household has decreased. Currently there is an average of about 4.4-5.5 people per hectare of arable land (or 0.2 ha per person). For some highland households, the farm size has fallen below what they need to meet their minimum food requirement within the constraints of their resources, technological knowledge and management skills. Poverty is a major underlying cause of land degradation in the CHZ. Many resource-poor households are preoccupied with satisfying their immediate needs and have little capacity to invest in soil and water conservation technologies and to adopt specific sustainable farming practices.

46. **One of the root causes of overgrazing** is that most farmers practice mixed farming, which includes the raising of goats and sheep. Every village in the highlands has its own communal land which all members of the community are free to use to graze their livestock. However, grazing lands have shrunk over time as more and more land has been converted to agricultural use and the human population and livestock numbers have increased tremendously. Traditional grazing systems have been weakened and there are no limits on livestock numbers, resulting in severely overgrazed lands. Communal grazing lands are however closed during the rainy season, so there is some level of communal management authority on which to build.

47. **The root causes of unsustainable use of forest resources** include: a) high population pressures, causing high demand for forest resources for subsistence and commercial use; b) the weakening of social capital and indigenous institutions for the management of forest resources; c) poverty, which leads to heavy reliance on natural resources (forest), and; d) low environmental awareness.

48. The natural woody vegetation on non-agricultural lands has been severely depleted through open access and an absence of management systems. Woodlots are of limited size and suffer from poor management. Techniques used for woodlot establishment have very high costs – more intensive soil and water conservation is practiced on woodlots than on fields. The lack of adequate firewood resources leads to the burning of dung for fuel, exacerbating the decline in soil organic matter and soil fertility.

Barriers

Insecure land tenure – lack of enforcement of existing legislation

49. Insecure tenure is probably the single most important obstacle to SLM is the traditional land tenure system which effectively prevents farmers from making long term investments in sustainable agricultural practices. The Diessa tenure system provides equal access rights to all village members, but has disastrous consequences, because it acts as a disincentive for the adoption of sustainable land management practices. Almost no one plants trees on agricultural land and there is very little construction or maintenance of terraces, bunds or other soil conservation structures. Cropland is open to post harvest communal grazing. While this contributes some manure, it also results in the consumption of crop residues that could reduce erosion and improve nutrient recycling. Land cannot be sold or used as collateral; limiting access to credit that is needed for farm improvements and investments in enhanced productivity and sustainability.

50. The Government recognized the need to change the old Diessa[4] land tenure system and consequently proclaimed a new land law in 1994. The long-term land redistribution to be undertaken under this new law will provide incentives for farmers to invest in sustainable agricultural practices and increased productivity. However, there have been major delays in the implementation of land redistribution under the new law, as undertaking permanent land distribution has been considered to be politically risky. To date, no one has attempted it although virtually everyone agrees it needs to be done. It was only during the preparation of this project that a consensus was developed amongst decision makers that time has come to move forward on the development of equitable, participatory methodologies for implementing permanent land distribution under the 1994 Proclamation.

51. **Insecure land tenure and breakdown of traditional authority:** The authority of local land use institutions and their ability to enforce rules on common grazing lands has declined over time. Traditional land tenure systems often allow free, open access to croplands after the harvest (grazing on post-harvest crop residues). No constraints are placed on the livestock numbers on communal grazing land. There is also no mechanism to ensure that an adequate portion of the forage production/crop residues are left on the ground as needed to minimize erosion and to maintain soil organic matter.

52. The absence of policies and legislation for the sharing of responsibilities between government and local communities in the management of local forests has led to inefficient management and governance of these resources. In the current arrangement, communities are allowed to harvest mature trees in forest plantations (eucalyptus). However, there is no formal and/or clear stipulation of respective responsibilities of local communities and government authorities over the sharing of costs and benefits from forest resources. This situation creates less incentive to fully participate in the development and protection of the forest resources.

53. **Absence of relevant policies:** Overall, the current land tenure system does not favor the planting of community woodlots. The absence of land use planning founded on well-elaborated land use policies has resulted in the unsustainable use of forest and grazing lands. There is no legal framework with an enforcement mechanism (incentive and disincentive system) that would force natural forest resources users to rehabilitate or introduce sustainable management systems. A new forest policy has been drafted, discussed and commented on, and recently has been enacted into law (2007), however experiences with implementation are yet to be forthcoming.

<u>Poor and uncoordinated land use planning</u>

54. **Poor land use planning:** Permanent land redistribution must be preceded by a community-based land use planning process that will form the basis for the redistribution. Currently local land administration bodies led by representatives from of the Department of Lands implement the allocation of usufruct rights, monitoring of land use and maintenance of land registries. However, this largely by-passes the participation of communities at the lowest level. This has deprived the system of intimate and detailed local knowledge of land use capability and social organization – and has deprived the system of the community approval that is absolutely essential if redistribution is going to succeed.

55. **Lack of land use policy:** with support from UNDP-Eritrea, land use policy is currently being formulated and is expected to be finalized in 2008. The new land use policy will mainly focus on how to sustainably use different categories of land for different purposes. The new land use policy will provide a legal basis for proper land use planning and community participation.

56. **Absence of tested methods, models and capacities for participatory land use planning for community-based land use:** One of the main reasons for the delays in implementing the 1994 land

[4] ***Diessa:*** Land in Village ownership. The Village land is periodically redistributed amongst the Village inhabitants by the Village *Baito* (*q.v.*), generally every 5-7 years.

proclamation is the lack of proven methodologies for community-based land use planning for permanent redistribution and the lack of politically accepted, equitable methodologies for its implementation. Most of the land use planning exercises that have been conducted have been concentrated on urban and semi-urban areas targeting urban infrastructure development. To date there is no operational land use planning for agricultural and rural areas of the country. Capacities of government and civil society institutions (human, financial and other resources) to assist and facilitate community-based land use planning for long-term or permanent redistribution of lands, are weak. They have weak institutional capacities to reconcile the scientifically-based, "idealized" categorization of land suitability with the realities of present-day agricultural land uses of extremely steep, marginal, easily degraded lands.

Lack of research information, know-how, knowledge management and dissemination systems and therefore proven models for sustainable agriculture:

57. Although there is a wealth of experiences, best practices and lessons learned on sustainable agricultural in the highlands of Eastern Africa, sustainable agricultural models have never been developed for the Central Highlands of Eritrea because of the land tenure constraints. Models need to be developed that fully integrate livestock and the use of animal manure, physical soil conservation structures, soil fertility enhancement, the integration of agroforesty, access to credit, improved access to inputs and to markets and increased agricultural productivity. The absence of tested/proven village and household-level models for sustainable agriculture in the CHZ forms a key barrier to the up-scaling of successful approaches. There is limited research on sustainable agriculture (e.g. best crop varieties, tillage practices, pest and weed control, soil erosion rates, soil and water conservation measures for farmlands). Farmers have limited knowledge of modern/appropriate agricultural practices including moisture conservation techniques. They have poor skills and capacity in water harvesting or moisture conservation techniques and technologies, and adaptive management for SLM is scarcely developed.

Box 1: Examples of Eritrean agriculture development – and implementation of SLM practices

For centuries Eritreans' have engaged in agricultural production, sometimes in very difficult terrain and under difficult environmental conditions. Traveling through Eritrea's landscapes e.g. in the CHZ, but also elsewhere in the country demonstrates the highly innovative and labour intensive land management practices that are being applied under most difficult conditions. Terracing is prevalent throughout the country, as are efforts to maximise soil and water conservation and irrigation options (see Section IV, Annex v).

Recent Integrated Water and Land Management practices promoted include the conservation of watershed up-stream and up-hill, whilst agro-forestry systems are supported mid-hill and agricultural practices, including under irrigation in the valley areas of the CHZ. The below picture is taken in the Serejeka sub-zoba and depicts the project pilot areas. Best practices exist and need to be communicated more widely in the project area and beyond.

58. **Limited capacity, technical knowledge and know-how in sustainable grazing practices and grazing land management:** The know-how for grazing management is inadequate at all levels. The existing knowledge level and financial capacity of Ministry of Agriculture at zoba level and research institutes like NARI to undertake targeted research primarily to support improvements in traditional grazing management systems within the mixed crop livestock farming system of the CHZ, is very low. There is limited capture of traditional knowledge, lessons learned and best practices for range/ pasture management in the CHZ. There is limited acknowledgement by researchers of the value of traditional grazing management systems as well as limited research and funding on sustainable grazing management. There has been no study on the carrying capacity of grazing lands in the CHZ. The modern concept of disequilibrium range ecology is little developed, and there are no models developed for sustainable grazing management.

59. **Limited know-how and absence of tested models for sustainable forest management**: There has been some success in regenerating woody and herbaceous vegetation of severely degraded forest and grazing lands through the use of the closure system – livestock is excluded to allow natural regeneration to take place. However, no sustainable management systems have been developed for the restored areas and the cycle of forest and range degradation begins once again when areas are re-opened for use. Know-how for sustainable management of natural forest resources is lacking. Sustainable financing systems have not been developed. There are no participatory management systems that empower local communities to integrate range and forest management systems. In addition, there is limited technical knowledge and understanding of the environmental complexity involved in addressing unsustainable forest/watershed management. These barriers are compounded by low levels of awareness of the negative impacts of forest destruction on watersheds, groundwater, livelihoods and biodiversity resources; coupled with inadequate public awareness of environmental services and economic values of forest lands. Consequently, there is limited capacity for inventory, assessment or monitoring of forest conditions. Existing techniques for reforestation are not cost effective and involve very expensive soil and water conservation structures (terraces). As a result, there have been no economic analyses of sustainable forest management options.

60. **Inadequate knowledge management systems:** Overall there is no established knowledge management system and network of field practitioners for capturing and disseminating lessons learned and best practices for sustainable agriculture, grazing management and forest management or SLM per se in Eritrea and the CHZ. There is no data base of best and proven practices and lessons learned. The extension system is especially weak. There is an inadequate research-extension-farmer linkage, a shortage of extension workers and a low level of training and experience. There are, for example, traditional woodland management practices at village level which could be shared and developed through a knowledge management network, however the absence of well organized information and knowledge management networks focusing on SLM has restricted the documentation and dissemination of best practices that could be adopted by other CHZ communities.

61. **Lack of experience in gender responsive programming:** There is inadequate gender responsive programming in extension services, which is a major capacity bottleneck towards SLM. In Eritrea, where a significant number of households are women-lead and where the cultural circumstances clearly disadvantage women, it is essential to develop gender sensitive programming to reduce poverty.

Inadequate incentive measures, including financial capacities and markets

62. **Limited incentive and market access:** Poor access to agricultural inputs and markets for agricultural and forest and non-timber forest products constrains the profitability and, therefore, the level

of investments made in sustainable resource management. Market constraints include, for example, high and variable agricultural input prices and shortages of agricultural inputs, coupled with inadequate access to credit, limiting investment and profitability from improved agriculture. These are exacerbated by poor marketing information systems, poor road networks[5] and limited transportation. The poor financial performance of smallholder agriculture does not generate enough return for adequate investment in agriculture and SLM technologies. The strategy adopted by most farmers is low input, low output agriculture. There are insufficient service providers for market information and provision of credit. Degraded grazing lands are not believed to yield a high return on investments in their management or restoration, but actual analysis is lacking. Investments in the management of communal grazing lands must be made by local institutions responsible for communal lands, but they lack the know-how and the capital to invest in these lands. There are no opportunities for individuals or households to invest in communally owned grazing lands.

Stakeholder analysis

63. During the project preparatory phase extensive stakeholder consultations took place at various levels, aiding the project preparation team in the identification of the key threats, roots causes, barriers and an effective project strategy. Consultative workshops took place, and more than 170 stakeholders contributed to the preparation of the brief. The identification of pilot villages was one of the key outcomes from the consultations and initial proposals for stakeholder involvement were made. Initially 15 and later 30 focal villages have been identified for in-depth targeting through the planned project interventions. Through a tiered project design all communities in the Toker catchment, as well up-scaling through extension services in adjourning sub-zobas are intended. Key stakeholders are identified at three levels, relating to the various intended project outcomes. A detailed stakeholder participation plan is included in Table 3.

64. Local level stakeholders include the administration of the Sub-Zoba Serejeka and especially the villages of Quandeba, Mekerba, Taereshi, Enanakay, Tsehaflam, Geshinashim, Simangus laelay, Simangus Tahitay, Afdeyu and Ande-kolon; additional villages in this and in a neighboring Sub-zoba will be confirmed during the project inception phase. Farmers in this region usually practice mixed crop-livestock production and some small-scale horticulturalists exist. It is notable that about 30 % of households are women-led and fair consideration of such households as project beneficiaries will be made.

65. At the regional/zoba level, stakeholders are mainly from the Zoba Maekel Administration and the various regionally decentralized line Ministries concerned with agriculture, food security, development planning and environmental management, such as the Ministry of Agriculture (MoA) and the Ministry of Land, Water and Environment (MoLWE) and their respectively regionally represented directorates. The Toker Integrated Community Development (TICD) project, which has been operational in the target area has been identified as a stakeholder, which might play a significant collaboration role in project implementation and service delivery. A number of social groups, and regionally operating women and youth groups (National Union or Eritrean Women, NUEW and National Union of Eritrean Youth, NUEYS) are active in the area and will be included as stakeholders to make use of established institutions and strengthen them where possible and appropriate.

66. The identified national level stakeholders cover a diverse set of line ministries, other government institutions, tertiary learning institutions and, where present, NGOs, private sector representative and donors. As this SLM intervention is amongst the first to be implemented in Eritrea, especially under the SIP portfolio and directly implementing identified NAP priorities, it is important that a wide range of relevant institutions become involved. The initial consultations identified the Ministry of Agriculture

[5] The government of Eritrea is presently making strong investments in road construction.

(MoA), the Ministry of Land, Water and Environment (MoLWE), especially the Land Administration Body, the Land Commission, and the Cadastral Office Body, all established through the 1994 Proclamation. Further the Ministry of Mines and Energy (MoEM) and the Ministry of National Development (MoND) are of relevance. The University and various agricultural colleges have been identified as key stakeholders. Given the proximity of the City of Asmara as the seat of the Zoba Maekel, the Asmara Municipality is an important player.

Baseline analysis

67. A detailed review of ongoing Government and private sector (including NGOs) activities that contribute to SLM in the CHZ has been conducted (see Section IV, Part VI, Table 1). These activities lay the foundation for the baseline scenario presented below.

68. Baseline situation: Land degradation due to unsustainable agricultural practices and deforestation threaten ecosystem integrity and function in Eritrea. These practices are largely driven by poor policies and inadequate policy implementation, poverty and population pressure. They have resulted in reduced productivity, loss of biodiversity (as well as agro biodiversity) and loss of household income. The situation in turn aggravates overall poverty and further diminishes the livelihood base of millions of people who depend on the natural resources for their survival. The risks of increased land degradation are substantial if nothing is done. 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. Farmers and land managers have insufficient incentives and technical support and have little technical knowledge in managing their land resources sustainably. While environmental considerations are included in several of the national development policies, strategies and laws, there is a low level of implementation of these policies, strategies and laws due to a shortage of financial resources, poor coordination and collaboration among implementing institutions and inadequate technical skills. The 1994 Land Proclamation, for example, a land mark policy on land tenure, which aims to create incentives to farmers to invest in land improvement owing to secured tenure rights, has not been acted on in the past 14 years, inevitably compounding poor land management practices and degradation.

69. The Government of Eritrea has developed a suite of relevant policies and programs that aim to address the above outlined threats, including under the various country requirements of major multi-lateral environmental agreements such as the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). The in 2002 completed **National Action Program (NAP) to Combat Desertification** identifies factors contributing to desertification and land degradation throughout Eritrea and practical measures to reverse and mitigate effects of land degradation. The NAP incorporates long-term strategies in different AEZs and also makes tangible recommendations for integration of relevant measures on a policy level, i.e. sustainable development policies. It identified the need to introduce community land use planning in pilot areas, to assist farmers for in situ conservation of indigenous crops and landraces, to establish gazetted protected areas, support enclosure development and conservation activities, develop agro-forestry, increase understanding and strengthening of traditional coping mechanisms, strengthening the capacity of local communities to combat desertification, establish local Land Degradation Committees; undertake community awareness raising campaigns and to disseminate improved traditional stoves to reduce the over-cutting of trees.

70. Many of these priority areas for intervention were also identified in **Eritrea's first National Biodiversity Strategy and Action Plan (NBSAP)**, which was prepared already in 2000. The overall goal of the NBSAP reflects the need for environmental recovery from the overall degradation of natural resources; the need for intervention in the form of environmental management to increase benefits flowing from biodiversity resources to the national economy; and recognition that there exists a potentially complimentary relationship between national economic development, people and biodiversity.

Strong linkages to SLM are implicit in the policy document. The **National Adaptation Program of Action (NAPA)** was prepared in Eritrea more recently, and was finalized in 2007. The NAPA has prioritized 6 major sectors as most vulnerable (agriculture, forestry, water, coastal area, livestock, and human health) and as part of the overall sectoral adaptation approaches has identified adaptation measures that correspond with SLM. The proposed coping and adaptation measures and strategies under NAPA are in line with the strategy designed under the FSP project to remove barriers of sustainable land management and to address the main root causes of land degradation.

71. Although the national frameworks under the various Conventions have been put into place, it is a reality that the overall capacities to implement the identified priority actions are extremely limited. International and national investments are sought for that would aide the Government of Eritrea to address such priorities. In addition to this SLM intervention, IFAD, the Global Mechanism and other partners are developing a strategic intervention on upland watershed management linked to key production areas. Both SLM activities would fall under the GEF Strategic Investment Program for SLM in Sub-Saharan Africa (SIP) and would form part of a National SLM Platform. A Climate Change Adaptation (CCA) FSP is currently in the preparation phase in Eritrea. Although the CCA intervention will touch on SLM aspects related to rangeland management, the interventions are focusing on an entirely different geographic area, with the CCA project targeting the arid areas of south-western Eritrea, and foreseeable the project will be very focused in its scope. Important CCA activities are mainstreamed into this SLM project.

72. There are a number of baseline activities ongoing/planned/past in Eritrea and partially implemented in the CHZ that form the baseline for this project (see Section IV, Part VI, Table 1). For example, the local NGO Vision Eritrea is implementing an SLM support project that aims to increase national GIS capacities at the University of Asmara. Other land use planning (LUP) tools and skills development haven been sponsored by the Government of Eritrea and partially UNDP over the past years, with sizable investments made into infrastructure and human capacity development of technical staff (e.g. land use mapping project, UNDP LUP support project, Eritrean Land Information System Project). However, most of these projects have remained at a higher tier capacity level and have not led to the development and application of SLM models at the farmers' level. The established technical capacities will be tapped on in this project and applied in a local level SLM context.

73. Several watershed management projects with a strong afforestation/reforestation focus are currently underway in Eritrea (e.g. NARI led project on SLM & research on integrated watershed management; various Department of Forestry related projects). Whereas the unsustainable use of forest resources has been identified as a key barrier to SLM in the preparation of this brief, it is important to note that especially the "de- and re-forestation" debate prevailing in Eritrea do need to identify the most appropriate management and rehabilitation measures applicable, which in the current interventions is not necessarily a given. The integration of appropriate practices into holistic SLM toolkits for application at the local level are urgently needed, and not currently applied in a larger and systematic manner.

