

Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities

Environmental and Social Management Plan

Introduction

This Environmental and Social Management Plan (ESMP) has been prepared in support of the project proposal on “*Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities*” by the Government of Ethiopia to the Green Climate Fund. As this project is supported by UNDP in its role as a GCF Accredited Entity, the project has been screened against the UNDP’s Social and Environmental Standards Procedure and deemed a Medium Risk (International Finance Corporation/World Bank Category B) project.

Background on the project

The aim of the project is to build the resilience of vulnerable communities to drought that have been exacerbated by climate change. Fundamentally, this requires that the predominately rural communities achieve diversification from their existing reliance on agriculture, in climate smart ways and adapt to the future impacts of climate change.

The proposed project responds to the underlying causes of low resilience within Ethiopia’s rural communities by using a landscape approach to systematically build resilience to drought and variability in rainfall though adapting this particularly circumstances of each targeted community (or landscape).

To ensure current knowledge and future learnings are gained across the diverse sectors and communities of Ethiopia, the project will work in at least one Woreda (District) in each region - a total of 22 Woredas will be targeted across the ten regions (Figure 1), thereby benefitting a population of about 2.5 million people (Table 1). The project design assumes that implementation will be supported in an average of eight Kebeles (Sub-Woredas) per Woreda. Woredas have been selected based on their vulnerability and susceptibility to drought or increasing variability of rainfall, all as a result of changes in climatic patterns, as well as satisfy core feasibility criteria; specifically adequate availability of water and physical access to markets, as well as the commitment of communities and other stakeholders to participate in the proposed initiatives.

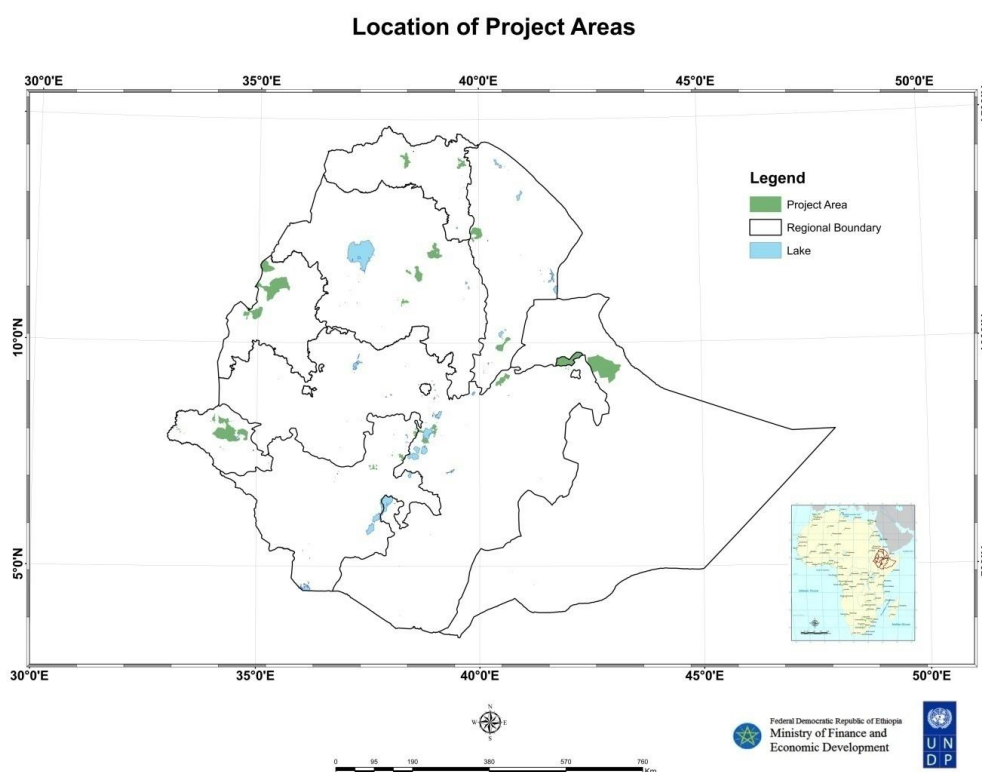


Figure 1: Location of project areas

Table 1: Woredas identified for project participation

Region	Targeted Woredas	Population	
		Female	Male
Tigray	Tahitay Koraro, Saesi Tsadamba	47,657	45,599
Amhara	Enbesi Sar Mider, Tachi Gayint, Lasta	210,165	206,186
SNNPR	Mareko, Hadero Tunito, Halaba Special	249,020	248,284
Oromia	Yabelo, Zewaye Dugda, Jida, Mieso	252,325	255,463
Gambella	Abobo, Etange	33,003	34,037
Afar	Gewane, Yallo	18,551	21,951
Somali	Jigjiga, Kebribeyah	258,975	288,903
Harari	Harari	115,000	117,000
Dire Dawa	Biyo Awale	1895	1,956
Benshangul Gumuz	Guba, Wembera	48,269	46,058
Total		1,234,860	1,265,437

The project has three main components and associated sub-components, with each sub-component comprising several activities:

1. **Technologies and infrastructure solutions for resilient livelihoods.** The main objective of this component is to improve agricultural and livestock productivity; and reduce land degradation through sustainable introduction of appropriate technologies. This component will also provide supporting infrastructures leading to enhanced resilience of vulnerable communities by minimizing the adverse impacts of drought.
2. **Livelihood Diversification and Protection.** This component will enable livelihood diversification through supporting high value agricultural activities (eg, modern vegetable and fruit production and non-timber forest products), as well as strengthening linkages in the value chain of agricultural and livestock products.
3. **Enabling Environment.** The enabling environment component is central to bringing a paradigm shift to build resilience of the vulnerable communities and address capacity constraints at all levels in a transformative and sustainable approach that involves establishing/strengthening climate responsive integrated planning and budgeting systems, strengthening institutional capacity, and establishing an efficient programme management system.

Assumptions underpinning the development of the ESMP

The following assumptions have been made in the preparation of this Environmental and Social Management Plan:

- a. none of the interventions will require the displacement of people;
- b. none of the interventions will be conducted in sensitive locations;
- c. the building of the water harvesting and erosion control structures will be undertaken during the dry season to reduce erosional impacts;
- d. appropriate erosion and sediment control will be undertaken during all stages of the projects; and
- e. there will be no release of pollution and/or chemicals as a result of the projects.

Governing Legislation and Standards

National Environmental and Social Legislation

The legislative and policy basis for the provision of environmental protection in Ethiopia is controlled through the following, which are discussed further below:

- a. The Constitution;
- b. The Environment Policy;
- c. Proclamation 299/2002, Environmental Impact Assessment (EIA);
- d. Proclamation 300/2002, Environmental Pollution Control;
- e. Proclamation 513/2007, Solid Waste Management;
- f. Proclamation 159/2008, Prevention of Industrial Pollution – Council of Ministers Regulation;
- g. EIA Guideline, July 2000;
- h. EIA Procedural Guideline, November 2003;
- i. Guideline for Environmental Management Plan (draft), May 2004; and
- j. The Climate Resilient Green Growth (CRGE) Strategy.