74. Government and local NGOs are building capacity of local communities for better agriculture. The TICD Toker Catchment project, for example, takes a community-based approach to development and has invested since the mid-1990'ties into empowering communities in the pilot area to undertake their own planning and developing adaptive management practices, however, not currently addressing LUP and SLM as a matter of priority throughout the CHZ. The already established community structures will be incorporated into the implementation of this project as relevant.

75. A notable baseline reality is that Government of Eritrea has developed the 1994 Land Proclamation with an intension to rearrange land tenure arrangements currently in place. Various supporting mechanisms, guidelines and legislative tools were developed. However, there are no tangible pilot studies that demonstrate the successful implementation of the Proclamation. Considering that the Proclamation has been in place for more than a decade, new momentum is needed to leverage enthusiasm

and buy-in for the national level application of this important instrument. Currently no such activities are being put into practice. Without the GEF intervention it is unlikely that tenure arrangements will be clarified and investments in local capacity building for improvement of land management practices be made in the near future. Food insecurity would remain a serious threat and it would be unlikely that Eritrea would be able to meet the MDG targets set for 2015. Land degradation would continue and critical ecosystem services will be further impaired. The climate change risk will be perpetuated through loss of ecosystem resilience and remaining low adaptive capacities.

76. In summary baseline contributions to the various proposed project outcomes, Outcomes 1 to 4 (see next section) amounting to approximately US$ 24 Million over the 5 year project period. The overwhelming amounts of investments are made into activities relating to the envisaged Outcome 1. It is noted however that it has proven very difficult to solicit real figures for investments made by any partners, be it Government, NGO, bilateral or international donors; thus these figures should be used in an indicative manner only (based on Section IV, Part VI, Table 1).

PART II: Strategy

Institutional, sectoral and policy context

77. The project primarily addresses critical elements identified in Eritrea's National Action Program (NAP) to Combat Desertification for priority action and not addressed currently by baseline activities in Eritrea. It will make tangible contributions to a number of other national policies and programs focusing on poverty reduction, environmental management, and food security, and contribute to the improvement of synergies and compatibility amongst such policies and programs. Interventions for the FSP have emerged from the priorities identified within the NAP, and are linked to the goals of global environmental conventions, and their respective national policy/implementation instruments.

78. In its Interim-**Poverty Reduction Strategy Paper (I-PRSP),** the Government of Eritrea has formulated a comprehensive economic revival program aimed at reinvigorating economic growth. The I-PRSP recognizes that the achievement of rapid, broad-based and sustainable growth and poverty reduction requires enhanced investment in sectors such as agriculture, fisheries, manufacturing and tourism, where Eritrea has a comparative advantage. Focus has been given to increased farm productivity by introducing modern farming techniques and sustainable land management methods.

79. The adoption of soil conservation measures is identified as one of the priority measures necessary to improve soil fertility and productivity. The Government's **agricultural sector review** conducted in 2001/02 recognized the importance of agriculture to the reduction of poverty, to the enhancement of national food security and increased exports earnings and as a support for industrialization. The sector review identifies limited water resources availability – emanating from deficiencies in storage capacity and inefficient on-farm water use, lack of modern and appropriate farming techniques, poor marketing channels and limited access to credit as some of the critical challenges facing the sector.

80. The **National Environment Action Plan for Eritrea (NEMP-E)** adopted in 1995, provides the basic policy for action in the environment sector and lays out a strategy for action on conservation activities. Its guiding principles include the strategic importance of conserving natural resources and maintaining environmental quality as part of the national economic growth and development process. The project focuses on mitigating the causes and effects of land degradation through institutional strengthening and sustainable land management interventions while contributing to poverty alleviation and improving local livelihoods and economic well-being. The NEMP-E is furthered in the various specific national instruments developed, such as the NAP, the NBSAP and NAPA, amongst other. Notably, Eritrea is still in the process of conducting its National Capacity Self Assessment for Global Environmental Management (NCSA), and the contributions of this intervention will make significant

contributions to increasing the national capacity to deal with integrated environmental management and poverty alleviation.

81. The Full Sized project (FSP) will provide support by implementing the **1994 Land Proclamation** (on land tenure) in the pilot area. It is anticipated that secure land tenure will create incentives for farmers to invest in land improvement. Overall the Land Proclamation is considered a land mark piece of legislature in Eritrea, however due to a number of barriers it has not bee applied widely.

Project Rationale and Policy Conformity

82. The project will address the identified key barriers to SLM and alleviate the effects of land degradation on the integrity of the CHZ in Eritrea. As part of the GEF Strategic Investment Program for SLM in Sub-Saharan Africa (SIP), the project will contribute to the SIP's Goal, by contributing to reduce land degradation in Eritrea. This will support the country in improving its natural resource based livelihoods. More specifically, the project will foster system-wide change through the removal of policy, institutional, technical, capacity and financial barriers to SLM, in line with the LD Strategic Objective (SO) 1, 2 and 3. It will build capacity for achievement of SIP Intermediate Result 1 (IR 1): SLM applications *on the ground are scaled up in country-defined priority agro-ecological zones.* It will work directly towards Intermediate Result 2 (IR 2): *effective and inclusive dialogue and advocacy on SLM strategic priorities, enabling conditions, and delivery mechanisms established and ongoing.* It will contribute to Intermediate Results 3 (IR 3) and 4 (IR 4): *Commercial and advisory services for SLM are strengthened and readily available to land users*, and T*argeted knowledge generated and disseminated; monitoring and evaluation systems established and strengthened at all levels* respectively.

83. The project is designed to reverse land degradation by building on the baseline to pilot, ideally scalable activities to overcome the barriers described in Part I above, particularly by reforming land use planning and tenure systems. It will promote sustainable land management in the Central Highland pilot area by strengthening the institutional and human resource capacity to improve sustainable land management planning and implementation; demonstration of innovative and good sustainable land management practices, including indigenous management systems; and strengthening policy, regulatory and economic incentive frameworks to facilitate wider adoption of sustainable land management practices across sectors. It will introduce appropriate land management practices and promote alternative livelihoods to reduce pressure on natural resources and broaden the income base for households, thereby reducing vulnerability. The project will ensure that tested locally appropriate sustainable land management models applicable to the CHZ Zone are systematically integrated into regional and national development policies, strategies, and programs. The long-term goal is to ensure that the sustainable management of lands and resources in Eritrea provide a resilient base for ecosystem integrity, stability and functions that support the provision of services and goods to both the environment and the population in perpetuity. The FSP will contribute significantly to the development of models and activities that will orient future investments within the framework of several national action plans and programs focusing on poverty reduction, environmental management, and food security.

84. The project will therefore focus its local level interventions within the Toker catchment, which is representative of the ecological and socio-economic conditions prevalent in the CHZ, and situated in the Serejeka sub-zoba, Zoba Maekel. The project will be implemented in 30 pilot villages, of which 10 have been identified in the preparation phase. An additional number of villages will be included in an "up-scaling" approach, testing the tools and models developed at the initial sites. Over 30,000 beneficiaries in 30 villages throughout Zoba Maekel will be reached through the interventions.

Project Goal, Objective, Outcomes and Outputs/activities

85. Section II includes the Strategic Results Framework (SRF) for the proposed project interventions. A summary of project goal, objectives, outcomes and outputs is presented below. The project **Goal is:** Better managed land provides the basis for ecosystems services and for meeting national development needs. The **Project Objective is:** To create the enabling environment (policy, capacity, knowledge, alternatives) necessary for adoption of sustainable land management practices and alleviate environmental degradation while improving livelihoods of the farming communities of the CHZ.

86. Outcome 1: Replicable models of SLM are developed and representative communities use them to manage land in 15 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation: Sustainable models for improving agriculture, grazing lands and forested lands developed and piloted *in 28 villages covering 140,000 ha and a suite of technologies made available.* Under this outcome sustainable agriculture, rangeland and woodland management models will be described based on the results of landscape functionality analysis and other cutting edge concepts, and building on traditional management systems and knowledge. Local authorities will be faciliated to use the results of the assessments to undertake a participatory zoning of the common lands into appropriate forms such as sustaianble use, protection, restoration, grazing, mixed use, etc. and set management objectives and activities such as the introduction of watershed conservation measures, as well as measures to counteract siltation of dams. They will also identify key techniques required for optimum management (including utilisation and rehabilitation/restoration) for each zone. Techniques for watershed protection, reducing soil erosion, improving soil fertility and productivity of the land, improving quantity and quality of range resources and of rehabilitating/restoration of badly degraded lands and woodlands will form the core of the SLM models.

87. Actual techniques will include conservation agriculture, water harvesting, inter-cropping with right mixes such as agro-forestry trees and legumes, rotational grazing, replanting with a combination of indegenous and fast growing exotic woodland species, etc. Model description will include an ellaboration of conditions necessary for its successful implementation, in particular resource governance, technical and technological capacity as well as economic, socio-cultural and livelihood elements. A strategy for the participatory, land users/managers-centered SLM model implementation will be developed and its implementation tested in the pilot villages.

88. To enhance adoption of the selected techniques, a system of incentives and penalties will be developed and applied at multiple levels to further the adoption of SLM practice. Testing local level application of the 1994 Land Proclamation will be the key incentive measure put into place supported by a number complementing rules, regulations and by-laws. Penalties for inappropriate land use and systems of enforcement will be agreed by relevant stakeholders.

89. Regulations and standards for land redistribution of agricultural lands under the 1994 Land Proclamation are developed, approved and applied. The change of land ownership from the Diessa system is critical to promoting SLM in Eritrea. At present the 1994 Land Proclamation is not implementable due to lack of clear guidance on regulations that could support its practical application at the local level. The project will therefore work with the local communities to assess the optimal institutional arrangement, rules and regulations necessary for the practical application of the land declaration and conversion of land ownership to the more secure form provided for by the declaration. It will then facilitate the communities to establish these requirements and to test application of the land law. Lessons learned will be shared and used by the government and other stakeholders to provide guidance in the rest of the country.

90. Community-based, village-level land use planning and land redistribution methodologies are developed and piloted in 28 villages. The successful implementation of the 1994 Land Proclamation forms an important pre-requisite/incentive for SLM. In order to undertake just and sustainable land

redistribution it is essential – and required by law – to undertake systematic land use planning, the outcomes of which guide land allocation. Currently no systematic local level land use planning tools are in place and need to be developed. The project will develop land use planning tools such as landscape functionality analysis and facilitate their application to produce land use zones and plans for practical application in support of the 1994 land declaration.

91. Alternative income generating options piloted and linked to markets in 28 villages. Although the improvement of productivity is one of the main goals of the land redistribution effort and also of this SLM project, it is clear that there is a need to develop off-farm economies. Land is a limited resource, and so is its ability to support continually increasing populations purely on agricultural and/or forest land production. In addition, successful adoption of SLM techniques will require local level investment in labor and perhaps finances. It is important that the local economy provide financial incentives for the application of SLM model through returns on such investments. Sustainable income generating activities (IGAs) could re-energize local economies if the right products are identified and matched to markets and local capacity for market participation. The project will therefore identify potential IGAs and investigate the conditions necessary for effective local level adoption and sustainability. It will then facilitate the provision of the required enabling environment such as training on entrepreneurship and business management, business administration and improved harvesting and processing. In addition, selected entrepreneurs will be supported to set up or improve existing enterprises.

92. *Feedback from pilot villages used to finalize the SLM model, LUP and land redistribution methodologies and an integrated extension package to facilitate replication – potentially over 2 million ha; SLM extension package successfully replicated in adjacent sub-zobas in Zoba Maekel*. To support upscaling of the application of the 1994 land declaration and the accompanying land use planning, a local level M&E system will be set up to monitor process and impacts focusing on: (i) **Process** - optimal institutional set up, supporting rules and regulations and time required to successfully apply the declaration at the local level; (ii) **Impacts** - biophysical aspects such as changes in soil fertility and land productivity, management impacts such as erosion control and soil fertility maintenance, and livelihoods/socio-cultural components. Lessons from formulation, implementation and monitoring of the project initiatives will be synthesized and fed into the Knowledge Management system (outcome 3) to inform model replication.

93. The set of recommendations from the initial ten villages will be tested in a further 18 villages, where their application will take place with lesser inputs from the project. The testing will be documented and evaluated to ensure that the final recommendations on process and products will be applicable and produce the intended impacts, inter alia, security of tenure that provides a better incentive for investing in SLM. It is important to ensure that the models and methodologies developed become an integral part and set of tools routinely applied by the various extension services and institutions dealing with land redistribution, LUP and SLM and community outreach, and special provisions to promote such mainstreaming need to be made.

Outcome 2: *A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation.*

94. *Knowledge management (KM) network formed of institutions and projects concerned with SLM in the Central Highlands*. Access to information and knowledge has been identified as a key barrier to SLM and development in Eritrea. It is particularly the rural farmers who voiced their concern that they are not up-to-date with new management options, alternative agricultural practices, new developments in policy and other important information. But also amongst service providers and public servant staff accessibility of knowledge and

information are identified as a bottleneck. This may be for a number of reasons, including e.g. poor access to the internet and other information sources, limited quality and content of radio and other media, language barriers, etc. The project will establish a Knowledge Management network that creates a platform for accessing existing knowledge and that will facilitate a systematic analysis of knowledge gaps and the development of a strategic approach to addressing them, taking all relevant stakeholder groups into consideration. It is recognized that the TICD, a local project/NGO, has already started the establishment of a Sustainable Land Management Forum (SLUF), which should be strengthened, if appropriate, as it is not necessary to establish parallel structures. On the community level peer mechanisms such as exchange visits within Eritrea and internationally, special training programmes and target group specific media development (e.g. theater, radio, using vernacular) will be considered. Three specific outputs will be delivered, described below.

95. *Output 2.1: Capacity for research on SLM supported.* The information base for decision-making needs to be strengthened in Eritrea, as well as building skills and capacity for research. A number of research institutions exist and individuals have been trained at local and international educational institutions including the University of Asmara. It is however critical to ensure that the education and training remain attuned to modern trends in science (bio-physical and socio-economic), policy and SLM. Research needs to be further interpreted not only to focus on a tertiary and secondary level, but to be particularly relevant in a Farmers' Action Research context, including the resource managers; who need to be engaged in local level research that informs decision making and adaptive management.

96. *Output 2.2: SLM M&E established and linked to SLM country program and SIP*. It is important to assess the extent of land degradation reliably and to monitor and evaluate (M&E) the successes of the practical application of the 1994 land declaration, in particular whether it indeed provides the security of tenure expected, and whether that security of tenure in return provides an incentive for investing in improved management practices in agriculture, livestock and woodland utilization. This information is critical to inform future decision-making on all levels, including the local farmers and land managers, regional administration and national governance and policy setting. The project will support the establishment of an SLM M&E framework as a decision-support system for Eritrea, based on the experiences gained and data collected from the pilot area. The system will be linked to other higher-tier SLM interventions, such as the IFAD led SLM country programme and the SIP.

97. *Output 2.3: SLM is mainstreamed into relevant programmes, policies and legislation, and is integrated throughout development planning and budgeting processes.* To support sustainability and upscaling of SLM, it is important to mainstream SLM considerations into the policy and planning processes at all levels, and to ensure that existing and newly emerging policy instruments promote it. Local, regional and national level rules, regulations and policy for NRM governance and management will therefore be reviewed for effectiveness in supporting improved practices within an SLM context. Gaps will be identified and regional and national authorities assisted to draft new policies, strategies and legislation that support adoption of SLM techniquerecommendations while discouraging or banning unsustainable land use practices, first in the pilot area, and then widely. In addition, guidelines for integrating SLM best practices and spatial planning into the preparation of local development plans will be developed and local planners assisted to integrate SLM into their Development Plans. Finally, data, experience and lessons from the project will be fed into the Eritrea SLM Investment Framework6 through the National SLM Platform. This will be to support the country to address mainstreaming of SLM in a broader environmental context, as most key environmental concerns are related to SLM, such as climate change, water management, biodiversity e.g. in a ecosystem services and agro-biodiversity context, to name a few.

98. **Outcome 3:** *Capacity for adoption of improved land management techniques and for upscaling to non-project areas provided at all levels:* Capacity is critical to the successful implementation of the SLM model, yet capacity constraint is a key barrier to adoption of improved land management practices in Eritrea. The project

[6] Development of the Eritrea SLM Investment Framework is led by the country's government, facilitated by the IFAD via a SIP SLM project.

will therefore improve capacity for all aspects of SLM (spatial planning, modeling, implementation and governance) largely at local level but with some key aspects of regional and national level capacity7.

99. *Output 3.1: Training programmes on SLM for different groups (farmers, land managers, technical officers) available and training conducted (with a focus on pilot site).* Although already the two foregoing outcomes address SLM capacity shortcomings, this specific output highlights and supplements other activities through a specifically developed capacity support strategy and action plan (CSSAP). The CSSAP will be developed at an early stage in the project implementation horizon as it one of the 'back-bone' pieces. It is important that the CSSAP is needs based and developed in a consultative and participatory manner with all relevant stakeholders and target groups. Capacity support and training programmes may well incorporate "hard ware" components, i.e. the required implements and investments that are needed for example for afforestation activities.

100. *Output 3.2: Extension package updated with SLM best practice provided and other relevant materials developed through KCAS successfully delivered to key target groups and intended impacts on awareness and skills base achieved.* It is not only important to develop relevant training and awareness materials, but it is essential to ensure effective dissemination and application in the long-term. An awareness baseline will be developed at the onset of the project to ensure that the intervention impacts can be measured in future. It is critical to determine the impact of the investment made to ensure that the most effective measures are being replicated and up-scaled in the future. The approach will build on existing extension services and strengthen them for sustainable future service delivery, especially in the pilot area.

101. *Output 3.3: Service providers (example agricultural input suppliers, extension services, financial service providers) strengthened to provide effective and relevant SLM support to community level.* A key bottleneck to SLM is the mismatch between available support services and the service needs by communities. Usually service delivery should be demand driven. In a country such as Eritrea, this mechanism has been disrupted in various ways, including an absence of service providers and goods. To ensure that productivity in agriculture, range and forest lands can be improved a great deal of inputs are required, including fertilizers, seeding material and tools. An effective trading system needs to be promoted that allows the farmers to generate enough income to be able to reinvest into production. The implementation of the 1994 Land Proclamation is seen as a first step in this direction; however the support for development of a functional service system is critical. Actions may have to take place primarily at the national level and may then be implemented with a focus on the pilot area. Cost-effectiveness of service delivery is another important concern; extension is costly and needs to be well planned and coordinated to ensure that scare resources are not going to waste.

102. *Output 3.4: SLM actions are climate change proof, mainstreaming adaptation and mitigation.* The Eritrea NAPA predicts that water scarcity and changed weather patterns will affect all parts of the country, even though in different nuances. The productivity of the CHZ, the agriculturally most productive zone in the country, critical to food supply in Eritrea, may be severely affected if farmers do not start to increase resilience of the system now. It is important to develop a strategy of how to deal with climate change and to develop the local and national capacity to cope with it in the future. Additionally Eritrea should attempt to contribute to cc mitigation and benefit from CDM investments. This output will be coordinated with the GEF Adaptation project for Eritrea.