Additionally, the project is being undertaken by the UNDP. As such, the project will not only comply with Ethiopia's national law, but with any obligations applicable under international law, whichever is the higher standard.

a) The Constitution

The project components and outputs are in line with many of the provisions of the Constitution of the Federal Democratic Republic of Ethiopia.

Many aspects of the project satisfy the constitutional provision of Article 43 (4) that states:

"The basic aim of development activities shall be to enhance the capacity of citizens for development and to meet their basic needs."

Project activities such as small scale irrigation, watershed conservation measures and water supply projects comply with this constitutional provision. The land requirements of the project for various activities, such as afforestation and irrigation, is assured through the provision of Article 40 (3), which states:

"The right to ownership of rural and urban land, as well as of all natural resources, is exclusively vested in the State and in the peoples of Ethiopia. Land is a common property of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or to other means of exchange."

The project activities and their outputs are in line with Article 41 (6), which states:

"The State shall pursue policies which aim to expand job opportunities for the unemployed and the poor and shall accordingly undertake programmes and public works projects."

The consultations so far conducted by the project proponents and the requirement of the ESMP for public disclosure and consultations with affected parties fulfils the requirements of the constitutional provision of Article 43 (2) that states:

"Nationals have the right to participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community."

Article 92 refers to the state's responsibility to design and implement programs and projects that do not damage the environment and establishes the joint responsibility of the government and citizens to protect the environment.

Finally, the ESMP is an instrument that attempts to fulfil the provision of Article 44 (1) that states:

"All persons have the right to a clean and healthy environment."

b) The Environment Policy

The *Environmental Policy of Ethiopia* (EPE) was approved on April 2, 1997 by the Council of Ministers and consists of ten sectoral and ten cross-sectoral policies. The EPE has embraced the concept of sustainable development. As its goal, the EPE states

"to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of future generations to meet their own needs."

Some of the policy provisions relevant to the project at hand include the following:

- a. To promote in drought-prone and low rainfall areas water conservation which is as important as physical soil conservation for more secure and increased biomass production, including crop production;

- b. To develop forestry on the farm, around the homestead and on eroding and/or eroded hillsides in order to increase the stock of trees for fuel wood, construction material, implements and crafts, for forage and for other tree products;
- c. To undertake full environmental, social and economic impact assessments of all existing irrigation schemes in the rangelands and wherever needed establish programmes of correcting their negative environmental, social and economic impacts.
- d. To recognize that public consultation is an integral part of EIA and ensure that EIA procedures make provision for both an independent review and public comment before consideration by decision makers;
- e. To ensure that forestry development strategies integrate the development, management and conservation of forest resources with those of land and water resources, energy resources, ecosystems and genetic resources, as well as with crop and livestock production; and
- f. To ensure that all phases of environmental and resource development and management, from project conception to planning and implementation to monitoring and evaluation are undertaken based on the decisions of the resource users and managers.

The former Environment Protection Authority (EPA) has issued several guidelines including the: (i) "EIA Guideline Document of the EPA" (2000), (ii) Procedural EIA Guideline of EPA (2003), and (iii) 2004 EPA's EIA Guidelines for sectors including: (a) road and railway; (b) fisheries projects, (c) forestry, (d) hydropower production, transportation and distribution, (e) irrigation projects, (f) livestock and rangelands, (g) mineral and petroleum operation projects, (h) water supply, and (i) Sustainable Industrial Zone/Estate Development.

c) Proclamation 299/2002, Environmental Impact Assessment

The EIA Proclamation makes EIA a mandatory requirement for the implementation of major development projects, programs and plans. The Proclamation is a tool for harmonizing and integrating environmental, economic, cultural, and social considerations into decision making processes in a manner that promotes sustainable development. The why and how to prepare, methodologies, and to whom the report is submitted are described in this law. The law clearly defines:

- a. Why there is a need to prepare EIAs;
- b. What procedure is to be followed by the MSE in order to implement EIA of the project;
- c. The depth of environmental impact studies;
- d. Which projects require full EIA reports;
- e. Which projects need partial or no EIA report; and
- f. To whom the report has to be submitted.

Directive No. 1/2008 A Directive Issued to Determine Projects Subject to the Environmental Impact Assessment Proclamation No.299/2002 lists the projects that require EIAs. None of the activities proposed under the proposed project are listed, therefore EIAs are not expected to be required. Should this change or the need for an EIA be identified, then a full assessment would be undertaken as part of the implementation

d) Proclamation 300/2002, Environmental Pollution Control

Complementary to the EIA legislation, which requires developmental activities to give considerations to environmental impacts before their establishment, the Pollution Control Proclamation requires ongoing activities to implement measures that would reduce their degree of pollution to a set limit or quality standard. Thus, one of the dictates of the legislation is to ensure through inspection the compliance of ongoing activities with the standards and regulations of the country i.e. environmental audit.

e) Proclamation 513/2007, Solid Waste Management

Proclamation 513/2007 aims to promote community participation in order to prevent adverse effects and enhance benefits resulting from solid waste. It provides for preparation of solid waste management action plans by urban local governments.

f) Proclamation 159/2008, Prevention of Industrial Pollution - Council of Ministers Regulation

As a follow up to Proclamation 300/2002, a regulation to prevent industrial pollution was developed by the Federal Environmental Protection Authority to ensure the compatibility of industrial development with environmental conservation. This regulation (Proclamation no. 159/2008) also includes comprehensive industrial pollution standards for a range of industrial and mining activities.

g) EIA Guideline, July 2000

The EIA Guideline Document provides essential information covering:

- a. Environmental Assessment and Management in Ethiopia;
- b. Environmental Impact Assessment Process;
- c. Standards and Guidelines; and
- d. Issues for sectoral environmental impact assessment in Ethiopia covering: agriculture, industry, transport, mining, dams and reservoirs, tanneries, textiles, hydropower generation, irrigation projects and resettlement projects.

The guideline also contains annexes that:

- a. identify activities requiring a full EIA, partial measure or no action;
- b. contain sample forms for application; and
- c. provide standards and guidelines for water and air.

h) EIA Procedural Guideline, November 2003

The guideline outlines the screening, review and approval process for development projects in Ethiopia and defines the criteria for undertaking an EIA.

Relevant to the project are the activities listed in Annex II, Schedules 1 and 2, which require either full or preliminary EIS. However, Directive No.1/2008 (refer above) modifies this list and consequently none of the proposed activities requires an EIA.

i) Guideline for Environmental Management Plan (draft), May 2004

The Guideline outlines the necessary measures for preparation of an Environmental Management Plan (EMP) for proposed developments in Ethiopia and the institutional arrangements for implementation of EMPs. This ESMP complies with the requirements of the Guideline.

j) The CRGE Strategy

The CRGE strategy focuses on four pillars that will support Ethiopia's developing green economy:

- a. Adoption of agricultural and land use efficiency measures;
- b. Increased GHG sequestration in forestry, i.e., protecting and re-establishing forests for their economic and ecosystem services including as carbon stocks;
- c. Deployment of renewable and clean power generation; and
- d. Use of appropriate advanced technologies in industry, transport, and buildings.

In general, four initiatives for fast-track implementation have been selected under the CRGE: (i) exploiting Ethiopia's hydropower potential; (ii) large-scale promotion of advanced rural cooking technologies; (iii) efficiency improvements to the livestock value chain; and (iv) reducing Emissions from Deforestation and forest Degradation (REDD).

Alignment of National Policies and Laws with GCF Safeguard Standards

Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts

Ethiopia's Environmental Policy defines the environmental and social objectives and principles that guide the project to achieve sound environmental and social performance; while the EIA Proclamation (Proclamation no. 299/2002) sets a process for identifying the environmental and social risks and impacts of the project;

The ESMP incorporates as appropriate what is required by the GCF's ESMS that include: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review.

Performance Standard 2: Labor and Working Conditions

Ethiopia's Labor Proclamation (Proclamation No. 377/2003) protects the rights of contract employees and contains similar provisions of PS2 of GCF safeguard standard. The proclamation's provisions such as the obligations of employers to respect human dignity of employees, to take measures for occupational health and safety and has clear provisions that stipulate the obligations of the employee and the employer. It is unlawful to discriminate against female workers in matters of remuneration on the grounds of their sex; discriminate between workers on the basis of nationality, sex, religion, political outlook or any other condition. Project implementers need to ensure that these national laws and GCF performance standard are implemented at all project sites. While the PS2 recommends not to employ children under 18 years, the proclamation "prohibits employing persons under 14 years of age." In cases where there are misalignments between the national and international requirements, it is advisable to adopt the more stringent standard.

Performance Standard 3: Resource Efficiency and Pollution Prevention

Ethiopia's Pollution Control Proclamation and standards (Proclamation no. 300/2002). The proclamation starts out by stating that

"some social and economic development endeavors may inflict environmental harm that could make the endeavors counterproductive" and further states "it is appropriate to eliminate, or where not possible, to mitigate pollution as undesirable consequence of social and economic development activities."

The proclamation has standards and penalties for waste management and disposal and it can be concluded that the provisions of the proclamation align well with the GCF performance standard.

Performance Standard 4: Community Health, Safety, and Security

The Food, Medicine and Health Care Administration and Control Proclamation (Proclamation No. 661/2009) replaces the earlier Public Health Proclamation (Proclamation No. 200/2000).

Proclamation No. 661/2009 contains important provisions that are relevant to the project and these include:

- a. *It is prohibited to give water supply service from springs, wells or through pipes unless its quality is verified by the Health Authority;*
- b. *Any employer shall ensure the availability of occupational health services to his employees;*
- c. *The use of any machinery or instrument which generates excessive noise is prohibited. Any person who uses such machinery or instrument shall install noise reducing apparatus or –instrument; and*
- d. *No person shall dispose solid, liquid or any other waste in a manner which contaminates the environment or affects the health of the society.*

Performance Standard 5: Land Acquisition and Involuntary Resettlement

Ethiopia's Proclamation to provide for the expropriation of land holdings for the public purposes and payment of compensation (Proclamation No. 455/2005), and the Rural Land Administration and Use Proclamation (Proclamation 456/2005) cover provisions contained in GCF PS5.

Proclamation 456/2005 includes provisions that are in line with GCF performance standard 5:

- a. *"Holder of rural land who is evicted for purpose of public use shall be given compensation proportional to the development he, has made on the land and the property acquired, or shall be given substitute land thereon; and*
- b. *Rural lands that have gullies shall be made to rehabilitate by private and neighboring holders and, as appropriate, by the local community, using biological and physical works."*

The Expropriation of Land Holdings for Public Purposes and Payment of Compensation Proclamation No.455/2005" states that

"A woreda or an urban administration shall, upon payment in advance of compensation in accordance with this Proclamation, have the power to expropriate rural or urban landholdings for public purpose where it believes that it should be used for a better development project to be carried out by public entities, private investors, cooperative societies or other organs, or where' such expropriation has been decided by the appropriate higher regional or federal government organ for the same purpose."

The law specifies procedures of expropriation, compensation payment, displacement of land holders and grievance and appeal.

No resettlement is proposed as part of this project.

Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Proclamation No. 381/2004, Institute of Biodiversity Conservation and Research Establishment Proclamation delegates the Institute of Biodiversity Conservation. *"to ensure the conservation of the country's biodiversity using ex-situ and in-situ conservation methods"*.

Proclamation No. 482/2006 Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation's objective is *"to ensure that the country and its communities obtain fair and equitable share from the benefits arising out of the use of genetic resources so as to promote the conservation and sustainable utilization of the country's biodiversity resources;"* Subsequent provisions focus on access rights to genetic resources.

Performance Standard 7 on Indigenous Peoples

There is no specific national legislation on this aspect as the Ethiopian population is indigenous. In the Ethiopian context this may not be relevant, but the provisions are relevant to any rural community in the selected project areas. The provisions of PS 7 will be addressed through the appropriate implementation of this ESMP.

Performance Standard 8 on Cultural Heritage

Ethiopia's Research and Conservation of Cultural Heritage Proclamation (Proclamation No. 209/2000) established the Authority for 'Research and Conservation of Cultural Heritage and is mandated

to protect and supervise Cultural Heritage; collect information on Cultural Heritage and define the nature and classify the standards of same; give the necessary education and advice on the content, benefit and preservation of Cultural Heritage.

The proclamation stipulates

“no person may, without a permit issued by the Authority, carry out building or road construction, excavations of any type or any operation that may cause ground disturbance in an area declared reserved.”

The project does not propose to undertake any of the above controlled activities in areas declared as reserved.

Overview - Institutional Requirements for the Environmental and Social Management Plan

The ESMP will be used for the project by the Ministry of Environment, Forests and Climate Change (MEFCC) and UNDP and further enhanced as required for specific sub-components at specific locations. The ESMP identifies potential risks to the environment and social matters from the projects and outlines strategies for managing those risks and minimizing undesirable environmental and social impacts. Further, the ESMP provides a Grievance Redress Mechanism for those potentially impacted.

The MEFCC will be responsible for the supervision of the ESMP. The UNDP will gain the endorsement of the MEFCC and will ensure the ESMP is adequate and followed. The supervising engineer will ensure timely remedial actions are taken by the contractor where necessary.

Objectives of the Environmental and Social Management Plan

An ESMP is a management tool used to assist in minimizing the negative impact to the environment and socially of a project; and reach a set of environmental and social objectives. To ensure the environmental and social objectives of the projects are met, this ESMP will be used by the contractor to structure and control the environmental management safeguards that are required to avoid or mitigate adverse effects on the environment.