Outcome 4: *Learning, evaluation, and adaptive management increased: Effective project management and implementation structures are established and function.* This output will ensure that the project is effectively managed and delivers impacts.

103. *Project M&E system established, adaptive planning takes place and project performance on track*. Project management M&E is an important management tool which will be established at the inception of the project. Performance contracts will be used at various project implementation levels to ensure staff and partner delivery. There are M&E components of various kinds interspersed throughout the planned activities and these will be linked to overall project M&E.

[7] Another SIP project (through the IFAD) has a component on National level capacity building. Any national level capacity building work under this project will therefore be closely coordinated with IFAD's watershed management project, through the national SLM platform.

Project Indicators, Risks and Assumptions

104. Project indicators as formulated in the Strategic Results Framework (SRF; see Section II) directly contribute to agreed UNDAF indicators, i.e. on food security (area of land management, household level food consumption increase of food production, production level in fields/areas which have adopted new technologies, area covered under diversification, intensification, and various indicators that relate to governance i.e. the implementation of the 1994 Land Proclamation (see UNDAF document, draft January 2008)). Harmonization and integration of project with the UNDAF and national development priorities i.e. the achieving of the MDG targets reduce the overall risk of failure of the project. A supplement for monitoring Global Environmental Benefits (GEB) is also provided as Annex A. the supplement provides indicators specific to the measurement of the GEB and provides the baseline (where available), targets, means of verification and costs. It should be noted that sample and control plots to measure these indicators will be established during the project inception and more accurate data will be provided on them. The PDF A used to develop the original MSP was inadequate to establish this level of detail.

105. The new UNDAF for the 2007-2011 period is still under negotiation at time of preparation of this project brief. However, the FSP is closely linked to the country and UN support priorities as laid out in the draft UNDAF, which support five main key delivery areas, linked to the Millennium Development Goals (MDGs). The proposed project makes significant contributions to achieving specific country programme outcomes under all five UNDAF outcomes, but particularly to UNDAF Outcome 3: Food security: By providing access to adequate food at all times for 10% of the poor by 2011 (3.1. Enhance decision (policy) making on food security by 2008; 3.2 Support development and protection of the environment and national resources by 2011; 3.3. Improve access and availability of food; 3.4. Capacity support provided to enhance food production at national and household level) and UNDAF Outcome 2: Capacity development: By 2011, planning, implementation and monitoring and evaluation capacities are improved at national, regional and local levels to address shortfalls towards attainment of the MDG targets and implementation of the MD (2.1 By 2011 capacity is improved and a system established within the NSO and sectoral ministries to conduct surveys, collect and disseminate data and update the national database; and supporting all other outputs under this outcome).

106. The related indicators, as set out in the SRF (Section II), are organized as follows: three objective indicators are identified, (1) tracking the rate of degradation through the project induced reduction of land degradation (in % of land area affected), (2) the number of ha "owned" under the new land tenure arrangements (guided by the application of the 1994 Land Proclamation) in the pilot area, sub-zoba Serejeka; and (3) the reduction of prevailing poverty levels in the pilot area by over 25% during the project period. Additionally specific indicators are formulated under each project outcome, with an overall set of 14 indicators established at this stage. It is noted that certain baseline values will have to be established/ verified during the project inception phase[8]. This is particularly relevant in the context of Outcomes 2 and 3, in support of which a Knowledge and Awareness baseline amongst project stakeholders should be established prior to the implementation of major project activities, to determine a reliable reference point for the project M&E.

107. Several risks that may prevent the proposed project from achieving its objectives have been identified (some are cross-referenced in the SRF): at the national level, competing priorities that may alter the political and financial support given to SLM; potentially slow pace of achieving the conditions needed to progress with alignment and harmonization, and challenges faced in engaging in programmatic approaches: at the local level, the local economies may be slow in demonstrating economic returns on SLM investments thereby promoting short term decisions of survival over investment into good practices by both land managers and their leaders, resource users may therefore reduce their commitment to SLM and some groups and agencies may be unwilling

[8] The FSP was developed with USD 25,000 PDF A funds which were inadequate and could not finance baselines.

to participate proactively in knowledge management processes. At both scales there are risks associated to climate change, that may undermine the gains made from SLM related investments, and/or may render proposed strategies/technologies for pursuing SLM obsolete.

108. National level risks will be mitigated by continuous policy dialogue with the Government and other Development Partners. The Government has expressed commitment towards a more programmatic approach to address land degradation. GEF partners have agreed to align and support the implementation of a more programmatic approach to SLM scale-up. Risks associated to climate change will be mitigated by integrating climate change concerns and adaptation issues into the formulation and implementation of SLM strategies and activities. The proposed project will indeed provide the government with an additional tool to address the root causes of climate change (through, for instance, increased carbon sequestration) and reduce the negative effects of climate change. At local level, the project will work closely with the civil society organizations and local leaders to help build national and community support for SLM. Training programmes will aim to maximize human resources for SLM. By enhancing natural resource management, the project will enhance the economic and other benefits flowing from the natural resource base and thus stimulate a stronger commitment to SLM. This will be supported by work on sustainable economic options and linkages to markets. The project will demonstrate the benefits of participating in SLM knowledge management and will make such participation easy and attractive for all stakeholders.

109. Concerning project implementation the underlying assumption is made that the Government of Eritrea is committed to seeing the implementation through for the planned five year period. The project design and management plan foresee that it is particularly the Zoba Maekel Administration but also a number of national Ministries carry out a majority of activities and have the responsibility to achieving the set outputs and performing as to reaching the agreed to outcomes. Relevant contractual arrangements will be entered and performance management agreements will be made during the inception of the project.

Table 1: Risks and mitigation measures

	Risk description	Degree	Mitigation/ Comment
1	Competing priorities at national level lead to reduced political support to SLM	Low	Government showed highest degree of commitment during project preparation and has set into place relevant enabling policies and country strategies such as NAP
2	Potential country conflict with neighboring Ethiopia	Low	Current commitments by Government suggest that Eritrea maintains stable political relationships
3	Climate change	Moderate (in terms of project time horizon)	Mitigated through integrating CC concerns into the project design (i.e. CCA "proofing"; CDM investments) and formulation and implementation of SLM strategies and activities per se
4	Short term decisions of survival instead of longterm investment into SLM good practice at local level	Moderate	Investments into longerterm strategic development planning incl. at the local level are a priority of the Eritrean Government. This project provides tangible support to empowering local communities to start engaging in such longerterm strategic planning and the project will assist local communities in leveraging the required investments for more sustainable livelihoods.
5	Insecure land tenure	Moderate	It is one of the key strategies of this project to assist the Government of Eritrea with the demonstration of the successful implementation of the 1994 Land Proclamation that would allow for more secure tenure systems to be implemented in the project pilot area. The Government is committed to roll out the implementation of the Proclamation, based on the tools developed and tested during the project phase.
6	Low capacities for SLM	Moderate	Strong knowledge and awareness as well as capacity support strategies and targeted action plans
7	Unsustainable markets (of agricultural and alternative income generating activities/ products)	Moderate	The creation of alternative income opportunities as well as the establishment of sustainable pricing/ marketing mechanism for agricultural products are critical to the longterm success of SLM strategies in Eritrea. It is important that relevant enabling economic, trade and other related policies and strategies are put into place to create the necessary enabling environment for SLM.
8	Severe drought or other	High	Eritrea, or the Horn of Africa per se, is prone to the occurrence of frequent

	extreme (weather events)		and severed droughts. Although droughts are expected and partially foreseeable events, they can place very difficult frame conditions onto the local population and the Government, which may negate project and SLM successes at least in the early phase of SLM interventions.

Incremental reasoning and expected global, national and local benefits

110. Investing into the development of local and national SLM capacities generates global, national and local level benefits. On the global level such benefits include that large land areas will be more sustainably managed, including the maintenance and rehabilitation of structure and functions of ecosystems. Improved land use planning and land management capacities will result in the improved management of soils, including soil organic matter, promoting carbon sequestration, and contributing to conservation of biodiversity and thus supporting ecosystem services such as soil fertility and nutrient availability. Relevant to the global, national and local level are the direct positive effects on improving provisioning ecosystem services such as food production, water quality and availability and wood production, which will be enhanced through applying better practices locally but also through generating an enabling and environmentally/sustainability-informed policy environment. By conserving or improving ecosystem condition, regulating services will be better balanced and threats such as droughts, floods, diseases and pests are in check.

111. Additional national and local benefits are the enhanced capacities in planning and executing projects, undertaking M&E, and empowering communities to take charge of their own livelihoods. Benefits include: The improvement of the knowledge base on SLM models applicable to the CHZ leading to better decision making and innovation in terms of agricultural production; and increase of agricultural productivity and a significant improvement of food security; reduction of vulnerability to extreme events such as drought, floods, diseases (including pests) through more resilient ecosystems and production systems and enhanced adaptive capacities by communities; improved service delivery by government and non-government institutions through improved skills and know-how.

112. The baseline analysis identifies a number of ongoing Government and private sector (incl. NGOs) activities that contribute to SLM in the CHZ (see Section IV, Part VI, Table 1). These activities are ongoing and may to some extend contribute to the attainment of the various project outcomes, thus form the baseline for the incremental contribution by this GEF funded project.

Table 2: Global environmental benefits generated through the planned project intervention.

Benefits	Baseline	Alternative	Increment
Global Environmental Benefits	▪ Ecosystem function and integrity are strongly degraded throughout CHZ ▪ Loss of the structure of the natural forest and loss of habitat for wildlife ▪ Loss of biodiversity – including genetic erosion of potentially global significant agro biodiversity ▪ The amount of carbon sequestered is being reduced ▪ The sediment concentration of trans-boundary rivers like Gash	▪ Sustainable land management models are being developed, adopted and replicated throughout the CHZ ▪ Capacities for replicating and adapting integrated natural resources/ ecosystem management are built within a range of local, regional and national institutions incl. civil society organizations ▪ Sustainable agricultural practices and reforestation undertaken through out the CHZ, so that significant reduction in rate of soil erosion from crop lands and barren lands will be attained and carbon sequestration will be maintained/ increased	▪ Rehabilitation efforts as part of sustainability models leading to the reestablishment of ecosystem integrity and function ▪ Strengthening and empowering communities to sustainable manage local level resources, supported by the implementation of a new land tenure system ▪ Improvement of capacities in Government and beyond through improved know-how and knowledge management systems

Benefits	Baseline	Alternative	Increment
	and Setit significantly increase. Wider part of their drainage is within the central highland and soil loss in this area affect their sediment concentration	▪ Lessening of pressure on biodiversity and minimized genetic erosion of local cropland races by increasing yields through SLM	

Country Ownership : Country Eligibility and Country Drivenness

113. Eritrea signed the United Nations Convention to Combat Desertification in 1994 and ratified it in 1996. The National Action Plan to Combat Desertification (NAP) was completed in 2002. Eritrea has also signed the Convention on Biological Diversity in 1996 and ratified the Convention on Climate Change in 1995. Further Eritrea is eligible to receive funding from UNDP. Therefore, Eritrea is fully eligible for GEF financing.

114. This FSP directly addresses a number of priorities laid out in the relevant national implementation strategies and programs under the UNCCD, CBD and UNFCCC (see Section I) and is aligned with the draft UNDAF for the 2007-2011 period with project indicators making direct contributions to the overall UNDAF M&E framework (see "indicators", above).

Sustainability

115. **Social Sustainability:** Sustainability is analyzed in social, financial/ economic, ecological, and institutional terms. Eritrea's long and successful war for independence has given the country an exceptionally strong level of social cohesion and pride. This has provided the basis for what has developed as a high level of participation of the grass-roots communities and relevant stakeholders starting from project identification and planning and continuing through implementation processes. The high level of stakeholder involvement in the problem analysis and project design is detailed in Section C.9 entitled "Stakeholder Involvement". This high level of involvement will increase the probability of the sustainability of project interventions. Redistribution of agricultural lands will lead to pride of ownership as a social factor that can contribute strongly to sustainable land use. Long term tenure will allow the land owner to realize the benefits of investments he/she makes in the land. The development of community-based management systems for grazing and forest lands will reduce or eliminate uncertainty about roles, obligations, costs and benefits of the use of communal lands and will contribute strongly to better governance systems, gender equity and higher social cohesion. Incentives and disincentives that favor the adoption of SLM techniques will be developed through participatory, equitable systems and will be modified based on participatory adaptive management reviews.

116. **Economic/Financial Sustainability:** Under the current land tenure system, farmers have no incentive for any investments in the land they cultivate other than those with the most immediate, short term payback. Investments in erosion control structures, tree planting or in the long term build up of soil organic matter are financially unsound when lands are redistributed every five to seven years. Long term redistribution and secure tenure will remove this barrier and increase sustainability. The Knowledge Management component will raise farmer awareness of lessons learned and best practices from throughout the highlands of East Africa. Annual adaptive management reviews will lead to a rapid identification of those techniques that farmers themselves identify as being the most compatible with the farming systems and that have the greatest return on investment. The development of models for the management of grazing lands and of forests/plantations will place a strong emphasis on financial sustainability. Sustainable, productive management of these lands incurs costs and yields benefits. All management systems will include the creation of community-managed funds under which a portion of revenues are reinvested into the management of the lands. Revenues may be generated from the sale of wood products, non-timber forest and rangeland products, grazing fees, watering fees, fines or other user fees. The management of community lands will be developed on basic business principles. Management costs will be covered out of revenues and the use of voluntary labor will be minimized.

117. **Ecological sustainability**: Sustainable agricultural models will focus on agricultural practices and soil conservation measures that minimize erosion and that restore and maintain soil fertility at productive levels. These fundamental aspects of agricultural sustainability must be viewed as pre-requisites for other investments in agricultural intensification. Past interventions on grazing and forest lands have SLM focused on temporary permanent closures and high-cost, labor intensive, physical structures, especially terraces, without directly addressing the root causes of overgrazing or unsustainable harvest of forest resources. The models that the project will develop for the management of grazing and forest lands will focus on the use of grazing systems for the prevention of soil erosion and for ensuring the ecological conditions necessary for the natural regeneration of both preferred forage species and of natural woody vegetation. The models will also ensure that the harvest of forest products is kept within sustainable levels. To achieve this, the models will emphasize equitable systems of social organization and empowerment with the development of systems of good governance and incentives and disincentives that promote SLM. This is contrasted to past approaches that focused on expensive technological "fixes" that require high levels of inputs and maintenance.

118. **Institutional Sustainability:** Integration of the SLM practices into Zoba and national programs, strategies, plans and policies will also enhance the sustainability of project initiatives. Redistribution of lands will be undertaken voluntarily and will be the responsibility of community institutions. They will be assisted by government and non-government institutions, but redistribution will not be imposed upon the communities. Community-based management systems for grazing and forest lands will be the responsibility of empowered, community institutions. Management costs will be covered by management funds generated out of revenues and reinvested in management of the resource. The project will build institutional capacities in and out of government for providing support to community-level land managers. Considerable attention will be given to capacity building and enhanced participation of the community institutions in project identification and implementation. Members of the local communities of the pilot project area as well as local MOA/MOLG staff will receive training on different development subjects that will help them integrate their indigenous knowledge with the new one.

Replicability

119. An analysis of past and ongoing experiences and lessons learned shows clear evidence that land degradation can be reversed through sustainable land management. This FSP will focus on addressing the key barriers identified through the development of SLM models and governance systems in targeted communities. The development of knowledge management for SLM will be accomplished in an integrated and collaborative manner working with other field partners and donor programs across the Central Highland. The Project will work within Toker catchment, which is representative of ecological and socio-economic conditions of the Central Highlands Agro-ecological Zone.

120. The project will build local capacity for replicating and adapting the new participatory management models; the most cost-effective approach for ensuring the sustainability and replicability of the project. The project's direct link to the NAP and integration into SIP and UNDAF further strengthen sustainability and scope for up-scaling.

121. The design of the project has, from the onset, attempted to include replicability considerations. Tools provided at the local level (training materials, approaches) for building local capacity for replicating and adapting the new participatory management models will be made available to the extension service for nation-wide dissemination. In particular the tools and lessons learnt from applying the 1994 Land Proclamation will be adapted to any area in Eritrea, with support from the ministries involved.

122. The tiered design, implementing, developing and testing tools at the local level, but at the same time tying them to regional and national level policy processes will ensure that lessons learnt at the local level will be up-scaled and replicated elsewhere. The institutionalization of the Technical Coordination Task Force (TCTF) (Section II – Management arrangements) is a particularly important invention in this regard.

PART III: Management Arrangements

123. The project will be implemented over a five-year period, commencing in 2008. The GEF implementation agency (IA) for the project will be the UNDP Eritrea Country Office. The project will be executed under UNDP National Execution (NEX) procedures. The Maekel Zoba Administration the overall responsible Eritrean partners, with the Ministry of Agriculture providing the national framework.

124. The National Project Coordinator (NPC) will be the Head of the Ministry of Agriculture Zoba Maekel or his/her delegate. A Project Coordination Unit (PCU) will be established under his supervision, and be located in the Ministries' offices in the sub-zoba of Serejeka. The performance of the project will be guided by a Project Steering Committee (PSC) with representatives from the national, regional and sub-zoba levels. A Project Management Group, a sub-section of the PSC and composed of the NPC, the Project Manager of the PCU, a representative of the Ministry of Finance and the UNDP will be established to provide guidance in the inter-sessional periods of PSC meetings.

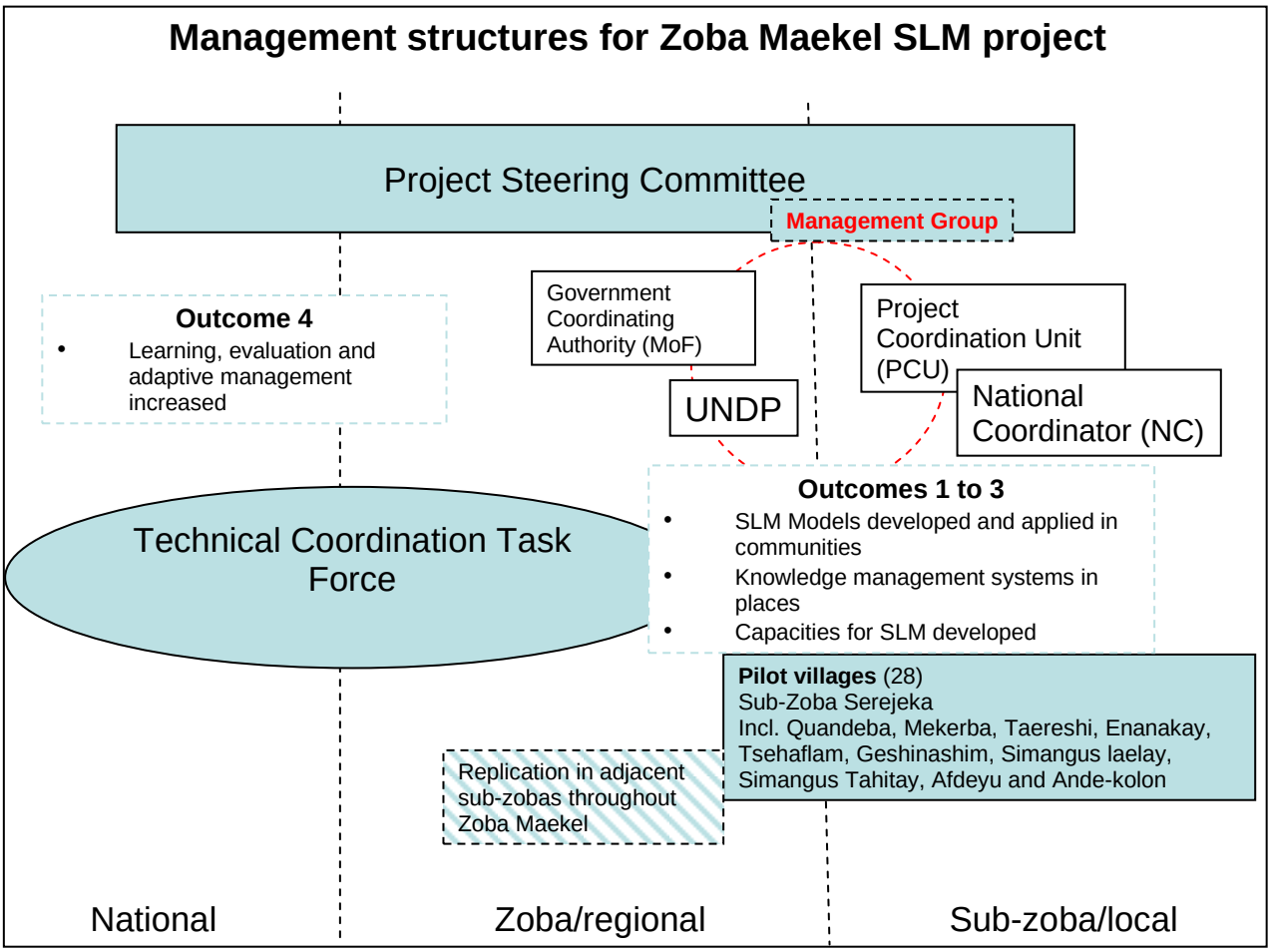


Figure 3: Overview of the proposed management structure.

125. The various project activities will be carried out by a suite of partners (Table 3), primarily in support of the pilot communities, and are constituted by government and NGO and private sector

entities, coordinated through the PCU. Performance contracts will be established with all key partners. A Technical Coordination Task Force (TCTF) composed of those institutions that are actively involved in the implementation of the project activities will be established to aide the coordination responsibility of the PCU.

126. The Project Coordination Unit (PCU): The PCU will be composed of thee staff members, the Project Manager (PM), an Accountant/Administrative Manager and a Driver/Admin Support. The PM will be directly responsible for the timely delivery of inputs and outputs and for coordination with all other executing/implementing agencies i.e. through the Technical Coordination Task Force. He/she will be a national professional recruited for the five-year duration of the project, potentially seconded by Government. He/she will be responsible for the application of UNDP administrative and financial procedures and for the use of UNDP/GEF funds. The PM in consultation with Management Group will be responsible for managing and monitoring of all administrative, technical and financial matters in the inter-sessional periods of the Project Steering Committee meetings throughout the implementation of the project. Detailed Terms of Reference for key staff of the PCU are included in Section IV, Part III.

127. **Project Steering Committee:** The Project Steering Committee oversees the execution and performance of the overall project. The PSC should meet on a quarterly basis. Key members of the steering committee will be:

Chair:
- Head of the Economic Department of Zoba Maekel Administration (Chair)

Project Management Group:
- Head of Ministry of Agriculture Zoba Maekel in his role as NPC or his delegate
- Project Manager (PM/PCU) (Secretary to PSC)
- Ministry of Finance
- UNDP representative

Local/sub-zoba stakeholders:
- Administrator of Sub Zoba Serejeka
- Representative of the pilot communities
- Head, MOA sub-zoba serejeka

National level stakeholders:
- Director General of Department of Environment (MoLWE) (GEF Focal Point)
- Director General of Department of Land (MoLWE)
- Director General of Agricultural Promotion and Development Department (MoA)
- Director General of Regulatory Department (MoA)
- Director General of National Agricultural Research Institute
- Director of Energy Research and Training Center
- Sub-zoba Representative of Toker Integrated Community Development – NGO
- Potential other NGO and private sector partners
- Executive Officer - Maekel Zoba Administration Office

128. **Technical Coordination Task Force:** A Technical Coordination Task Force (TCTF) composed of those institutions that are actively involved in the implementation of the project activities will be established to aide the coordination responsibility of the PMU. Each institution responsible for the implementation of project activities and the coordination of achieving certain outputs will enter into a performance contract with the project, and receive relevant funding support for carrying out the assigned activities. Table 3 below indicates the various institutions that have been identified as partners during the project preparatory phase. Performance

contracts will be established during the inception phase of the project. A suite of support consultancies will be outsourced to competent national and where appropriate international partners to generate a good mix of professional expertise and input. The TCTF should meet on a monthly basis.

129. Other: In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The UNDP logo should be more prominent and separated from the GEF logo if possible, as UN visibility is important for security purposes.

Table 3: Key responsible institutions and their expected inputs are specified according to planned project output. This table will from the basis for developing performance contracts for the implementation of the project during the inception phase.

Component/Outcome	Outputs	Lead / Resp. inst.	Support Institutions	Key inputs expected from lead and support institutions
Component 1 - SLM model developed and applied to reduce land degradation SIP IR 1				
Outcome 1: Replicable models of SLM are developed and representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation	**Output 1.1:** Sustainable models for agriculture, grazing lands and forested lands developed and piloted in more than 28 villages covering 140,000 ha	MOA	MoLWE, NGOs	**Lead Institution**: in Identifying capacity and training needs; SLM related training activities, the overall SLM development process, process and lesson leant documentation. **Support Institutions**: facilitating on issues on land, in providing support on documenting SlM model development process and lesson learned – particularly DoL, DoE and NGO like TICD
	Output 1.2: Systems of incentives and penalties are developed and applied at multiple levels to further the adoption of SLM practices	MOA	MoLWE; Ministry of Justice (MoJ), Ministry of Energy and Mines (MOEM)	**Lead Institution**: develop regulations or bylaws or other incentive and disincentive systems that support the adoption of SLM practices. **Support Institutions**: Provide input on technical, legal issue (MoJ), environmental (DoE), land use policy (DoL), queries (MOEM) etc
	Output 1.3: Regulations and standards for land redistribution of agricultural lands under the 1994 Land Proclamation are developed, approved and applied	MoLWE	MOA	**Lead Institution**: coordinate relevant institution and develop regulations and standard for Land redistribution; lead consultation, training, dialogue on the amendment of the land. Proclamation. **Support institution**: provide technical support related to agriculture. Department of Justice seem relavant for amending the proclamation
	Output 1.4: Community-based, village-level land use planning and land redistribution methodologies are developed and piloted in more than 28 villages	MoLWE	MOA	**Lead Institution**: Facilitate the development of CLUP by providing training, providing technical support, use CLUP for land redistribution, document lesson learned, present in KMN etc. **Support Institution**: provide technical support related to SLM visa a vise participatory land use planning
	Output 1.5: Alternative income generating options piloted and linked to markets in more than 28 villages	MOA	NGOs, NUEW	**Lead Institution**: identify possible alternative income generating activities and create linkage with SLM practices. Promote awareness, facilitate study, document lesson learned, present for KMN – use their extension system **Support Institutions**: participate in intervention design and implementation, Facilitate the involvement of women, share previous experience etc (NUEW)
	Output 1.6: Feedback from pilot villages used to finalize the SLM model, LUP and land redistribution methodologies and an integrated extension package to facilitate replication – potentially over 2 million ha; SLM extension package successfully replicated in adjacent sub-zobas in Zoba Maekel	MoA	MoLWE	**Lead Institution**: Finalize the SLM (documentation), develop extension package development strategy, and facilitate mainstreaming SLM and facilitate replication. **Support Institutions**: support finalize LUP and land redistribution as part of SLM (documentation), make sure they are part of SLM model, replication etc.
Component 2 – Knowledge management systems forms bedrock of SLM SIP IR 2, 4 and 1				
Outcome 2: A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation	**Output 2.1:** Knowledge management (KM) network formed of institutions and projects concerned with SLM in the country	MOA	MoLWE, Hamelamalo Agricultural College (HAC), Ministry of Education, NGOs, Association of Eritrea's in Agricultural Science (AEAS)	**Lead Institutions**: Identify Key institutions for KMN, devise appropriate KM conveying or delivery strategy or mechanism, support Zoba Maekel in establishing Knowledge management system, and lead the implantation of knowledge management. **Support Institutions**: actively involved in support the dissemination and mainstreaming of SLM through research, study, documentation of good practices, presenting in KMN forums, etc.

	Output 2.2: Capacity for research on SLM supported	PCU	MOA, MoLWE ,MOE, HAC	**Lead Institution**: Assign or enter in contract with institutions. Follow up and Coordinate the assignment ; organize SLM conference, **Support institutions**: MoA-NARI- Conduct assessment of capacity and training need for SLM research and propose SLM research strategy, Providing training, leading Farmers Action Research Program; support MoA/DoL and other in tracking resources ...provide training on research extension skill; HAC-develop SLM training programs/courses
	Output 2.3: SLM M&E established and linked to SLM country program and SIP	PCU	Relevant institution	**Lead Institution**: conduct M&E regularly/ Publish regular M&E report; Using the KMN /Develop guidelines to integrate SLM into the SIP **Support Institution**: Provide support in developing major bio-physical and socio economic indicators and developing performance target.
	Output 2.4: SLM is mainstreamed into relevant programs, policies and legislation, and is integrated throughout development planning and budgeting processes	PCU	MOF,MOJ,MND,MOA	**Lead Institution**: develop strategy that facilitate mainstreaming of SLM, identify relevant institutions, organize awareness workshops; develop policy ideas relevant to SLM and strategy for integration, facilitate integration of SLM into land use policy **Support Institutions**: MOF – facilitate SLM mainstreaming in the budgetary system, MoJ – SLM practices into laws and regulations; MND- SLM to be considered into all national development strategies, MoA – SLM as part of its routine work
Component 3 - Capacities for replicating and adapting SLM models developed and applied to halt land degradation SIP IR 1,3				
Outcome 3: Capacity building programs and adaptive management systems are developed at all levels for improved governance of SLM, particularly enabling grass root community to implement improved SLM	**Output 3.1:** Training programs on SLM for different groups (farmers, land managers, technical officers) available and training conducted (with a focus on pilot site)	MOA	MoLWE ,HAC	**Lead institution**: Undertake capacity assessment; develop targeted capacity support strategy and action plan (CSSAP); implement part of the action plan and develop funding strategy for the long terms actions. **Support Institution**: provide technical personnel to undertake the assessment
	Output 3.2: Extension package updated with SLM best practice provided and other relevant materials developed through KCAS successfully delivered to key target groups and intended impacts on awareness and skills base achieved	MOA	MOA, NGOs	**Lead institution:** Update extension package; lead the delivry of to target groups; establish awareness baseline **Support Institution:**
	Output 3.3: Service providers (incl. e.g. agricultural input suppliers, extension services, financial service providers) strengthened to provide effective and relevant SLM support to community level	PCU	MOA, Eritrean Investment and Development Bank (EDIB), private sector, NGOs	**Lead Institution**: Assign and coordinate 1.) the Assessment of Status of Service provision relevant to SLM/opportunity and constraint/supply and demand level/Gaps etc/ 2. Organize platform for interactive dialogue between service providers and users in one hand and between service providers on the other hand. Improve the availability of inputs and services, Identify financial service providers and provide support. **Support Institutions**: facilitate the improvement of financial services, inputs etc using their experience and by provision of support and involve in the project implementation.
	Output 3.4: SLM actions linked to adaptation and mitigation measures	MoLWE	MOA	**Lead institution**: Using the strategies and action plans developed to mitigate CC support the implementation of projects that improve the resilience of the society for climate change and impacts of CC. **Support institutions**: as per the mandates and responsibilities of institutions support the implementation of activities like soil and water conservation and similar activities.
Outcome 4: Learning, evaluation, and adaptive management increased	**Output 4.1** Effective project management and implementation structures are established and function	PSC	PCU	**Lead Institutions**: establish effective project management structure
	Output 4.2 Project M&E system established, adaptive planning takes place and project performance on track	PCU	Key stakeholders	**Lead Institution**: Establish project M&E system; regularly document lesson learned etc.

PART IV: Monitoring and Evaluation Plan and Budget

130. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix in Annex 1 provides performance and impact indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's Monitoring and Evaluation system will be built.

131. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

MONITORING AND REPORTING

Project Inception Phase

132. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, in this case NORAD, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate. A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

133. Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings.

134. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase.

Monitoring responsibilities and events

135. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

136. Day to day monitoring of implementation progress will be the responsibility of the Project Coordinator/Manager, Director or CTA (depending on the established project structure) based on the project's Annual Work Plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

137. The Project Coordinator/Manager and the Project GEF Technical Advisor will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

138. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the indicative Impact Measurement Template in this document. The measurement, of these will be undertaken through subcontracts or retainers with relevant institutions (e.g. vegetation cover via analysis of satellite imagery, or populations of key species through inventories) or through specific studies that are to form part of the projects activities (e.g. measurement carbon benefits from improved efficiency of ovens or through surveys for capacity building efforts) or periodic sampling such as with sedimentation.

139. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

140. UNDP Country Offices and UNDP-GEF RCUs as appropriate, will conduct yearly visits to projects that have field sites, or more often based on an agreed upon scheduled to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. Any other member of the Steering Committee can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

141. Annual Monitoring will occur through the Tripartite Review (TPR). This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Tripartite Review (TPR) at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP-CO and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.

142. The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

143. The terminal tripartite review is held in the last month of project operations. The project proponent is responsible for preparing the Terminal Report and submitting it to UNDP-CO and LAC-GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation of formulation.

144. The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks are indicatively provided in Section II (see SRF) and will be further developed during the Inception phase, based on delivery rates, and qualitative assessments of achievements of outputs.

Project Monitoring Reporting

145. The Project Coordinator/Manager in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) Inception Report (IR)

146. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed Firs Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

147. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

(b) **Annual Project Report (APR)**

148. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self -assessment report by project management to the CO and provides input to the country office reporting process and the ROAR, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.

149. The format of the APR is flexible but should include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- AWP, CAE and other expenditure reports (ERP generated)
- Lessons learned
- Clear recommendations for future orientation in addressing key problems in lack of progress

(c) Project Implementation Review (PIR)

150. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.

151. The individual PIRs are collected, reviewed and analysed by the RCs prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.

152. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.

(d) Quarterly Progress Reports

153. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. A format is provided for the preparation of these reports.

(e) Periodic Thematic Reports

154. As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

(f) Project Terminal Report

155. During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and Replicability of the Project's activities.

(g) ***Technical Reports*** (project specific- optional; for this project to be confirmed during Inception Workshop)

156. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, 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.

(h) ***Project Publications*** (project specific to be confirmed during Inception Workshop - optional)

157. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

2. INDEPENDENT EVALUATION

158. The project will be subjected to at least two independent external evaluations as follows:

(i) Mid-term Evaluation

159. An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

(ii) Final Evaluation

160. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation

will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

Audit Clause

161. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (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 commercial auditor engaged by the Government.

3. LEARNING AND KNOWLEDGE SHARING

162. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- The project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP/GEF shall establish a number of networks, such as Integrated Ecosystem Management, eco-tourism, co-management, etc, that will largely function on the basis of an electronic platform.
- The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned.

163. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analyzing lessons learned is an on- going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. To this end a percentage of project resources will need to be allocated for these activities.

Table 4: Indicative Monitoring and Evaluation Work Plan and Corresponding Budget

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team Staff time*	Time frame
Inception Workshop	▪ Project Coordinator ▪ NORAD ▪ UNDP CO ▪ UNDP GEF	3000	Within first two months of project start up
Inception Report	▪ Project Team ▪ UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	None; to be determined at IW	Start, mid and end of project
Measurement of Means of Verification for	▪ Oversight by Project GEF Technical Advisor and Project	None	Annually prior to APR/PIR and to the

Project Progress and Performance (measured on an annual basis)	Coordinator ▪ Measurements by regional field officers and local IAs		definition of annual work plans
APR and PIR	▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF	None	Annually
TPR and TPR report	▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit	None	Every year, upon receipt of APR
Steering Committee Meetings	▪ Project Coordinator ▪ SC members ▪ UNDP CO	None	Following Project IW and subsequently at least once a year
Periodic status reports	▪ Project team	5,000	To be determined by Project team and UNDP CO
Technical reports	▪ Project team ▪ Hired consultants as needed	15,000	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	▪ Project team ▪ NORAD ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team)	20,000	At the mid-point of project implementation.
Final External Evaluation	▪ Project team ▪ NORAD ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team)	30,000	At the end of project implementation
Terminal Report	▪ Project team ▪ UNDP-CO ▪ External Consultant	None	At least one month before the end of the project
Lessons learned	▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc)	15,000 (average 3,000 per year)	Yearly
Audit	▪ UNDP-CO ▪ Project team	4,000 (average $1000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	▪ UNDP Country Office ▪ NORAD ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives	15,000, 4 times a year 2 times a year	Quarterly Bi-annual
TOTAL INDICATIVE COST *Excluding project team staff time and UNDP staff and travel expenses*		US$107,000	

PART V: Legal Context

164. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of the State of Eritrea and the United Nations Development Programme, signed by the parties on [date]. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

165. The UNDP Resident Representative in Asmara/Eritrea is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

a) Revision of, or addition to, any of the annexes to the Project Document;

b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;

c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

d) Inclusion of additional annexes and attachments only as set out here in this Project Document

SECTION II: STRATEGIC RESULTS FRAMEWORK (SRF) AND GEF INCREMENT
Strategic Results Framework, SRF Analysis

Table 5: Logical Framework and Objectively Verifiable Impact Indicators

Project Strategy	**Objectively verifiable indicators**				
Goal	Better managed land provides the basis for ecosystems services and for meeting national development needs				
	Indicator	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
Objective – To create the enabling environment (policy, capacity, knowledge, alternatives) necessary for adoption of sustainable LM practices and alleviate environmental degradation while improving livelihoods of the farming communities of the CHZ.	1. % decrease of degraded land area in Serejeka sub-zoba	Relevant baseline values to be established during inception phase; measure of current extent of land degradation will include, but will not be limited to: - Land area (ha) of sub-zoba with signs of soil erosion - Ha of land area deforested, using long-term time series - Liters of water abstraction for agricultural use (irrigation) per ha (distribution map) - Soil fertility levels (baselines to be established at pilot village level); relevant measures to be determined - Level of NRM yields (e.g. crops)	Overall 25% decrease in degraded area; individual targets to be developed as per established measure during inception period	▪ Baseline report/ verification; of current (project start and project process) situation; GIS based and research based assessments (e.g. part of SLM models); link to Transects done by MoA/NARI a relevant ▪ Project progress reports (PIR/APR) ▪ Local level M&E and SLM resource tracking ▪ MoA annual assessment	▪ No prevalence of severe droughts
	2. Ha of land under new (private) land tenure arrangements	Currently the 1994 Land Proclamation is not applied and 0 ha of land in the Serejeka sub-zoba are under long-term private ownership/ tenure	More than 50% of land in the sub-zoba are under private title, following the provisions of the 1994 Land Proclamation	▪ Under the 1994 Land Proclamation registered Title deeds; registrar of the Land Administration ▪ Project progress reports (PIR/APR)	▪ Implementation of Land Proclamation rolls out to plan
	3. Decrease of population living below the poverty line in Serejeka sub-zoba	Currently 66% of the population in Serejeka sub-zoba live below the poverty line (according to the international definition of poverty; assessed in xxx through xxx)	The poverty rate is reduced to at least 40% in the sub-zoba	▪ Xxx (assessment report that provides baseline) ▪ Baseline report/ verification; of current (project start and project process) situation ▪ Project M&E Plan to be developed during inception phase	▪ No unforeseeable disasters occur such as extreme weather (e.g. severe drought) or war