The environmental and social objectives of the projects are to:

- a. increase the productivity of livelihoods and the populations' capacity to adapt to climate change through various tested interventions in a coordinated manner to effectively address the challenges facing the rural populations of Ethiopia;
- b. improve the water supply to populations in the targeted areas and introduce water and soil conservation measures;
- c. improve farming practices to increase productivity and resilience including irrigation, improved seed supply, improved animal husbandry practices diversification of crops (agro-forestry);
- d. increase access to credit facilities to allow for improved agricultural productivity;
- e. provide an early warning system that ensures adequate measures are undertaken prior to any event;
- f. encourage good management practices through planning, commitment and continuous improvement of environmental practices;
- g. minimize or prevent the pollution of land, air and water pollution;
- h. protect native flora, fauna and important ecosystems;
- i. comply with applicable laws, regulations and standards for the protection of the environment;
- j. adopt the best practicable means available to prevent or minimize harmful environmental impact;
- k. describe monitoring procedures required to identify impacts on the environment; and
- l. provide an overview of the obligations of MEFCC and UNDP staff and contractors in regard to environmental obligations.

The ESMP will be updated from time to time by the contractor/s in consultation with the UNDP staff and MEFCC to incorporate changes in the detailed design phase of the projects.

General Management Structure and Responsibilities

The MEFCC will be the implementing agency and as such, will be responsible for the delegation of authority (DoA) for implementation to other Ministries. The MEFCC will be assisted by other federal line ministries, in particular the Ministry of Agriculture and Natural Resources, Ministry of Livestock and Fisheries and Ministry of Water, Irrigation and Electricity.

The federal line ministries have DoA to conduct ESIA for projects under their jurisdiction, as provided to them by the former Environment Protection Authority (EPA) which is still valid under the new MEFCC. A sample DoA provided by the EPA to the Ministry of Water, Irrigation and Electricity is attached (Annex 1).

The implementation of the ESMP will utilize the project implementation arrangements by embedding responsible officers at all levels of the governance structure, at federal, regional, and woreda levels (Figure 2).

There are already environmental units in all line ministries. It is recommended to designate Project Environment Management Officers (EMO) to work with the staff of the four Federal Project Coordination Units. The EMOs will also be designated in the regional bureaus and Woreda offices. Where employment of new staff for the environment post is required, it has to be done well ahead of the launching the project in order for the staff to benefit from the capacity building activities under this ESMP.

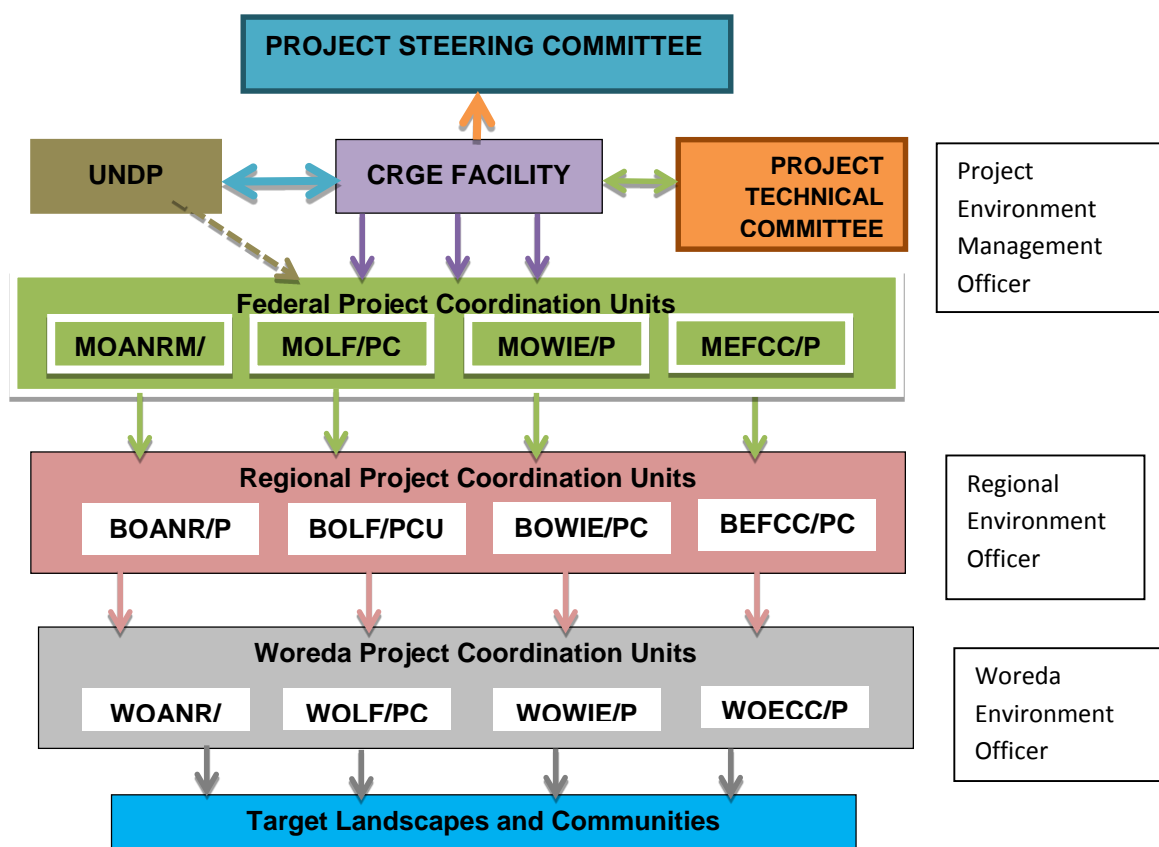


Figure 2. Proposed project implementation structure and environmental coordination roles

The UNDP and MEFCC are accountable for the provision of specialist advice on environmental and social issues to the contractors and for environmental and social monitoring and reporting. The MEFCC or its delegate will assess the environmental and social performance of the contractor in charge of construction throughout the project and ensure compliance with the ESMP. During operations the contractors will be accountable for implementation of the ESMP. Contractors working on the projects have accountability for preventing or minimizing environmental and social impacts.

Administration

The MEFCC will be responsible for the revision or updates of this document during the course of work. It is the responsibility of the person to whom the document is issued to ensure it is updated.

The site supervisor will be responsible for daily environmental inspections of the construction site. The MEFCC or its delegate will cross check these inspections by undertaking monthly audits.

The contractor and/or persons undertaking activities under the project will maintain and keep all administrative and environmental records which would include a log of complaints together with records of any measures taken to mitigate the cause of the complaints.

The contractor will be responsible for the day to day compliance of the ESMP.

MEFCC will be the implementing agency and will be responsible for the implementation and compliance with the ESMP via the contractor. The ESMP will be part of any tender documentation.

The Supervising Engineer/Project Manager will supervise the contractor, while the MEFCC will be responsible for environment and social issues.

Site Supervisor

The site supervisor is responsible for ensuring compliance with the ESMP. The site supervisor will provide advice on effective environmental management of the project to the UNDP Staff, MEFCC and engineers and all construction site personnel. The site supervisor is to also ensure the environmental awareness of project personnel is maintained through appropriate training. A compliance report on mitigation measures will be submitted by the UNDP to MEFCC for the civil contractor. An independent review of the compliance may be undertaken during construction and post construction where deemed necessary.