Outcome 1 Replicable models of SLM are developed and representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for central highlands, reducing the rate of land degradation	4. % Increase in land (ha) managed through community-level SLM plans	Currently no community-level SLM plans are in place - No of villages with functional SLM plans in place - Area (ha) managed through application of SLM plans	The management of land in Serejeka sub-zoba is guided by community level SLM plans (the Serejeka sub-zoba constitutes approximately 240,000 ha and 28 villages are situated in the sub-zoba)	▪ Baseline report/ verification; precise ha and village nos through GIS assessment ▪ Community level SLM plans ▪ Project progress reports (PIR/APR) ▪ Mid-term review and end of project evaluation	▪ Communities are willing to participate
	5. Ratio of source of household incomes in the 28 pilot villages - income from agriculture versus other alternative income sources	Baseline to be established during inception phase for pilot villages (Survey)	Ratios clearly indicate income diversification (as a measure of resilience); final targets to be established during inception phase	▪ Socio-economic baseline survey to be conducted in the 28 identified pilot villages during inception phase ▪ Subsequently: Local level M&E and SLM resource tracking ▪ Project progress reports (PIR/APR)	▪ Enabling environment to allow communities to establish economically meaningful alternative incomes is given
	6. No. of households in 28 pilot villages benefiting from application of Land Proclamation	Currently the 1994 Land Proclamation is not applied and 0 households in the pilot area are currently benefiting from its application	More than 50% of rural/ land based households benefit from private tenure, following the provisions of the 1994 Land Proclamation	▪ Under the 1994 Land Proclamation registered Title deeds; registrar of the Land Administration ▪ Project progress reports (PIR/APR)	▪ Implementation of Land Proclamation rolls out to plan

Outcome 2 A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development	7. Increased knowledge about SLM practices amongst all project key stakeholders/ SLM platform members	Knowledge baseline to be established during KCAS development during inception phase (Knowledge & Awareness survey amongst representative sample of key stakeholder groups)	50% of population in 28 pilot villages and 100% of all extension personnel reach knowledge and awareness target (set after baseline survey)	▪ Knowledge and Awareness baseline survey to be undertaken at onset of project ▪ Periodic M&E; e.g. in line with mid-term and end-of project evaluations	▪ Baseline study to be undertaken at onset of project
	8. Coordinated SLM KM "platform" operational and self sustaining	No formal SLM-KM "platform" exists to date	A minimum of 7 SLM-KM "platforms" established (1 national, 3 regional and 3 sub-regional)	▪ Component reports (on KM; potentially outsourced and governed through contract) ▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	

programs, projects, strategies, policies and legislation	9. Evidence of successful mainstreaming of SLM principles in key policies	The existing draft land use policy does not integrate SLM principles and standards	SLM fully integrated (mainstreamed) into the new, approved land use policy	▪ Discussion paper on land use policy ▪ Final reviewed policy document	▪ Land Use policy process follows relevant timeline
	10. Zoba and sub-zoba annual budgets (in target area) include allocations for replication/adoption of SLM models to new villages and for the extension and implementation of SLM activities	Baseline information on Zobas and sub zobas budget allocated to SLM practices will be determined during the inception phase	40 % increment on their budget for SLM practices	▪ Annual budgets of zoba and sub-zoba	▪ Government/ zoba administration are transparent (e.g. allowing a review of their budget)

Outcome 3 Capacity building programs and adaptive management systems are developed at all levels for improved governance of SLM, particularly enabling grass root community to implement improved SLM	11. % of annual increase in budget available for implementation of Capacity Support Strategy and Action plan (CSSAP) (in pilot area)	Baseline value for CSSAP implementation to be determined during CSSAP	Annual increase of at least 15% (target value to be verified during baseline assessment) including from co-financing sources	▪ CSSAP baseline survey ▪ Project progress reports (PIR/APR) ▪ Co-financing figures (to be tracked as part of ongoing project management) ▪ Mid-term and end-of project evaluations	▪ (Increasing) Budget availability in Eritrea
	12. No. of individuals that apply the through the project developed extension packages	No extension package available; baseline of people who apply packages is 0%	80% of all land managers in the 28 pilot villages use the packages; additionally more than 150 land managers in "replicate" areas do so; 100% of extension officers in Maekel zoba are knowledgeable about the extension packages and use them in their extension work	▪ KCAS baseline survey; survey to be conducted as part of extension package dissemination strategy ▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	
	13. Ratio of U$ leveraged through SLM relevant carbon finance project (s) and reinvestment into CCA activities in pilot area	Currently no SLM relevant carbon finance project identified	At least one project identified, prepared and under implementation	▪ CC reports (UNFCCC focal point) ▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	▪ CDM successfully established in Eritrea
Outcome 4 Learning, evaluation, and adaptive management increased	14. Level of performance score achieved in scheduled evaluations	Project design: to establish performance score (use GEF BD score as guidance)	A minimum of satisfactory performance (approx. 50% of all scheduled activities implemented to plan) at mid-term of project ; at least 90% at end of project	▪ Project progress reports (PIR/APR) ▪ Mid-term and end-of project evaluations	▪ Relevant performance score developed (e.g. based on BD SPs)

SECTION III: Total Budget and Workplan

Total Budget (GEF, Norad and UNDP components)

Award ID:	00063171
Award Title:	PIMS 2979 - SIP Sustainable Land Management Pilot project
Business Unit:	ER 10
Project Title:	Enabling Environment for SLM in Eritrea
Project ID:	Proposal No. 00050933
Implementing Partner (Executing Agency)	Government of Eritrea , GoE

GEF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name[9]	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	Budget notes
OUTCOME 1: Replicable models of SLM are developed & representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation	**UNDP - NEX**	**62000**	**GEF**	71200	International Consultants	46,500	0	0	0	0	46,500	1.1
				71600	Travel	26,800	4,000	34,000	6,000	12,000	82,800	1.2
				72100	Contractual Services	95,000	57,500	93,000	21,000	34,500	301,000	1.3
				72300	Materials & Goods	202,500	31,000	21,000	22,000	21,000	297,500	1.4
					Sub-total GEF	**370,800**	**92,500**	**148,000**	**49,000**	**67,500**	**727,800**	
			Norad	72200	Equipment & furniture	100,000	0	0	0	0	100,000	1.5
				72300	Materials & Goods	50,000	50,000	50,000	50,000	25,000	225,000	1.4
				72600	Grants	0	50,000	50,000	50,000	25,000	175,000	1.6
					Sub-total Norad	**150,000**	**100,000**	**100,000**	**100,000**	**50,000**	**500,000**	
			UNDP-CO	71300	Local Consultants	12,500	12,500	12,500	12,500	12,500	62,500	1.7
				72000	Publications	23,000	9,000	31,500	3,000	7,000	73,500	1.8
				72100	Contractual Services	70,000	56,000	76,500	15,500	28,000	246,000	1.3
				72600	Grants	0	0	30,000	0	0	30,000	1.6
				74200	Audio visual and print prod. Costs	7,000	0	0	0	0	7,000	1.9
					Sub-total UNDP	**112,500**	**77,500**	**150,500**	**31,000**	**47,500**	**419,000**	
					Total Outcome 1	**633,300**	**270,000**	**398,500**	**180,000**	**165,000**	**1,646,800**	

[9] Only cash co-financing actually passing through UNDP accounts should be entered here and in Atlas. Other co-financing should NOT be shown here.

OUTCOME 2: A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation	**UNDP – NEX**	**62000**	**GEF**	71200	International Consultants	0	0	0	20,000	0	20,000	2.1
				71300	Local consultants	0	0	12,500	12,500	12,500	37,500	2.8
				71600	Travel	0	22,500	20,000	18,500	9,000	70,000	2.2
				72100	Contractual Services	5,000	69,200	92,700	53,700	71,700	292,300	2.3
				72200	Equipment & furniture	0	48,000	0	0	0	48,000	2.4
				72300	Materials & Goods	12,500	14,500	0	0	2,500	29,500	2.5
				72800	Information technology equipment	10,000	7,500	10,000	0	10,000	37,500	2.6
					Sub-total GEF	**27,500**	**161,700**	**135,200**	**104,700**	**105,700**	**534,800**	
			Norad	72200	Equipment & furniture	25,000	25,000	25,000	25,000	25,000	125,000	2.4
				72300	Materials & Goods	25,000	25,000	25,000	25,000	25,000	125,000	2.5
					Sub-total Norad	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**250,000**	
			UNDP-CO	71300	Local consultants	12,500	12,500	0	0	0	25,000	2.7
				71600	Travel	0	22,500	20,000	18,500	9,000	70,000	2.2
				72400	Equipment and audio visual materials	0	36,000	2,000	2,000	2,500	42,500	2.8
				72800	Information technology equipment	10,000	7,500	10,000	0	10,000	37,500	2.6
				74200	Audio visual and print prod. Costs	2,000	7,000	10,000	10,000	10,000	39,000	2.9
					Sub-total UNDP	**24,500**	**85,500**	**42,000**	**30,500**	**31,500**	**214,000**	
					Total Outcome 2	**102,000**	**297,200**	**227,200**	**185,200**	**187,200**	**998,800**	
OUTCOME 3: Capacities for replicating and adapting SLM models developed and applied to halt land degradation	**UNDP - NEX**	**62000**	**GEF**	71600	Travel	1,000	3,000	3,000	18,000	18,000	43,000	3.1
				72100	Contractual Services	8,000	4,000	4,000	4,000	4,000	24,000	3.2
				72300	Materials and Goods	12,500	135,000	25,000	25,000	25,000	222,500	3.3
					sub-total GEF	**21,500**	**142,000**	**32,000**	**47,000**	**47,000**	**289,500**	
			Norad	72200	Equipment & furniture	25,000	25,000	25,000	25,000	25,000	125,000	3.4
				72300	Materials & Goods	25,000	25,000	25,000	25,000	25,000	125,000	3.3
					Sub-total Norad	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**250,000**	
			UNDP-CO	71300	Local consultants	12,500	25,000	25,000	25,000	25,000	112,500	3.5
				72100	Contractual Services	2,000	117,000	2,000	14,000	2,000	137,000	3.2
				74200	Audio visual and print prod. Costs	0	0	0	6,000	0	6,000	3.6
					sub-total UNDP	**14,500**	**142,000**	**27,000**	**45,000**	**27,000**	**255,500**	
					Total Outcome 3	**86,000**	**334,000**	**109,000**	**142,000**	**124,000**	**795,000**	
OUTCOME 4: Learning, evaluation, and adaptive management increased	**UNDP-NEX**	**62000**	**GEF**	71200	International Consultants	3,000	3,000	3,000	3,000	3,000	15,000	4.1
				72100	Contractual Services	26,000	0	0	0	0	26,000	4.2
				75100	Facilities & Administration	18,900	18,900	18,900	18,900	18,900	94,500	4.3
					sub-total GEF	**47,900**	**21,900**	**21,900**	**21,900**	**21,900**	**135,500**	
			UNDP-CO	72100	Contractual Fees	7,900	5,400	5,400	5,400	5,400	29,500	4.2

				75100	Facilitation & Administration	8,100	8,100	8,100	8,100	8,100	40,500	4.3
					sub-total UNDP	**16,000**	**13,500**	**13,500**	**13,500**	**13,500**	**70,000**	
					Total Outcome 4	**63,900**	**35,400**	**35,400**	**35,400**	**35,400**	**205,500**	
PROJECT MANAGEMENT UNIT	**UNDP-NEX**	**62000**	**GEF**	71600	Travel	5,000	5,000	5,000	5,000	5,000	25,000	5.1
				72100	Contractual Services	3,250	3,250	3,250	3,250	4,500	17,500	5.2
				72300	Materials & Goods	20,000	20,000	20,000	15,000	15,000	90,000	5.3
					sub-total GEF	**28,250**	**28,250**	**28,250**	**23,250**	**24,500**	**132,500**	
			UNDP	71600	Travel	5,000	5,000	5,000	5,000	5,000	25,000	5.1
				72100	Contractual Services	1,750	1,750	1,750	1,750	3,000	10,000	5.2
				75100	Facilities & Administration	1,280	1,280	1,280	1,280	1,280	6,400	5.4
					sub-total UNDP	**8,030**	**8,030**	**8,030**	**8,030**	**9,280**	**41,400**	
					Total Management	**36,280**	**36,280**	**36,280**	**31,280**	**33,780**	**173,900**	
					PROJECT TOTAL	**921,480**	**972,880**	**806,380**	**573,880**	**545,380**	**3,820,000**	

Summary of Funds: [10]

Donor	Year 1	Year 2	Year 3	Year 4	Year 5	Total
GEF	$495,950	$446,350	$365,350	$245,850	$266,600	$1,820,000
UNDP	$175,530	$326,530	$241,030	$128,030	$128,780	$1,000,000
GoE in-kind	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
Norad	$250,000	$200,000	$200,000	$200,000	$150,000	$1,000,000
TOTAL	S971,480	$1,022,880	$865,380	$623,880	$595,380	$4,070,000

[10] Summary table should include all financing of all kinds: GEF financing, co-financing, cash, in-kind, etc.

No. of Budget note	Description
Outcome 1: Replicable models of SLM are developed & representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation	
1.1	Support of international experts will be sought for several activities under outcome 1, namely supporting the development of the SLM models through selected capacity support, incl. peer review. Special input will be provided for the development of Farmers Action Research (FAR) activities that will for part of the SLM extension package. Expertise in support of environmental/ resource economics will also be solicited.
1.2	Extensive local travel will take place during the outreach activities in the Serejeka sub-zoba, including for community member who will attend workshops and training sessions. Travel allocations are also included that allow for national/regional/local level interactions, e.g. in terms of developing the 1994 Land Proclamation implementation guidance, which requires extensive consultation.
1.3	Contractual services will be of different natures. Firstly a number of SLM and FAR activities required the remuneration of workhands, e.g. for implementing soil and water conservation activities. Secondly, a suite of contract for technical assistance will be sought for, such as for hiring national experts that should facilitate the development of the Land Proclamation implementation guidance and undertake the policy consultations, undertake the environmental and resource economic studies that would include market analysis and strategies for market development, a.o. Thirdly a number of workshops on the village, sub-zoba, zoba and national level are planned, which would partially be financed under this budget line.
1.4	A significant amount of resources have been earmarked for materials and goods that would be utilised for SLM and FAR activities at the village levels, incl. support for afforestation and soil & water conservation. Certain maintenance costs pertaining to equipment (see below) are included under this budget line, esp. taking into consideration that project stakeholders and implementers are to a large extent situated in sub-zoba or zoba level extension offices that are otherwise poorly resourced.
1.5	At project inception the for the project relevant equipment has to be purchased, partially, but not only for the PMU. It is essential to improve e.g. computer access and connectivity at the sub-zoba or/and zoba level extension offices that are otherwise poorly resourced. Investments from Norad andUNDP TRAC funds will be utilised to purchase at least 2 project vehicles for field work under this budget line.
1.6	The provision of micro-credit type financing options for SLM best practices but also the development of alternative income generating options is foreseen in the project document and sufficient baseline funds need to be made available. It is noted that the grant system should not be given as "hand outs" and my include pay-back mechanism. Thus the grant scheme my be established in form of a longterm viable and self-sustaining SLM support mechanism.
1.7	Funding for project staff salaries.
1.8	Promotions and training materials and esp. the SLM extension package/ toolkit will be printed and disseminated. This budget item will be strongly linked to the KCAS, that will be developed (see Outcome 2)
1.9	Initial investment cost for auto visual equipment and activities, i.e in support of community outreach (e.g. a generator and movable powerpoint projector may be needed to facilitate local level training activities).
Outcome 2: A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation	
2.1	International expertise is sought for support on certain technical elements of establishing e.g. the SLM M&E programme and providing peer review for various outputs under this outcome, incl. the SLM trainee programme. All expenses are included under year 3 to coincide with the conducting of an international SLM symposium in Eritrea.
2.2	To fund certain dya-to0-0day travel needs, but mainly exposure and exchange visits, within region, country-wide an internationally. To cover also travel expenses that will incur in relation to international SLM conference/symposium, although additional sponsors may need to be found, depending on how large the conference will be.
2.3	A suite of expert studies and assessments will have to be outsourced, esp. the development of a KCAS, which will form the foundation for the establishment of the KM platform. It is currently proposed to sub-contract TIDC for such work. The various baseline assessments required for M&E purposes, amongst other (see SRF) will be financed under this budget line, as well as the establishment of an Information Management System at Zoba-level. Support for the preparation of the international conference and holding that event are budgeted for under this item. Further the establishment of a SLM trainee programme will be partially supported (also Outcome 3).
2.4	Roll-out activities and required baseline investments under the KCAS will be financed form this budget line (village, sub-zoba,zoba, national, PMU levels; various stakeholders).

2.5	Roll-out activities and required baseline investments under the KCAS will be financed form this budget line (village, sub-zoba,zoba, national, PMU levels, various stakeholders).
2.6	Roll-out activities and required baseline investments under the KCAS will be financed form this budget line (village, sub-zoba,zoba, national, PMU levels, various stakeholders).
2.7	Funding for project staff salaries.
2.8	Roll-out activities and required baseline investments under the KCAS will be financed form this budget line
2.9	Roll-out activities and required baseline investments under the KCAS will be financed form this budget line
Outcome 3: Capacities for replicating and adapting SLM models developed and applied to halt land degradation	
3.1	Travel expenses are particularly required during the final two years of the project, under this component Whilst outcomes 1 and 2 lay the foundation for the SLM tool development and work at the initial pilot sites, outcome 3 will require outreach and up-scaling workshops and training initiatives, including exchange visits during the final project years.
3.2	A number of support services will be required, but esp. during year two baseline assessment and support studies esp. for the CSSAP and KCAS will be commissioned. The interface activities and baseline studies on how to engage and improve the service providers for SLM will be established. A report on how to mainstream and address CCA in the context of SLM will be prepared with expert support.
3.3	Roll-out activities and required baseline investments under the CSSAP will be financed form this budget line (village, sub-zoba,zoba, national, PMU levels; various stakeholders).
3.4	Roll-out activities and required baseline investments under the CSSAP will be financed form this budget line (village, sub-zoba,zoba, national, PMU levels; various stakeholders).
3.5	Funding for project staff salaries.
3.6	Roll-out activities and required baseline investments under the CSSAP will be financed form this budget line (village, sub-zoba,zoba, national, PMU levels; various stakeholders).
Outcomes 4: Learning, evaluation, and adaptive management increased	
4.1	Peer support for establishment of project (inception phase) ,and potentially needed expert input during implementation, such as for M&E. Mainly foreseen as ad hoc capacity support to PMU.
4.2	Assistance with establishing M&E plan; organisation and conducting of inception workshop and consultations.
4.3	For maintenance and running expenses of Steering Committees and other project structures.
Project Management Unit	
5.1	PMU running expenses.
5.2	PMU running expenses.
5.3	PMU running expenses.
5.4	PMU running expenses.