Environmental Procedures and Site and Activity-Specific Work Plans/Instructions

Environmental procedures provide a written method describing how the management objectives for a particular environmental element are to be obtained. They contain the necessary detail to be site or activity-specific and are required to be followed for all construction works. Site and activity-specific work plans and instructions are to be issued and will follow the previously successful work undertaking similar projects by the African Development Bank, IUCN and World Bank.

Environmental Incident Reporting

Any incidents, including non-conformances to the procedures of the ESMP are to be recorded using an Incident Record and the details entered into a register. For any incident that causes or has the potential to cause material or serious environmental harm, the site supervisor shall notify MEFCC as soon as possible. The contractor must cease work until remediation has been completed as per the approval of MEFCC.

Daily and Weekly Environmental Inspection Checklists

A daily environmental checklist is to be completed at each work site by the relevant site supervisor and maintained within a register. The completed checklist is forwarded to MEFCC for review and follow-up if any issues are identified. A weekly environmental checklist is to be completed and will include reference to any issues identified in the daily checklists completed by the Site Supervisors.

Corrective Actions

Any non-conformances to the ESMP are to be noted in weekly environmental inspections and logged into the register. Depending on the severity of the non-conformance, the site supervisor may specify a corrective

action on the weekly site inspection report. The progress of all corrective actions will be tracked using the register. Any non-conformances and the issue of corrective actions are to be advised to MEFCC.

Review and Auditing

The ESMP and its procedures are to be reviewed at least every two months by UNDP staff and MEFCC. The objective of the review is to update the document to reflect knowledge gained during the course of construction operations and to reflect new knowledge and changed community standards (values). Any changes are to be developed and implemented in consultation with UNDP Staff and MEFCC. When an update is made, all site personnel will be made aware of the revision as soon as possible through a tool box meeting.

Training of Contractors

The main contractor has the responsibility for ensuring systems are in place so that relevant employees, contractors and sub-contractors are aware of the environmental and social requirements for construction, including the ESMP.

All construction personnel will attend an induction that covers health, safety, environment and cultural requirements.

All staff and contractors engaged in any activity with the potential to cause serious environmental harm (e.g. handling of hazardous materials) will receive task specific environmental training.

Public Consultation and Environmental and Social Disclosure

The ESMP includes public consultation as part of their stakeholder engagement plan. The project was developed with MEFCC staff and approved by Government. On-ground consultations have been undertaken in the design of the project and it is expected that consultation with any affected communities will continue. It is anticipated that based on the communities' needs, the projects will be fully accepted.

The UNDP and MEFCC will develop and release Community Flyers on a regular basis to provide interested stakeholders with an update on the construction status of the projects. A publicized telephone number will be maintained throughout the construction of all projects to serve as a point of contact for enquiries, concerns and complaints. All enquiries, concerns and complaints will be recorded on a register and the appropriate manager will be informed.

Where there is a community issue raised, the following information will be recorded:

- a. time, date and nature of enquiry, complaint or concern;
- b. type of communication (eg telephone, letter, personal contact);
- c. name, contact address and contact number;
- d. response and investigation undertaken as a result of the enquiry, complaint or concern; and
- e. actions taken and name of the person taking action.

Some enquiries, complaints and concerns may require an extended period to address. The complainant(s) will be kept informed of progress towards rectifying the concern. All enquiries, complaints and concerns will be investigated and a response given to the complainant in a timely manner. A grievance redress mechanism has been included in the ESMP to address any complaints that may not be able to resolved quickly.

A nominated contractor staff will be responsible for undertaking a review of all enquiries, complaints and concerns and ensuring progress toward resolution of each matter.

Complaints Register and Grievance Redress Mechanism

During the construction and implementation phases of any project, a person or group of people can be adversely affected, directly or indirectly due to the project activities. The grievances that may arise can be related to social issues such as eligibility criteria and entitlements, disruption of services, temporary or permanent loss of livelihoods and other social and cultural issues. Grievances may also be related to environmental issues such as excessive dust generation, damages to infrastructure due to construction related vibrations or transportation of raw material, noise, traffic issues, decrease in quality or quantity of private/ public surface/ ground water resources during irrigation rehabilitation, damage to home gardens and agricultural lands etc.

Should such a situation arise, there must be a mechanism through which affected parties can resolve such issues in a cordial manner with the project personnel in an efficient, unbiased, transparent, timely and cost-effective manner. To achieve this objective, a grievance redress mechanism has been included in ESMP for this project.

The project allows those that have a complaint or that feel aggrieved by the project to be able to communicate their concerns and/or grievances through an appropriate process. The Complaints Register and Grievance Redress Mechanism set out in this ESMP and to be used as part of the project will provide an accessible, rapid fair and effective response to concerned stakeholders, especially any vulnerable group who often lack access to formal legal regimes.

While recognizing that many complaints may be resolved immediately, the Complaints Register and Grievance Redress Mechanism set out in this ESMP encourages mutually acceptable resolution of issues as they arise. The Complaints Register and Grievance Redress Mechanism set out in this ESMP has been designed to:

- a. be a legitimate process that allows for trust to be built between stakeholder groups and assures stakeholders that their concerns will be assessed in a fair and transparent manner;
- b. allow simple and streamlined access to the Complaints Register and Grievance Redress Mechanism for all stakeholders and provide adequate assistance for those that may have faced barriers in the past to be able to raise their concerns;
- c. provide clear and known procedures for each stage of the Grievance Redress Mechanism process, and provides clarity on the types of outcomes available to individuals and groups;
- d. ensure equitable treatment to all concerned and aggrieved individuals and groups through a consistent, formal approach that, is fair, informed and respectful to a complaint and/or concern;
- e. to provide a transparent approach, by keeping any aggrieved individual/group informed of the progress of their complaint, the information that was used when assessing their complaint and information about the mechanisms that will be used to address it; and
- f. enable continuous learning and improvements to the Grievance Redress Mechanism. Through continued assessment, the learnings may reduce potential complaints and grievances.

Eligibility criteria for the Grievance Redress Mechanism include:

- a. Perceived negative economic, social or environmental impact on an individual and/or group, or concern about the potential to cause an impact;
- b. clearly specified kind of impact that has occurred or has the potential to occur; and explanation of how the project caused or may cause such impact; and
- c. individual and/or group filing of a complaint and/or grievance is impacted, or at risk of being impacted; or the individual and/or group filing a complaint and/or grievance demonstrates that it has authority from an individual and or group that have been or may potentially be impacted on to represent their interest.

Local communities and other interested stakeholders may raise a grievance/complaint at all times to the Kebele Administration, Woreda Administration, and Regional State Administration. Affected local communities should be informed about the ESMP provisions, including its grievance mechanism. Contact information of the Kebele, Woreda and Regional State designated environmental officer should be made publicly available.

Complaints Register

A complaints register will be established to record any concerns raised by the community during construction. Any complaint will be advised to the UNDP and MEFCC within 24 hours of receiving the complaint. The complaint will be screened. Following the screening, complaints regarding corrupt practices will be referred to the UNDP for commentary and/or advice along with the Ethiopian Institution of the Ombudsman (EIO).

A summary list of complaints received and their disposition must be published in a report produced every six months.

Grievance Mechanism

The Grievance Redress Mechanism has been designed to be problem-solving mechanism with voluntary good-faith efforts. The Grievance Redress Mechanism is not a substitute for the legal process. The Grievance Redress Mechanism will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties. When making a complaint and/or grievance, all parties must act at all times, in good faith and should not attempt to delay and or hinder any mutually acceptable resolution.

The EIO is a federal entity accountable to the Federal Parliament and responsible for ensuring that the constitutional rights of citizens are not violated by executive organs. It receives and investigates complaints in respect of maladministration; conducts supervision to ensure the executive carries out its functions according to the law; and seeks remedies in case of maladministration.

The Regional Public Grievance Hearing Offices (PGHOs) are regional entities accountable to their respective regional Presidents. They are responsible for receiving appeals, complaints and grievances related to public services and good governance; investigating these; and making recommendations and decisions to redress them. Most regions have established their PGHOs and have branches at zonal, woreda and kebele levels which are accountable to their respective chief administrator. At the kebele level, the Kebele Manager serves as the focal point.

A complainant has the option to lodge his/her complaint to the nearby EIO branch or the respective PGHO in person, through his/her representative, orally, in writing, by fax, telephone or in any other manner. Complaints are examined; investigated and remedial actions are taken to settle them. If not satisfied with the decision of the lower level of the Grievance Redress Mechanism system, the complainant has the right to escalate his/her case to the next higher level of administration. In addition, some regions have mobile grievance handling teams at woreda level to address grievances by clustering kebeles; some have good governance command posts to handle cases that have not been settled by the Kebele Manager and woreda PGHOs. PBS 3 is supporting Grievance Redress Mechanism system strengthening including the opening of new EIO branches.

MEFCC has a multi-pronged approach to receiving and handling of complaints about environmental and social harms caused by projects/programmes. Grievance Point Persons (GPPs) have been appointed within MEFCC to be responsible for the initial screening of complaints received and working with EIO on resolution of the complaints. Members of the public are made aware of their right to launch complaints about environmental and social harms caused by projects/programmes through radio and television programmes which were launched to popularize the CRGE Facility. The CRGE Facility website encompasses information on safeguards aspects including the information on the public's right to complain and the avenues for making these complaints.

Level	Responsible Institution	Procedure
Federal Level	MEFCC + Project steering committee	MEFCC need to give response within one month
	Federal Ombudsman's Office	The Federal Ombudsman's can also give advice for unresolved issues before the case is submitted to the court
	Federal Court	Applicants may also pursue their cases through the court system, if they are not satisfied with the Grievance Redress System.
Regional Level	Regional Environment Office and PCU	If Applicants are not satisfied or referred to the regional environment office and the regional office should give response within 15 days,
	Regional Ombudsman's Office	Applicants may also get advice from the Regional Ombudsman's office
	Regional Court	Applicants may appeal to the court if it is not resolved at environment office
Woreda * Level	Woreda Environment office	Applicants may raise their grievance to the Woreda environment office and response should be given within 10 days. If the Applicant are not satisfied by the response they can take the issue to the Regional PCU or Woreda formal court
	Woreda Ombudsman's Office	Applicants can also submit their apple to the Ombudsman's for advice
	Woreda Court	Applicants can submit their appeal to the formal court and continue with the formal process
Kebele* Level	Kebele Shengo	Local communities and other interested stakeholders (Applicants) may raise a grievance/complaint to the Kebele manager for grievance caused by the project and need to get a response within 10 days

*Each woreda has an average population of 100,000. The kebele is the smallest unit of local government with an average population of 5,000.

Any grievance related to corruption or any unethical practice should be referred immediately to the EIO and the Office of Audit and Investigation within the UNDP in New York.

In addition to the project-level grievance redress mechanism, complainants have the option to access UNDP's Accountability Mechanism, with both compliance and grievance functions. The Social and Environmental Compliance Unit investigates allegations that UNDP's Standards, screening procedure or other UNDP social and environmental commitments are not being implemented adequately, and that harm may result to people or the environment. The Social and Environmental Compliance Unit is housed in the Office of Audit and Investigations, and managed by a Lead Compliance Officer. A compliance review is available to any community or individual with concerns about the impacts of a UNDP programme or project. The Social and Environmental Compliance Unit is mandated to independently and impartially investigate valid requests from locally impacted people, and to report its findings and recommendations publicly.

The Stakeholder Response Mechanism offers locally affected people an opportunity to work with other stakeholders to resolve concerns about the social and environmental impacts of a UNDP project. Stakeholder Response Mechanism is intended to supplement the proactive stakeholder engagement that is required of UNDP and its Implementing Partners throughout the project cycle. Communities and individuals may request an Stakeholder Response Mechanism process when they have used standard channels for project management and quality assurance, and are not satisfied with the response (in this case the project level grievance redress mechanism). When a valid Stakeholder Response Mechanism request is submitted, UNDP focal points at country, regional and headquarters levels will work with concerned stakeholders and Implementing Partners to address and resolve the concerns. Visit www.undp.org/secu-srm for more details. The relevant form is attached at the end of the ESMP.

Key Environmental and Social Indicators

This section identifies the key environmental and social indicators identified for the project and outlines respective management objectives, potential impacts, control activities and the environmental performance criteria against which these indicators will be judged (i.e. auditable). This section further addresses the need for monitoring and reporting of environmental performance with the aim of communicating the success and failures of control procedures, distinguish issues which require rectification and identify measures which will provide continuous improvement in the processes by which the projects are managed.

Flora and Fauna

The target woredas lie across a wide-range of agro-ecological zones. Based on the major agro-ecology zones the woredas can be classified as follows:

- a. Arid and semi-arid zones: Biyo Awale, Gewane, Jijiga, Kebribeyan, Meiso and Ziway Dugda (warm arid lowlands) and Genwane (warm arid lowlands);
- b. Sub-moist: Adami Tulu-Jida, Lasta, Yallo, Saesi Tsadamba and Thaitay Koraro (warm and cool sub-moist middle and low lands);
- c. Moist: Enebse Midir, Tach Gaynt, Sofi and Yabello (tepid moist midlands), Enebse Sarmidir (cool moist highlands), and Guba (warm moist lowlands); and
- d. Warm and hot sub-humid lowlands: Abobo, Itang, Mareko, Hadero, Halaba.

Cultivation is the predominant land use / cover type over most of the project areas. Percentages of cultivation, under different intensities, constitutes between 75-100% of these areas (based on GIS assessment of land use done for the project). In Jijiga and Zeway-dugda project areas, cultivation covers between 60 and 70% of the land area; the remaining is natural vegetation. In Guba, Sherkole, Gewane, Mieso, Itang and Abobo project areas, natural vegetation is the dominant land cover type.