Work plan including tentative implementation time table

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Outcome 1: Replicable models of SLM are developed & representative communities use them to manage land in 28 villages of the central highland that are representative of the major agro-ecological zone for Central highlands, reducing the rate of land degradation																					
1.1. Sustainable models for agriculture, grazing lands and forested lands developed & piloted in 28 villages covering 140,000 ha	1.1.1. In participatory manner develop "SLM workplans" with pilot communities identified during project preparation; confirm local interest & operationalise project leadership, management & implementation arrangements																				
	1.1.2. Undertake needs assessment to identify capacity (incl. technical, financial, policy) & training needs for SLM in the pilot communities																				
	1.1.3. Together with expert organizations (e.g. MoA, Agricultural Colleges, international collaborators) develop and subsequently implement Farmers Action Research & Training programmes relevant to SLM in the CHZ																				
	1.1.4. Strengthen regional & national level expert support mechanisms & institutions to provide relevant & appropriate research and management information, including on service delivery																				
	1.1.5. Develop relevant extension service response measures & establish an effective working link between client (farmer) and provider (primarily government extension); explore opportunities of promoting private & business investments (national/international) in support of SLM																				
	1.1.6: Document processes, implement M&E programme and synthesize key lessons learnt to feed into the development of local level SLM best practice models for agriculture, grazing lands and forested lands, which can be adapted and replicated elsewhere																				
1.2: Systems of incentives & penalties are developed & applied at	1.2.1. Identify appropriate incentive and disincentive measures for SLM and develop key support systems e.g. relevant regulations and penalties; commission in-depth study in support of this activity																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
multiple levels to further the adoption of SLM practices;	1.2.2. Commission a national policy review study that clearly identifies policies and policy elements that pose disincentives for SLM and make clear proposals of how to eliminate such disincentives																				
	1.2.3. Collect best practices from Eritrea and other areas around the world that demonstrate how to successfully establish such systems and disseminate widely; integrated the notion of payment for ecosystem services, where appropriate																				
	1.2.4. Based on the background research make proposals for the implementation of incentive measures and draft relevant draft measures including relevant regulations (e.g. on watershed utilization)																				
	1.2.5. Facilitate the successful testing of developed incentive measures and integration into national pro-SLM policies and regulations																				
1.3: Regulations and standards for land redistribution of agricultural lands under the 1994 Land Proclamation are developed, approved and applied	1.3.1 Operationalise 1994 Land Proclamation implementation through the participatory development of relevant regulations and standards, based on and linked to activities and lessons learnt under Output 1.4																				
	1.3.2 Plan and undertake national-scale consultations that complement the experiences and inputs from the pilot area																				
	1.3.3 Facilitate meaningful consultations through intensive information and awareness raising campaign linked to the Knowledge Management activities under Outcome 2; promote policy dialogue amongst a wide range of stakeholders; generate positive momentum for the implementation of the 1994 Proclamation																				
	1.3.4 Based on consultations, experiences from Eritrea and elsewhere, and expert inputs formulate regulations and standards needed to facilitate the successful implementation of the 1994 Land Proclamation																				
	1.3.5 Promote potential amendments of 1994 Land Proclamation as relevant																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1.4: Community-based, village-level land use planning and land redistribution methodologies are developed and piloted in 28 villages	1.4.1. Based on needs assessment and congruent to Output 1.1 develop concept for land use planning and land redistribution methodologies																				
	1.4.2. Develop land use planning tools and training modules facilitating the application of the tools at the community-level																				
	1.4.3. Undertake land redistribution in line with the 1994 Land Proclamation in pilot communities and facilitate application of local level land use planning tools																				
	1.4.4. Harmonize bottom-up and top-down land use planning and land redistribution activities to ensure smooth implementation and roll-out of the 1994 Land Proclamation																				
	1.4.5. Promote potential amendments of 1994 Land Proclamation, based on local level implementation experiences																				
	1.4.6. Document processes, implement M&E programme and synthesize key lessons learnt to feed into the development of local level LUP and land redistribution best practice tools, which can be adapted and replicated elsewhere																				
1.5: Alternative income generating options piloted and linked to markets in 28 villages	1.5.1. Undertake/commission an expert scoping study that establishes feasibility and options for alternative income generation in pilot area, with potentially wider reaching trading linkages																				
	1.5.2. Use scoping study for public awareness activities and as venture point for discussion of the development of alternative income generating activities with target groups and key stakeholders																				
	1.5.3. Based on initial experiences develop strategy of how to promote alternative income generating activities; link to SLM programme and other relevant country strategies and plans																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
	1.5.4. Support development of alternative income generating options amongst pilot community members through facilitating technical support and, as appropriate, financial start up (e.g. loans, micro credit schemes, proposal development, SME incentives national/international)																				
Output 1.6: Feedback from pilot villages used to finalize the SLM model, LUP and land redistribution methodologies and an integrated extension package to facilitate replication – potentially over 2 million ha; SLM extension package successfully replicated in adjacent sub-zobas in Zoba Maekel	1.6.1. Draft extension packages for large-scale application; test extension packages in adjacent sub-zobas in Zoba Maekel																				
	1.6.2. Revise drafts based on testing experience and produce final product																				
	1.6.3. Develop extension package dissemination strategy and rollout campaign; including a M&E component that determines the impacts of the produced materials in the medium to long-term																				
	1.6.4. Mainstream extension package as key material for MoA and other relevant extension services to ensure sustainability and replicability of approach and products																				
Outcome 2: A system of knowledge management (KM) for SLM is developed and used to achieve SLM through mainstreaming of SLM principles into the regional and national development programs, projects, strategies, policies and legislation																					
Output 2.1: Knowledge management (KM) network formed of institutions and projects concerned with	2.1.1. Establish an KM network based on stakeholders and interested parties identified in the project preparation phase, and partially reflected in the stakeholder involvement plan (Section IV); build on existing Sustainable Land Management Forum (SLUF) facilitated by TICD; hold inception meeting and operationalise																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
SLM in the Central Highlands;	2.1.2. Based on capacity needs assessment undertaken under output 1.1, planning workshop element at inception meeting and other consultations develop demand driven work programme of KM and appropriate convening/delivery mechanisms, in form of a Knowledge, Communication and Awareness Strategy (KCAS)), which supports the exchange of SLM related knowledge generated e.g. under outcome 1																				
	2.1.3. Establish relevant delivery mechanism and implement KCAS i.e. in a form of a SLM information management systems at the level of the Zoba Maekel, with access beyond; M&E of implementation																				
	2.1.4. Operationalise consultations and awareness campaign on 1994 Land Proclamation, as stipulated under output 1.3, as a matter of priority																				
Output 2.2: Capacity for research on SLM supported;	2.2.1. Based on capacity needs assessment undertaken under output 1.1, planning workshop element at inception meeting and other consultations develop demand driven capacity building programme for SLM, as basis for developing a comprehensive SLM Research Strategy, clearly identifying capacity needs at various levels.																				
	2.2.2. Develop local level research capacity through implementing Farmers' Action Research programme addressing key SLM needs at pilot sites, including local level resource tracking/ monitoring/ SLM M&E activities leading to adaptive management																				
	2.2.3. Train extension personnel from both government and non-government sectors in research extension skills and targeted SLM related research skills																				
	2.2.4. Develop a SLM trainee programme/course for (agricultural) colleges and, if appropriate, University																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
	2.2.5. Facilitate availability of research information and research collaboration including with international Centers of Excellence/research institutions (e.g. research traineeships, exchange visits, internet based information portal)																				
	2.2.6. Organise SLM conference hosted in Eritrea, and facilitating the exchange of cutting edge SLM experiences from around the world, particularly Africa																				
Output 2.3: SLM M&E established and linked to SLM country program and SIP;	2.3.1. Develop SLM M&E methodology in pilot area (linked to output 2.2), taking into consideration bio-physical and socio-economic indicators and developing performance targets that clearly illustrate achievements made on investments																				
	2.3.2. Establish overall SLM baseline for this project during inception phase, including the confirmation of the set indicators and performance targets																				
	2.3.3. Up-scale and link SLM M&E to national level through SLM country programme and SIP																				
Output 2.4: SLM is mainstreamed into relevant programmes, policies & legislation, & is integrated throughout development planning & budgeting processes.	2.4.1 As part of the Knowledge, Communication and Awareness Strategy (KCAS) (output 2.1) develop section that particularly targets planners, policy and high-level decision makers at sub-zoba, zoba and national level																				
	2.4.2 Implement targeted capacity support and awareness programme in CHZ with the aim to facilitate that SLM is better integrated into annual programs and budgets at zoba and sub-zoba levels																				
	2.4.3 Establish regular policy roundtable in the capital that discusses policy relevant SLM issues on a bi-monthly basis (e.g. to be attended on Director General level from all Ministries; target group to be determined through KCAS process)																				
	2.4.4 Commission a discussion paper that illustrates how SLM could be effectively integrated into the new national land use policy (table e.g. at policy roundtable see activity 2.4.3 and during other relevant events)																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
	2.4.5 Develop and implement action plan of how to support the mainstreaming of SLM in the new land use policy																				
Outcome 3: Capacity building programs and adaptive management systems are developed at all levels for improved governance of SLM, particularly enabling grass root community to implement improved SLM																					
Output 3.1. Training programmes on SLM for different groups (farmers, land managers, technical officers) available and training conducted (with a focus on pilot site).	3.1.1. Congruent to the needs assessment to identify capacity (incl. technical, financial, policy) and training needs for SLM in the pilot communities (output 1.1.) undertake a wider ranging capacity assessment for regional and national level stakeholders (can also be linked to KCAS process and assessment, output 2.1 on KM)																				
	3.1.2. Develop targeted capacity support strategy and action plan (CSSAP)																				
	3.1.3. Implement CSSAP during project duration and, through a long-term mainstreaming strategy, ensure that activities are integrated into institutional programmes and continue beyond project horizon																				
Output 3.2: Extension package updated with SLM best practice provided and other relevant materials developed through KCAS successfully delivered to key target groups and intended impacts on awareness and skills base achieved.	3.2.1. Implement KCAS and associated dissemination strategy; facilitate the establishment of enabling conditions for dissemination																				
	3.2.2. In support of output 2.4 develop material targeted to senior decision-makers; implement pilot site visits to community to establish a direct exchange and debate on SLM between the farmers and senior policy and decision-makers																				
	3.2.3. Establish awareness baseline at onset of project and monitor changes throughout project duration to assess impact																				

Output	Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Output 3.3: Service providers (incl. e.g. agricultural input suppliers, extension services, financial service providers) strengthened to provide effective and relevant SLM support to community level.	3.3.1. Establish platform for interactive dialogue between service providers and clients (communities/farmers/land managers) and amongst service providers themselves to discuss client needs and coordinate service delivery where relevant																				
	3.3.2. Strengthen input suppliers to provide SLM technologies (seeds, tools, etc.) through creating an enabling environment at national level (e.g. promote accessibility to imported goods where necessary; support establishment of needed market conditions)																				
	3.3.3. Target financial services providers to improve their service delivery in a manner that SLM enabling conditions are promoted e.g. through better access to banking facilities, rural finance facilities and microcredit programmes, as well as establishing links to markets for SLM products																				
Output 3.4: SLM actions are climate change proof, mainstreaming adaptation and mitigation	3.4.1. Develop and implement a strategy for adapting SLM to climate change in Eritrea, linked to NAPA and related CCA projects																				
	3.4.2. Develop project CCA plan and mainstream CC throughout this project, as relevant																				
	3.4.3. Develop SLM relevant carbon finance projects and register with the CDM																				
Outcome 4: Learning, evaluation, and adaptive management increased																					
Output 4.1: Effective project management and implementation structures are established and function	4.1.1. Establish PCU, hire all staff and establish reporting and communication channels																				
	4.1.2. Establish steering committee and any other peer review instruments																				
	4.1.3. Hold inception meeting, develop workplan and commission all support contracts as relevant																				
	4.1.4. Establish and coordinate operations of a liaison group composed of representatives of the national SLM programme and the SIP, amongst other																				
	4.1.5. Adaptively manage project implementation, link to output 4.2																				

Output	**Activity**	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Output 4.2: Project M&E system established, adaptive planning takes place and project performance on track	4.2.1. Develop workplan based on project document, in line with M&E plan and set performance indicators; make room for adaptive planning.																				
	4.2.2. Confirm M&E plan at inception meeting; follow-up regularly.																				
	4.2.3. Implement M&E schedule as agreed to in project document.																				

SECTION IV: ADDITIONAL INFORMATION

PART I : Other agreements

Note: attach endorsement letter(s) .

[Once the GEF Council has approved the project, add letter(s) of financial commitment, MOUs with executing agency if relevant, and other official agreements.]

PART II: Organigram of Project

See Figure 3.

PART III: Terms of References for key project staff and main sub-contracts

A. Draft TORs of key staff

1. Project Manager

Background:
The SIP SLM pilot project in Maekel Zoba, Eritrea falls under the GEF Strategic Investment Programme for Sustainable Land Management in Sub-Saharan Africa (SIP) and provides a catalytic shift to scale up SLM in the region, based on already existing development frameworks. NEPAD's Comprehensive African Agriculture Development Program (CAADP) and Environment Action Plan (EAP), the implementation action plans of the African Regional Economic Communities, and the UNCCD all aim to address land degradation and scale up the area of African cropland, rangeland, and woodland under sustainable management. The SIP is an important strategic partnership with the GEF, designed as a multi-agency response to support achievement of these African-defined goals (implemented by collaboratively by the World Bank, UNDP, UNEP, AfDB, FAO and IFAD).

This Full-size Project (FSP) was identified as country priority in Eritrea's National Action Programme (NAP) under the UNCCD. It has four key outcomes relating to SLM capacity development, targeting the improvement of food security and halting of land degradation through SLM. The project is designed to pilot land use planning and new tenure arrangements through the implementation of the 1994 Land Proclamation in Maekel Zoba, in the Central Highlands of Eritrea, with additionally support functions at the national level.

The Project Manager will be based in the Sub-zoba Serejeka, Maekel Zoba, Eritrea. The Project Manager reports to the National Coordinatior, the Head of the Ministry of Agriculture in Maekel Zoba. The assignment as Project Manager is for a time period of five years from the inception of the project.

Scope of work:
The key responsibilities of the Project Manager (PM) include the following:

- Ensure the timely implementation of planned activities under the FSP project as stipulated in the project document/work plan. The PM should provide the lead role in implementing such activities;
- Set up office in Serejeka Sub-zoba and hire all staff for the Project Coordination Unit (PCU), in line with international UNDP standards for recruitment of personnel;
- Facilitate and coordinate the implementation of the project activities according to the stakeholder involvement plan, develop and manage performance contracts and operationalise the Technical Coordination Task Force (TCTF);
- Oversee the development of scopes of work and terms of reference and other procurement documentation required to solicit the procurement of technical assistance and other services, if such should be required;
- Supervise and coordinate the work of all project PCU staff, consultants and sub-contractors;
- Prepare project working plans and financial plans, as required by Government and UNDP, in collaboration with project staff;
- Ensure proper management of funds consistent with UNDP/GEF requirements, and budget planning and control;
- Responsible and accountable for reporting and M&E activities, including the coordination of mid-term and final project evaluations.

Remuneration:
The Project Manager will be hired on the level of Programme Officer as applies to the UN System in Eritrea.

Qualifications:

- Preferably master's degree in agriculture or environment-related studies and other related disciplines;
- Good understanding of the Eritreas's agricultural, environment and development issues as well as an understanding of the UN Convention to Combat Desertification (UNCCD);
- At least three to five years experience relevant to the project;
- Demonstrated experience in project management and staff supervision;
- Excellent communication (written and oral) skills;
- Demonstrated experience in working with communities, project partners from all sectors and particularly government, donors and the United Nations system;
- Excellent inter-personal skills as well as working well within a team environment;
- Fluency in English; and relevant local languages [Tigrinya].

2. Accountant/Administrative Manager

Background:

The SIP SLM pilot project in Maekel Zoba, Eritrea falls under the GEF Strategic Investment Programme for Sustainable Land Management in Sub-Saharan Africa (SIP) and provides a catalytic shift to scale up SLM in the region, based on already existing development frameworks. NEPAD's Comprehensive African Agriculture Development Program (CAADP) and Environment Action Plan (EAP), the implementation action plans of the African Regional Economic Communities, and the UNCCD all aim to address land degradation and scale up the area of African cropland, rangeland, and woodland under sustainable management. The SIP is an important strategic partnership with the GEF, designed as a multi-agency response to support achievement of these African-defined goals (implemented by collaboratively by the World Bank, UNDP, UNEP, AfDB, FAO and IFAD).

This Full-size Project (FSP) was identified as country priority in Eritrea's National Action Programme (NAP) under the UNCCD. It has four key outcomes relating to SLM capacity development, targeting the improvement of food security and halting of land degradation through SLM. The project is designed to pilot land use planning and new tenure arrangements through the implementation of the 1994 Land Proclamation in Maekel Zoba, in the Central Highlands of Eritrea, with additionally support functions at the national level.

The Accountant/Administrative Manager support staff will be based in the Sub-zoba Serejeka, Maekel Zoba, Eritrea. The Accountant/Administrative Manager reports to the Project Manager. The assignment as Accountant/Administrative Manager is for a time period of five years from the inception of the project.

Scope of work:
The key responsibilities of the Accountant/Administrative Manager support staff include the following:

- Assist the Project Manager in the implementation/coordination of planned activities under the FSP project as stipulated in the project document/work plan;
- Assist the PM with the setting up of office in Serejeka Sub-zoba; administer the hiring of the staff for the Project Coordination Unit (PCU),
- Assist the PM with the implementation of the project activities according to the stakeholder involvement plan, develop and manage performance contracts and operationalise the Technical Coordination Task Force (TCTF);
- Based on inputs from the PM, responsible for the development of scopes of work and terms of reference and other procurement documentation required to solicit the procurement of technical

assistance and other services, if such should be required;
- Supervise and coordinate the work of support staff; assist with the facilitation of contracts and work visits/affairs of PCU staff, consultants and sub-contractors;
- Facilitate consultative meetings, workshops and other interactions with key stakeholders;
- Under guidance of the PM, provide inputs into the preparation of project working plans and financial plans, as required by Government and UNDP, in collaboration with project staff;
- Ensure proper management of funds consistent with UNDP/GEF requirements, and budget planning and control;
- Responsible and accountable for financial reporting.

Remuneration:
The Accountant/Administrative Manager will be hired on the level of Administrative Officer as applies to the UN System in Eritrea.

Qualifications:
- Minimum requirement BCom, BA or relevant accounting qualification;
- At least three to five years experience in financial and project management;
- Good communication (written and oral) skills;
- Demonstrated experience in networking with project partners from all sectors and particularly government, donors and the United Nations system;
- Excellent inter-personal skills as well as working well within a team environment;
- Fluency in English and relevant local languages [Tigrinya].