The major land uses of the selected kebeles fall under farming, grazing land, forest/woodlands and are typically highly degraded. Woodlands within the Kebeles are typically dominated by Acacias. While no specific flora and fauna surveys have been undertaken of the project areas, in some areas 'land use and vegetation cover surveys' estimate that up to 70% of the region is barren land (Afar 2010). Thus there is likely to be limited habitat available and competition with human uses is high

Ethiopia has recognized the need to establish different types of productive forests to reduce pressure on natural forests and woodlands, and ensure that the rising demands from internal and regional markets are met with sustainable and domestically produced wood and non-timber forest products (NTFPs) as well as provision of environmental services and products. Key interventions include, among others, establishing nursery centres and woodlots, and promoting NTFPs.

It is assumed that the majority of the project areas have been previously disturbed, although vegetation may still exist. Further, it is assumed that the weather stations, plantations and irrigation areas will be located in areas that do not contain important or protected habitats. Ground truthing of specific locations will be undertaken immediately prior to any activities.

The project includes activities aimed at reforestation, closure of areas to allow rehabilitation and erosion and soil conservation measures. All these activities will have secondary benefits to native flora and fauna. The forestry component will focus on small-scale forms of tree planting on small rural holdings and communal lands.

Implementation of the proposed interventions will follow an integrated landscape approach, which creates multiple benefits for other conservation and use.

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. no clearance of vegetation outside of the designated clearing boundaries;
- b. net increase in vegetated areas, biodiversity, and supporting ecosystem parameters (reduced soil erosion, increased nutrients, carbon storage, water infiltration and retention);
- c. no death to native fauna as a result of clearing activities;
- d. no deleterious impacts on aquatic environments and terrestrial habitats;
- e. no introduction of *new* weed species as a result of construction activities and through the planting of seeds that are adapted to climate change;
- f. no increase in *existing* weed proliferation within or outside of any project footprint as a result of construction activities; and
- g. successful establishment of rehabilitation works incorporating species native to the local area.

Monitoring

A flora and fauna monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will when undertaking clearing works, will compile a weekly report to MEFCC and UNDP staff outlining:

- a. any non-conformances to this ESMP;
- b. the areas that have been rehabilitated during the preceding week and
- c. details of the corrective action undertaken.

Reporting

All flora and fauna monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MEFCC must be notified in the event of any suspected instances of death to native fauna and where vegetation is detrimentally impacted.

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Table 1: Flora and Fauna Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
FF1. Habitat loss and disturbance of fauna	FF1.1 Limit vegetation clearing and minimize habitat disturbance through adequate protection and management of retained vegetation.	Construction	Site Supervisor	Daily and maintain records
	FF1.2: Minimise noise levels and lighting intrusion throughout construction and operation in the vicinity of any sensitive locations.	Construction	Site Supervisor	Daily and maintain records
	FF1.3: Ensure that all site personnel are made aware of sensitive fauna/habitat areas and the requirements for the protection of these areas.	Construction	Contractor	Daily and maintain records
	FF1.4 Minimise disturbance to onsite fauna and recover and rescue any injured or orphaned fauna during construction and operation.	Construction	Contractor	Daily and maintain records, report to ME FCC
FF2. Introduced flora and fauna species	FF2.1: Prevent introduction of weeds/pests/diseases by sourcing appropriate weed/pest/disease free seed and stock. Utilise chain-of custody to track exposure and minimise risk of contamination in transit.	All phases	All personnel	Maintain records
	FF2.2: Implement an Erosion, Drainage and Sediment Control Plan (EDSCP) to reduce the spread of weeds through erosion and sediment entering any waterways and therefore spreading	Pre and during construction	Contractor	Maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
FF2. Introduced flora and fauna species	FF2.3: Revegetate disturbed areas using native and locally endemic species that have high habitat value.	During construction	Site Supervisor	As required and maintain records
	FF2.4: Minimise disturbance to mature remnant vegetation, particularly canopy trees.	During construction	Site Supervisor	Daily and maintain records
	FF2.5: The removal of regrowth native trees should be minimised particularly where the width of a forest is narrow.	During construction	Site Supervisor	Daily and maintain records
	FF2.6: Small trees and shrubs shall be removed in preference to large trees.	During construction	Site Supervisor	Daily and maintain records
	FF2.7: Vegetation to be removed shall be clearly marked using paint or flagging tape.	During construction	Site Supervisor	Daily and maintain records
	FF2.8: Environmental weeds and noxious weeds within the project footprints shall be controlled.	All phases	Site Supervisor	Weekly and maintain records
	FF2.9 Development and implementation of Forest Management Plans for designated areas	All phases	MEFCC	Maintain records
FF3: Exposure to disease and pests	FF3.1 Increase resistance to disease and attack by utilising a mix of species and/or use of different provenances if single tree species being used.	Operation	MEFCC	Maintain records
	FF3.2 Adopt Forest Management Plan – including thinning and weeding	Operation	MEFCC	Maintain records

Surface and Groundwater Quality

Ethiopia has a tropical monsoon climate with a wide climatic variation induced by varying topography. Annual rainfall varies from less than 100 mm along the borders with Somalia and Djibouti to more than 2000 mm in the highlands of the south-west (Figure 3). The national average rainfall is 744 mm per year.

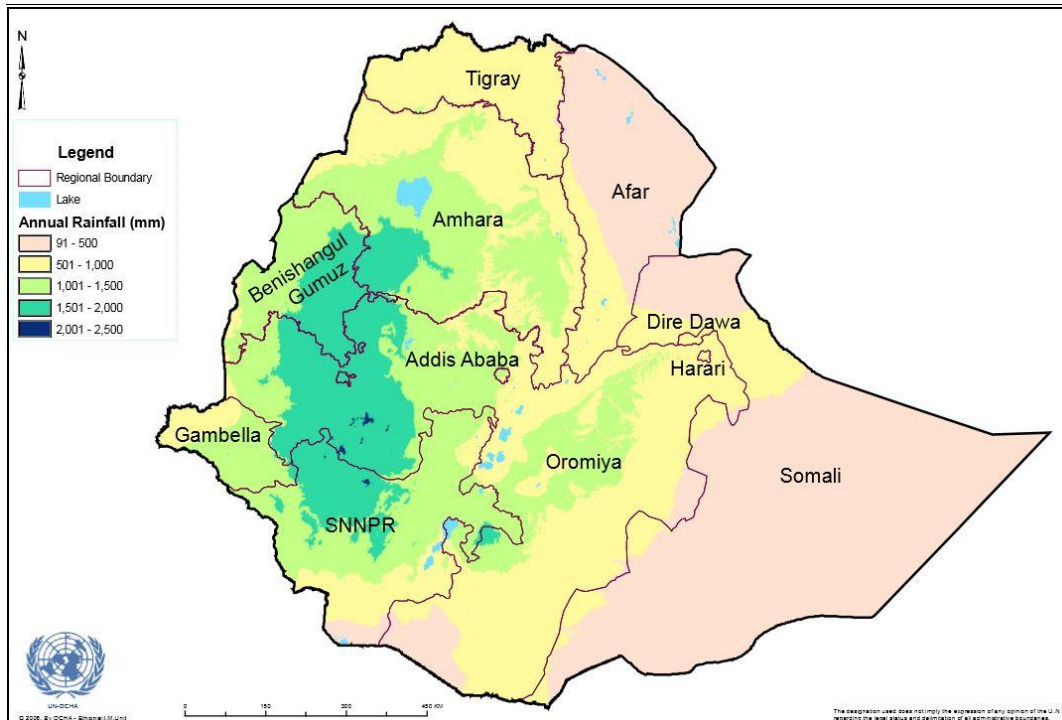


Figure 3. Average annual rainfall across Ethiopia¹

Ethiopia has three climatological rainy seasons namely; February–May (Belg), June–September (Kiremt) and October–January (Bega) seasons. The seasonal rainfall progression is mostly influenced by the north to south migration of the Inter-Tropical Convergence Zone. The wet season, which spans from March to November over southwestern Ethiopia, broadly exemplifies these circumstances. Rift Valley and the adjoining escarpments generally, experience two rainy seasons; small (March-May) and main (June-September) rainy seasons, which are interrupted by dry months. Temporal variations in rainfall mean that parts of Ethiopia are highly prone to drought.