B. Draft TORs for main sub-contracts

10 support contracts (national or international consultants) are foreseen as follows:

1. Capacity and Training Needs Assessment (pilot site specific; then also for regional and national level)
2. Development Farmers Action Research Programme elements (with pilot area stakeholders)
3. Methodology development for Land Use Planning and Land Redistribution (with pilot area stakeholders)
4. Scoping study: opportunities for alternative incomes in pilot area
5. Development of "Extension package"
6. Development of a "Knowledge, Communication and Awareness Strategy" (KCAS) and establishment of an SLM awareness/knowledge baseline
7. Development of a national SLM research strategy
8. Development of a SLM trainee course
9. Discussion paper on how to improve the LU policy through mainstreaming SLM principles
10. Development of Capacity Support Strategy and Action Plan (related to 1.)

PART IV: Stakeholder Involvement Plan – in conjunction with Table 3

Stakeholder involvement in project development: During the preparation phase of this project brief strong emphasis was given to the identification of relevant stakeholders and creation of enabling environment for enhanced/active participation of these stakeholders in the implementation phase through consultations and active involvement in the planning process. Two national level workshops (with representation from the Zoba/regional level) took place, one at the onset of the planning process and one near finalization of the proposal. The first workshop set the scene and briefed stakeholders about the nature and scope to the proposed intervention and solicited valuable planning inputs. The later was undertaken in February 2008 to validate the project proposal and especially the stakeholder involvement plan. A suite of local level consultative workshop was conducted between 2006 and 2007. The project preparation team used participatory, community centered approaches that allowed and encouraged stakeholders to participate in identifying needs/problems and issues related to SLM in their respective areas. The consultations formed the foundation for the threats, root causes and barriers analysis in the pilot area, i.e. this proposal. The project design contains a great number of activities that are stakeholder centred; Table 3 specifies specific outputs and activities in which various stakeholder groups will be involved and complements the below (Table 6).

Table 6: Stakeholder description

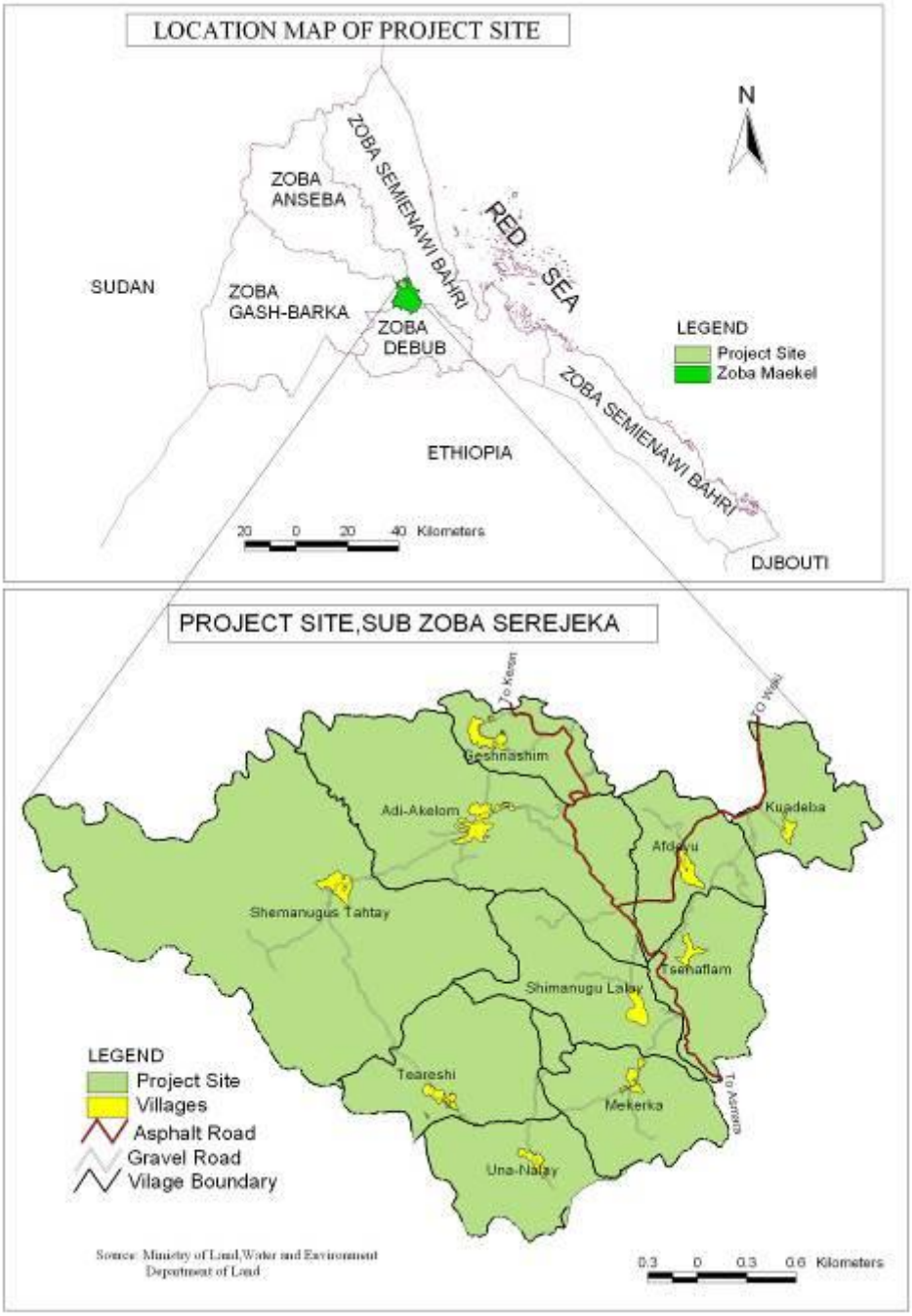
Stakeholder	Profile	Competencies in relation to project
Farmers, (mixed crop-livestock production system)	• Willingness to implement SLM on their respected villages • Full participation on the government led SWC campaigns • Initiated and implemented individual woodlot plantation with support of Government.	• To possess farm lands for longer time or permanently, • Protect their farm, grazing lands and forest from degradation, • Increase their agricultural production/productivity, • Improved feed and water supply for livestock • Get adequate/enough agricultural inputs, • Efficient extension services/Improved farm techniques • Improve their living conditions…….
Small-scale horticultural farmers	• Willingness to practice SLM on their respected farms • Full participation on the government led SWC campaigns • Ready to accept new technology and to change	• Land lease for longer period of time, • Access to credit facility, • Protect their farm/grazing lands from degradation, • Efficient extension services, • Increase their farm products, especially cash crops • Get enough agricultural inputs,
Zoba Maekel Administration	• Readiness to organize and lead local and regional partners on implementing SLM program • Setting and application of government regulations on natural resources protection	• Create conducive work environment for the stakeholders • Mobilize communities • Organize the implementation of NLT
MoA Maekel	• Work on raising awareness/knowledge on land degradation and environmental deterioration (Nationally/CHZ) • Available staff are ready to organize and lead partners on implementing SLM program • Provide agricultural support services that could	• Implement SWC, • efficient forestry and range land utilization • Build human/institutional capacity • ensure development and adoption of SLM, • Implement the 1994 land proclamation, • ensure application of community based land use

	contribute for SLM. • Limited research on agricultural practices related to SLM	• contribution on achieving food security
MoLWE Maekel	• Growing awareness/knowledge on land degradation and environmental deterioration (Nationally/CHZ) • Readiness to employ activities such as NLT and PLUP, that ensure SLM	• Lead the application of proper land use systems • Lead/provide technical assistance on the implementation of NLT system, • Implement proper land use plan and land capability classification • Ensure environmental protection/restoration • Lead the application of proper land use systems
MoA	• Work on raising awareness/knowledge on land degradation and environmental deterioration (Nationally/CHZ) • Available staff are ready to organize and lead partners on implementing SLM program • Provide agricultural support services that could contribute for SLM. • Limited research on agricultural practices related to SLM	• Implement SWC, • efficient forestry and range land utilization • Build human/institutional capacity • ensure development and adoption of SLM, • Implement the 1994 land proclamation, • ensure application of community based land use • contribution on achieving food security
MoLWE	• Growing awareness/knowledge on land degradation and environmental deterioration (Nationally/CHZ) • Readiness to employ activities such as NLT and PLUP, that ensure SLM	• Lead the application of proper land use systems • Lead/provide technical assistance on the implementation of NLT system, • Implement proper land use plan and land capability classification • Ensure environmental protection/restoration • Lead the application of proper land use systems
MoEM	• Introduction and dissemination of energy saving technologies • Introduction and promotion of renewable energy sources	• Inclusion of energy saving stove programs as part of SLM pilot program
MoND	• Support on coordinating different institutions involved in SLM • Main signatory for all type of development cooperations.	• Introduction of SLM through out the CHZ where land degradation is serous problem • Improve livelihood
UNCCD Focal point and secretariat	• Provide technical support in identifying SLM best practices • Contribute in awareness raising programs related to SLM and land degradation	• Significant reduction in land degradation • Replication of SLM throughout the nation • Mainstreaming SLM concerns into national plans and programs so that land degradation would be reduces • SLM to contribute on combating desertification

PART V: *Pilot Project Area Description*

Location and Administration

The SIP SLM pilot project area is located in Serejeka sub zoba – Zoba Maekel - within the CHZ of the country. The town of Serejeka is the administrative center of the sub zoba and is located 20 km north of Asmara, along the main Asmara-Keren road. Administratively, the 28 villages identified in the Toker catchment fall under six administrative *Kebabis*. See attached map for the location of pilot project area.



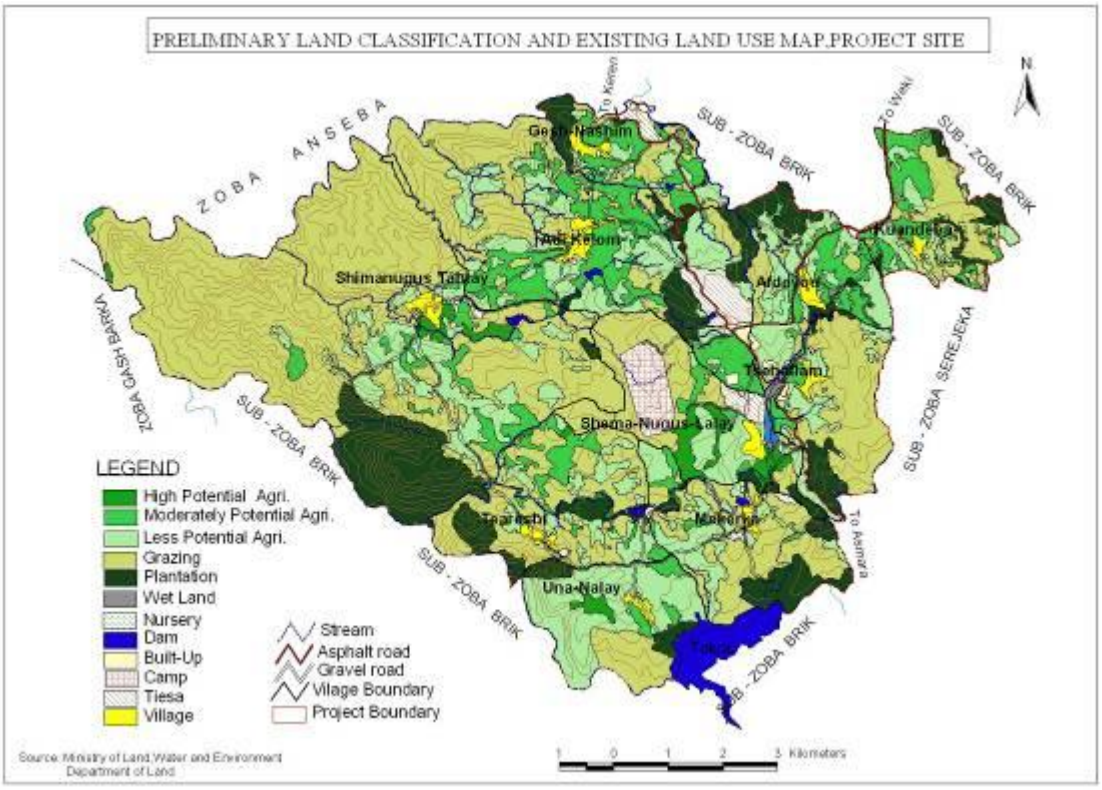
Map 1: Location of the pilot area

Population and Livelihoods

The total population of the 28pilot villages is about 30,000 people in approximately 7500 households and their livelihoods mainly depend upon mixed crop-livestock subsistence farming, in certain areas supplemented through off-farm economic activities.

Area, Topography and Climate

The project area has total land-mass of the CHZ is about 2,4 million hectares, with the Toker catachment and its adjacent areas making up some 10% of that area. The Toker is a tributary of the Anseba ephemeral river. The pilot area is generally hilly and sloppy landscapes cover majority of the total land mass. Soil loss due to erosion is a major land degradation threat and gully erosion is commonly observed on rangelands and farm lands, despite well estbalihsed soil and water management practices. Elevation ranges between 2,200 - 2,490 m.a.s.l and the average annual rainfall ranges between 400 and 500 mm. with significant temporal variability. Rainfall characterized by bimodal rainfall pattern, with the short rainy season *(Azmera)* occurring during March to May and the main rainy season *(Kremti)* during June to August, the highest rainfall occurring in July and August.



Map 2: Land use classifications of the project pilot area, sub-zoba Serjeja and adjacent sub-zobas.

Socio-economic Characteristics

Similar to the majority of the population in the CHZ, the people of the pilot area live in "nucleated" settlements. Their livelihoods depend mainly on mixed crop-livestock and rain-fed subsistence agriculture with limited irrigated vegetable production activities. Agriculture is becoming increasingly more difficult and a number of studies have confirmed that agriculture alone cannot support local people's livelihoods. The reasons behinds this trend include: population pressure that led to decrease in land holding size; general declining returns from farming due to natural as well as man made problems; the traditional land tenure system (Diessa system) currently in use; and increased opportunities for different types of off-farm employment (masonry work, carpentry, petty trade, etc). Gaining an income from off-farm activities is said to be an essential coping strategy for most households to meet their basic needs. However, this dependency exacerbates poverty.

Agricultural , grazing and forest systems

Crops grown in the area are mainly cereals that rely on rainwater. The local farmers also practise irrigated vegetable production from dam water on a limited scale. The current crop production levels, even in a good harvest year, are not sufficient to secure the livelihood of most families in the pilot project area. Livestock constitutes an integral part of the local farming system and so do grazing lands; the communities of the pilot villages are highly dependent on these resources for feed supply. However, the grazing areas of the pilot area are severely eroded, indicating that the carrying capacity has been seriously undermined. In addition to grazing lands, other sources of livestock feed include grazing in the common fields – crop residues and some grasses – soon after harvest and straw. Feeding of animals is carried out through herding in grazing lands and common fields and by feeding with straw in the homestead. Straw is chiefly reserved for dry season feeding when grasses in the field become scarce.

Serejeka sub zoba in general and the 28 pilot villages in particular are typical example of the CHZ agro-ecological zone in terms of the severity of the degradation of their natural resources. Information obtained from MoA sub zoba staff, local farmers and documented secondary sources revealed that soil erosion, soil nutrient depletion, moisture stress, deforestation and overgrazing are major environmental problems in the pilot project area.

Figure 1 & 2: Photographs of the study area on sub-zoba Serjeka. Soil and water conservation through terracing has been implemented for hundreds of years, however such practices are not necessarily considered sustainable. Irrigation can lead to impressive production of vegetable gardens, which are usually irrigated from rainfed dams.

Natural forest resources

Different MoA/FAO study results indicate that, as similar to the CHZ, the pilot area used to be significantly covered with forest resources a century ago. However, currently, there is virtually no real natural forest in the pilot area; only a few remnants of the naturally grown indigenous tree species are left in a few pocket areas. According to these sources, the main causes for the exhaustion of the natural forest cover of the area included cutting trees for construction of traditional houses (*Hidmo*) which needed an excessive quantity of timber, fuel wood, and farm implements, and clearing of forests to extend agricultural land. Owing to the degradation of the natural forests and woodlands, the local farmers are faced with a lack of forest products for various agricultural purposes and shortage construction materials. In addition, the resident communities are faced with a severe shortage of fuel wood that has rendered the villagers increasingly dependent on animal dung for fuel, which otherwise would have been used for fertilizing the farmlands.

Grazing resources

Livestock, and therefore grazing lands, are key resources in the pilot villages. The grazing areas, however, are severely eroded, indicating that the current carrying capacity has been severely undermined. Despite the degraded state of the resource, however, most of the villages are highly dependent on grazing land for the feed supply of its livestock in the face of limited feed alternatives. In addition to the regular pasturelands, common agricultural fields constitute another important source of feed for the local livestock. For this reason, common fields similar to the pasturelands are managed and used collectively by the community. According to MoA sources and information obtained from community representatives, feed shortage is a major livestock production problem in the pilot project area. These sources attributed this problem to the continuous shrinking of grazing land, which is increasingly converted into agricultural land to cope with the population increase. In addition, The Sub-zoba MoA office confirms that the grazing land in the pilot area is heavily exploited while no efforts have been made to improve the pastures through proper range management practices. Despite the severe degradation of the forests and grazing lands, the villagers do still rely significantly on common pool resources, such as pasture-lands and common fields, for various economic purposes. The economic contributions of the local resources are at two levels: firstly, the important role they play in supporting household livelihoods and, secondly, at community level in augmenting village development efforts. Households, for instance, appropriate local common pool resources to generate agricultural output (crops and livestock). Likewise, local community, being *'authorised users'* of the local afforested watershed enclosure, also benefit by selling matured trees and grasses, and use the cash for various village developmental activities.

Watershed afforestation scheme

In an effort towards reversing the undesirable situation of natural resources degradation in the pilot villages, the government and its partners have made significant efforts on rehabilitating and developing the forests of the area through implementing a watershed afforestation programme. As an outcome of this afforestation scheme, so far, approximately 2266.8 hectares of land have been treated and planted with a variety of exotic and indigenous tree species on two main catchment areas of the sub zoba, namely Toker and Engula catchments. The watershed afforestation programme is government-initiated and financed and has been under its control. For the last few years, however, the government has allowed the local community to harvest matured eucalyptus trees and grasses from the watershed enclosure. Based on the authorised right of use they have been granted, the local communities are selling matured eucalyptus and grass and have been utilising the cash from the sales to enhance their community fund towards various collective developmental activities. This exercise is also considered by the MoA as a partial handing over of the watershed to the local communities to develop their feeling of ownership and hence to protect the forests. In other words, this practice will help to guarantee sustainable use of the existing natural resource base particularly forest resource

PART VI: *Table of baseline activities ongoing in Eritrea and CHZ in particular*

Section IV, Part VI, Table 1: Information on SLM related baseline activities ongoing in the CHZ

Project Name & duration	Funding agency and implementing agencies	Description	Baseline for increment (outcome)
The Sustainable Land Management Program (SLM Eritrea) **2007 - 2008**	*Funded by:* Syngenta Foundation for Sustainable Agriculture (SFSA) *Implemented/ coordinated by:* Center for Development and Environment at the University of Bern and Vision Eritrea, a local NGO	The overall goal of the program is to support Eritrea in its effort towards the development of sustainable land management, improved food security and rural livelihoods and in related human resources skills development. The program focuses mainly within the Central Highlands Zone on three programmatic areas: - Research, - Education, and - Outreach Under its Education program the program supports the University of Asmara (UA) on its efforts of establishing and strengthening its GIS laboratory and in capacity building (CB) and training in GIS and remote sensing (RS) for staff members of various ministries, as well as knowledge management (KM). GIS and RS are critical tools needed for land use planning and land redistribution. Overall budget: US$ 262,000 **Baseline contribution:** GIS/RS CB & KM: US$ 214,000 Unallocated: US$ 48,000	Outcome 2
Land use mapping project **2006 – 2007**	Department of Land of the Ministry of Lands, Water and the Environment (MoLWE)	The Department of Land of the Ministry of Land, Water and Environment (MoLWE) completed a broad land use plan map that they intend to use as a planning tool for land use planning of the Central Region (Zoba Maekel). The total area covered is 1000 km^2. Toker Catchment and more than 10 pilot villages identified for the proposed SLM project are covered. The map is a good reference document but it is not detailed enough for direct use in community-based land use planning for land redistribution. The project was financed by DoLWE Overall budget: US$ 66,700 **Baseline contribution:** Map: US$ 66,700	
Support for the Strengthening of Government Capacity for Effective Land Use Planning and Policy Development to Ensure SLM **2006 - 2008**	Funded through: UNDP Implemented by: MoLWE	The project supports government capacity development for SLM and will result in the development of a new national land use policy by the end of 2007. The project builds human and technical capacities of MoLWE for land use planning. It reinforces the use of land use planning and the application of land use policy. The project has provided the MoLWE with satellite imagery and surveying equipment. A new up-graded data base system is being established and guidelines and a web site have been developed for sharing and dissemination of geographical data for land use planning. Training on data management, land use planning and land use policy has been provided. Overall budget: US$ 434,000 (UNDP: US$ 414,000; MoLWE: US$ 20,000) Add funds: US$ 180,000 **Baseline contribution:** Satellite imagery: US$ 180,000 Data base (KM): TBD Training & CB: TBD Policy development: US$ 25,000 Other: TBD	Outcome 2 Outcome 1
Eritrea Country Water Partnership	MoLWE, Department of Water Resources; funded by UNDP	Preparation of an Integrated Water Resources Management Plan: the Eritrea Country Water Partnership (ERI-CWP) was launched in January 2003 aiming with the objective of developing Integrated	Outcome 1 Outcome 2

(ERI-CWP) **Since 2003** **2006 - 2007**	Host institution: Toker Integrated Community Development (see below)	Water Resources Management (IWRM) by the year 2007 the project is extended for 2 more years until 2009. The project has three project components and covers the whole country: a) Finalize the National Water Policy and National Water Law; b) Capacity building; c) Prepare IWRM action plan. The total budget allocated for this project is 480,000 Euros [approx. US$ 550,000]. Overall budget: approx. US$ 550,000 (2006-2007 approx. US$ 320,000 spent) **Baseline contribution:** Regulations/policy: approx. US$ 40,000 Capacity building : approx. US$ 98,000 (on IRWM support part of SLM)	
Establishment of Eritrean Land Information System (ELIS) **Since 2005 - ongoing**	DoLWE	The objective of ELIS is to establish a data base on land information, establish a platform for monitoring and evaluation of land and resources; enhance the knowledge management network on land and land use for the whole country. Training on data base management for regional experts is underway and will continue. Overall budget: US$ 50,000 over 5 years **Baseline contribution:** Zoba Maekel: US$ 9,000	Outcome 2
SLM relevant curriculum, University of Asmara **Since 2003 - ongoing**	The College of Agriculture (CA)	The curriculum includes training on soil and water conservation and soil fertility maintenance in their degree programs. 12 students graduate at MSc level annually; and approx. 100 BSc level students. Most of the graduates find employment with MoA, NARI, the private sector and educational institutes. About 60% of the staff currently working in relevant positions at the sub-Zoba Serejeka are CA graduates. The MoE has opened a new Institute of Science and Technology and an additional Agricultural College in Hamelmalo recently (from 2003/2004 academic year). Overall budget: TBD **Baseline contribution:** The estimated total amount of funding dedicated to SLM for the five year period (2006-11) is estimated at US$ 10 million.	Outcome 3
Community awareness program on land degradation and afforestation The project is planned to be implemented between 2008-10; not yet approved	Agreed to be funded by IFAD/EU/ADP joint integrated rural development project The project is proposed by Agricultural Promotion and Development Department (APDD)	The program aims to support the CCD secretariat office, regional and sub regional offices and the Water Resources Department in conducting community awareness raising programs on a continuous basis to address land degradation and to promote afforestation programs throughout all six zobas in Eritrea. Overall planned budget: US$ 80,000 **Baseline contribution:** Out of this about 50% of the budget will be allocated for the CHZ, however the project is not yet approved	Outcome 1
Government Forest research **Since 1995 – ongoing**	Forestry Research Unit of NARI; government funding	Over the last 12 years, the Forestry Research Unit of NARI has conducted research on species elimination trials; evaluation of several *Eucalyptus* species and provenances; fodder species trial with *Gliricidia sepium, Leucaena leucocephala, Sesbania sesban* etc*;* spacing and crop performance trial with *Cordia africana* and *Jacaranda mimosifolia;* agroforestry research/demonstration trials, i.e *Cajanus cajan* with commonly planted crops such as wheat, barley and pulses and alley cropping trial with *Leucaena leucocephala;* adaptation potential of tree planting on field boundaries and terrace hedges; germination & seedling pot sizes trials; and some gene conservation	Outcome 2

		efforts. Overall budget: US$ 27,000 p.a. (US$ 135,000 for 5 years) **Baseline contribution:** About 70% of fund is allocated for CHZ research program at Merhano and Halhale for a total of US$94,500 over 5 years	
Sustainable Land Management Program (SLM Eritrea) **2007 – 2008**	NARI	Under this research program, NARI with SLM Eritrea will work on the development of a watershed management model at the Afdeyu Research Sub-Station. Under its outreach program SLM Eritrea promotes the adoption of soil and water conservation and watershed management within the CHZ to improve livelihood and food security. The outreach program is severely constrained by the lack of security of land tenure. Overall budget: US$48,000 **Baseline contribution:** All activities: US$ 48,000	Outcome 2
Research on integrated watershed management Ongoing since 2001 **2006 – 2010**	NARI	Following the restructuring of MoA in 2001, research on integrated watershed management was added to NARI's research program. NARI is now conducting a survey of indigenous knowledge related to integrated watershed management. Overall budget: US$ 135,000 **Baseline contribution:** Survey/all activities: US$ 135,000	Outcome 2 Outcome 1
Conservation Agriculture **2006 - 2008**	NARI/MoA and TCP/FAO; government funding	NARI/MoA and TCP/FAO completed a two-year joint pilot program on conservation agriculture, working on both the CHZ and the lowlands. NARI has continued the work, mainly by training of farmers and conducting a pilot program involving the introduction of different farming implements, identifying cover crop legumes, and identifying appropriate technology on agronomic practices Overall budget: US$ 81,000 (US$ 27,000 p.a.) **Baseline contribution:** All activities: US$ 81,000 (US$ 27,000 p.a.)	Outcome 2 Outcome 1
Temporary protection for the regeneration of dry land forests **2006 - 2011**	MoA; funded by communities through in-kind contributions	Following independence, MoA developed a successful joint program with local communities for the rehabilitation and reforestation of degraded hillsides and woodlands mainly in the CHZ and on the escarpment. These rehabilitation techniques will form an important element of sustainable land management systems to be developed by this project. A total of about 6000 hectares of degraded hillsides and woodlands are under temporary closures with in the CHZ. To protect these temporary closures, communities spend a total of about US$ 36,000 per year to hired guards and this is equivalent to about US$ 210,000 over a period of 2006-11. Overall budget: US$ 210,000 **Baseline contribution:** Activities in project area 10%: US$ 21,000	Outcome 1
Permanent Closures	GoE	Presently a total of about 92,300 ha of highland forest, mainly composed of *Juniperus procera* and *Olea Africana* have been declared permanent closures and the Government of Eritrea is protecting these forest from any form of exploitation (FAO,2000). These *de facto* protected areas have not been formally gazetted as protected areas. Overall budget: No data **Baseline contribution:** TBD	Outcome 1

Reforestation by students' summer campaigns **Since Independence – ongoing**	MoE and MoA; government funded	Since 1994, Eritrean students throughout the country have participated in reforestation and soil-conservation campaigns during *Kremti* (June-July) during their summer vacations. About 18,000 students participated in the 2006 summer student campaign. This program has been continuous since independence and will continue in similar fashion. About 70 percent of students are from the CHZ Overall budget: US$ 1.3 million p.a. **Baseline contribution:** About 70 percent of students are from the CHZ and therefore, about US$ 0.91 million/year are being spent in the CHZ	Outcome 1
Warsay-Yikealo Economic Development Program **1998 – ongoing**	GoE	A government economic development program started in mid-1998 planned to make up for lost development opportunities that were derailed due to the war. Reforestation and soil and water conservation are parts of the environment recovery and agricultural land improvement program of Warsay-Yikealo project. This program is ongoing and supports the construction of small dams, ponds and diversion structures for irrigation projects, hillside and farmland terraces, check dams and tree planting. It is implemented mainly by mobilizing communities with support of machinery and skilled personnel from the government and the Eritrean defense forces. Overall budget: US$ 3.4 million p.a. (CHZ) **Baseline contribution:** SLM contributions: US$ 1.4 million p.a. (CHZ)	Outcome 1 [Outcome 3]
TICD Toker Project **2006- 2007**	**Toker Integrated Community Development (TICD)** **Mainly funded by NOVIB/The Netherlands**	TICD is a local NGO that started operations in mid-1994 TICD's overall program is focused on support to communities in planning and implementation of integrated rural development projects. The Toker Project covers sub-zoba Serejeka in the Central Highlands. The main areas of intervention are improved crop husbandry; water development and irrigation, soil and water conservation, home economics and gender and livestock development. The total budget allocated for year 2006 is 4.9 million Nakfa (US$ 0.33 million) and for year 2007 it is 4.5 million Nakfa (US$ 0.30 million). Of the total budget about US$154,000 and US$ 83,000 respectively are allocated to activities directly related to SLM. Overall budget: approx. US$ 0.3 million p.a. **Baseline contribution:** SLM contributions: US$ 237,000	Outcome 1 [Outcome 3]
The Eritrean Sustainable Natural Resource Management Forum (ER-SNRMF) **Ongoing**	Hosted by TICD with funding from Novib	The forum's mission is to improve the sustainable land use capacities of the farming community, government, non-government organizations, civil society groups and private sector entities through training, workshops, study tours, exchange visits, establishment of an information center, and through the creation of a forum for information exchange amongst members and regional and international organizations Overall budget: US$ 80,000 p.a. **Baseline contribution:** All activities: US$ 400,000 U$	Outcome 1 Outcome 3 Outcome 4
Integrated Community Development Project **2006 - 2008**	Funded by the Norwegian Embassy Implemented by the NGO LWF/WS-ER	The project is focusing on Shiketti which is in the CHZ. Project activities related to sustainable land management include capacity building of local institutions, soil and water conservation, forestry development, and agricultural input supply. Overall budget: US$ 745,000. **Baseline contribution:** Capacity building of local institutions: US$ 33,100 Soil and water conservation: US$ 206,800 forestry development Agricultural input supply: US$ 27,800	Outcome 1 Outcome 2 Outcome 3
Central Highland Irrigated Horticultural	African Development Fund (ADF)	Project to promote small scale irrigation for horticulture production by developing surface and groundwater within the central highland regions. In year 2006, the project allocated US$ 2.07 million for irrigation infrastructure construction mainly for the development of small scale irrigation downstream of existing small dams. By	Associated

Development Project **2006 – ongoing**		increasing agricultural productivity, this project indirectly increases farmer's ability to invest in SLM. Overall budget: data not available **Baseline contribution:** SLM contributions: US$ 2.07 million	
Testing and dissemination of improved stoves Since 1995 2007 – 2011	Energy Research and Training Center (ERTC) of MoEM	The Energy Research and Training Center (ERTC) of the Ministry of Energy and Mines initiated a research and development program in 1995 to develop improved *mogogo* stove for baking the local staple bread using fewer wood and dung resources. ERTC continues to work on the testing, promotion and dissemination of improved stoves. As of 2005, over 26,000 improved stoves had been installed. ERTC has targeted the installation of an additional 10,000 improved stoves annually with in the highlands region. Overall budget: US$ 1.25 million (2007 – 2011) **Baseline contribution:** 10% of budget dedicated to CHZ: US$ 125,000	Associated
Catchment and Landscape Management	IFAD	A GEF concept note and PDF-B funding request have been prepared with IFAD for a poject to be entitled "Catchment and Landscape Management". The GEF funding would be an SLM increment to the proposed Livestock Rehabilitation and Development Program (LRDP), to be jointly financed by IFAD, GoE, OPEC and the participating communities. LRDP would provide investment in community driven agricultural development particularly targeting the rural poor. The LRDP incorporate community capacity building, community and household income generating investment and a program management component. Four sub-zobas from Zoba Gash-Barka (western Lowland) and two sub-zobas from Zoba-Debub (Central Highland) are targeted under this project. The GEF program under this project is to integrate SLM strategies with LRDP program for sustainable utilization of resources. The incremental outcomes under this project, particularly that of the highland can easily be synergized with FSP-SLM project. The Community capacity building in land and water use planning and catchment and landscape planning and management and building capacity of government staff and institutions to initiate, implement and manage, monitor and evaluate land and water use planning at local and regional level will enhance the replication and adopting of SLM models developed under this FSP. Therefore, There is a great opportunities for developing synergies between this GEF project and the IFAD/PDF-B CLM project. There is also an opportunity for exchanging progressive lessons learnt between this FSP-SLM project and IFAD implemented GEF project.	Planned
Integrated Rural Development Program	World Bank, AFDB, EC, IFAD and others	The GoE has presented an Integrated Rural Development Program for co-financing by World Bank, AfDB, EC, IFAD and others. The proposed program covers agriculture, and irrigation development, rural infrastructure, rural water supply, rural water supply, rural electrification and capacity building. Though the project is still at appraisal stage consultation regarding this GEF project has been made with the World Bank Mission in Ertirea and it was clear that the results of SLM will support the intended rural development programs by being input for sustainable use of the natural resources for sustainable development.	Planned

ANNEX A– M&E SUPPLEMENT EXPLAINING INDICATORS, MEASUREMENTS, MEANS OF VERIFICATION AND COSTS OF MEASURING GLOBAL ENVIRONMENT BENEFITS

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Description of GEB	Indicators	Baseline situation	Expected situation (end of project)	Means/sources of verification	Budget in US$
Carbon sequestration	Change in soil carbon in the long run and change in soil organic matter in the shorter term11.	To be established during project inception period	Real changes expected long after the project duration, but perhaps 2-5% increase in soil organic matter	Measured annually using the ICRAF's soil spectrometer, reported in the project periodic and technical reports	500 – the ICRAF spectrometer is very cheap, costing cents per measurement
Reduction in soil erosion	• Amount of soil in flowing water (water runoff); • Rate of recovery for erosion rills and gulleys • Amount of soil contained in the streams (extent of brownness on rivers)	In general, the Central highlands are loosing about 15 tons of soil per ha annually	50% reduction in soil erosion	Sample plots will be established during project inception, including control plots in non project area. More accurate soil erosion measurements will be taken and subsequently measured annually. This will be reported in the project M&E system and periodic reports	1000
Improvement in ground water storage	Reduction in water runoff after the rains as a measure of improved infiltration (proxy indicator)	Very little infiltration due to the fact that most land is bear, especially at the beginning of the rains when crops are not yet established. However more accurate runoff figures will be established during project inception period when sample and control plots will be established	At least 50% reduction in water runoff	Measurements taken bi-weekly during the rainy season only and reported in the M&E and annual/ periodic reports	1000
Increase in fertility	Rate of adoption of techniques (proxy indicator) Change in yields (proxy indicator) Change in soil chemistry	Soils are very poor currently as indicated by the very low yields. However, accurate measurements will be taken during the project inception when sample and control plots have been identified	At least 50% increase in soil fertility	Measurements taken per cropping season and reported in the in the M&E and annual/ periodic reports	1000

[11] It is noted that it possible that none of these indicators will show significant changes during the life of the project, but the government and TerrAfrica are interested in monitoring this indicator in the long run. The project will therefore establish the baseline and take annual measurements for the duration of the project but hand those over to both the government and TerrAfrica through the National SLM and CSIF processes.

Pollination services	Change in the population of pollinators such as bees	Farmers currently report drastic decline in bee populations due to change in vegetation[12]	At least 25% recovery of the bee population	Measurements taken per cropping season and reported in the in the M&E and annual/ periodic reports	1000
Total					**4,500[13]**

[12] It should be noted that there is global trend in declining bee populations and the reasons for this are not yet understood (or there is no agreement on the reasons for this trend). It is possible therefore that even an improvement in the ground cover provided by return of a healthy ground cover (annuals, herbs, etc.) may not automatically facilitate a recovery of the bee population. However, this still needs to be monitored as it might provide information that could contribute to the global debate and understanding of what is happening with the bee populations.

[13] It should be noted that collection of monitoring data is part of the project implementation, budgeted for under outcomes 1 (participatory ecological M&E) and outcome 3 (Knowledge management).

SIGNATURE PAGE

Country: **ERITREA**

UNDAF Outcome(s)/Indicator(s): **By providing access to adequate food at al times for 10% of the poor by 2011, contribute to the achievement of halving hunger and ensuring environmental sustainability.**
(Link to UNDAF outcome., If no UNDAF leave blank)

Expected Outcome(s)/Indicator (s): **Support development and protection of the environmet and national resources by 2011.**
(CP outcomes linked to the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s): **Enabling conditions for sustainable land management established**.
(CP outcomes linked t the SRF/MYFF goal and service line)

Implementing partner: **Central Region - Ministry of Agriculture**
(designated institution/Executing agency)

- Other Partners: **Ministry of Land, Water & Environment, Min. of Agriculture, Ministry of Finance, Central Region Administration Office, National Agricultural Research Institute, Ministry of Energy and Mines (Energy Research and Training Center), Toker Integrated Community Development (local NGO),**

Programme Period: 2009-13
Programme Component: **Environment and Sustainable Development**
Project Title: SIP-Sustainable Land Management-Eritrea
Project ID: 00050956
Proposal No: 00063220
Project Duration: January 2009- December 2013
Management Arrangement: National execution (NEX)

Total budget: (excl. in-kind) $4,070,000
Allocated resources: _____

- Government _____
- Regular (UNDP) $1,000,000
- Other: (GEF) $1,820,000
  - Donor (Norway) $1,000,000
  - Donor
  - Donor
- In kind contributions (Gov't) $250,000

Agreed by (Government): _____

Ministry of Finance Signature Date Seal

Agreed by (Implementing partner/Executing agency):_____

Ministry of Agriculture-Central Region Signature Date Seal

Agreed by (UNDP/GEF): __________

Signature Date Seal