A subsidiary effect is that a large amount of rainfall on the highlands is concentrated as runoff in river valleys, which drain into the low-lying areas where annual rainfall is low. In almost all river basins in Ethiopia, some 80% of the runoff results from annual precipitation falling in four months from June to October. Two groups of factors mainly determine the extent of flow in streams: climatic and physical characteristics of the drainage basins.

Groundwater is an important source of water in Ethiopia and is the dominant source for domestic supply in many areas, especially the dry areas where surface waters are scarce and seasonal. Figure 4 shows the broad availability of groundwater throughout the country.

¹ <http://reliefweb.int/map/ethiopia/ethiopia-annual-rainfall>

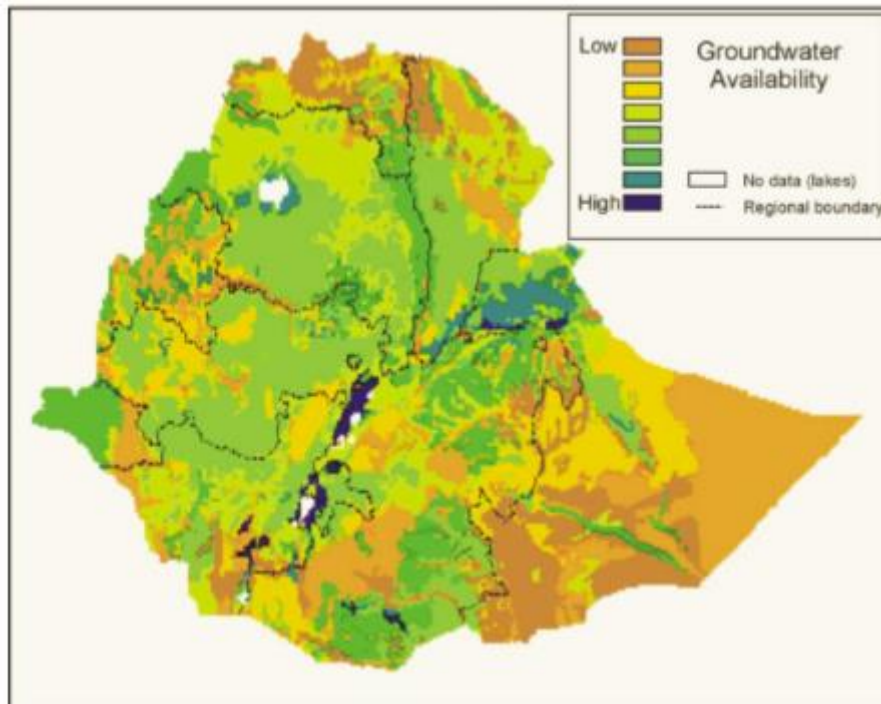


Figure 4: Estimated groundwater availability. MacDonald et al., 2001²

Rainfall intensity plays significant role for groundwater recharge system. The main source of recharge for the vast groundwater systems is the rainfall in the highlands. The major recharge zone regionally occurs mainly from the south Eastern Highlands of Ethiopia.

It is well understood that geology plays an important role in the distribution and occurrence of groundwater and can have an effect on surface water quality. The concentrations, relative proportions and rates of transport of dissolved substances in water samples reflect their sources path and interactions with different substances. The geology in the project areas has been mapped and assessments of groundwater potential made.

The hydro-chemical classification of water, based on major cations and anions, indicates that groundwater in project areas are a mix of basic, transitional and mixed-type waters. Bicarbonate (HCO_3) type is the dominant cation in most of Ethiopian waters and is generally due to the presence of rocks like limestone, dolomite, sandstone, silican and other minerals that are sources for HCO_3 ions.

Groundwater quality in Ethiopia is known to be highly variable, ranging from fresh waters in many of the springs issuing from the crystalline basement rocks to more saline waters in parts of the Rift and the sedimentary formations of the plains.

Groundwater in the Rift zone is influenced by geothermal waters with abnormally high concentrations of fluoride and/or total dissolved salts. Fluoride is therefore a recognised major problem, especially for the communities living within the Rift. Observed increased salinity in many ground waters from sediments in the south, southeast and north-eastern parts of the country arises from the dissolution of evaporite minerals (the products of evaporation) in certain horizons of the sediments. Fluoride has long been a recognised water-related health concern in Ethiopia, as in other parts of the East African Rift.

² MacDonald, A.M., Calow, R.C., Nicol, A., Hope, B. and Robins, N.S. 2001. Ethiopia: water security and drought. BGS Technical Report WC/01/02

A range of human-induced activities, such as deforestation, overexploitation, pollution, and the spread of invasive alien species has degraded lands and led to declining land productivity. Combined with highly variable rainfall and loss of vegetative cover, this can lead to water quality issues.

A combination of interventions is envisaged, including development of small-scale irrigation, upgrading traditional irrigation schemes, construction of diversion weirs, and development of pipe supported irrigation schemes in the target Woredas. The project also intends to augment the above interventions through access to groundwater using solar powered pumping system which involves organising water well drilling, construction of shallow water wells, and installing solar powered submersible and surface pumps in the target communities.

Sources of water pollution include

- a. soil erosion,
- b. the main contributor to faecal coliform counts in water is the poor sanitation practices;
- c. many different types of human activities that increase turbidity, change pH, add heavy metals and other types of pollutants including agri-chemicals, fertilizer runoff, oils, solid waste etc; and
- d. activities during the construction phase of the project including construction waste, oil spilling of machineries, solid disposal etc.

Prior to the commencement of works, baseline data will be collected to develop a suitable monitoring regime.

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. no significant decrease in water quality as a result of construction and operational activities;
- b. no significant decrease in the quality and quantity of surface and/or groundwater as a result of construction and operational activities in proximity to the projects;
- c. water quality shall conform to any approval conditions stipulated by UNDP, MEFC and/or other government departments, or in the absence of such conditions follow a 'no worsening' methodology; and
- d. effective implementation of site-specific EDCPs.

By following the management measures set out in the ESMP the project will not have a significant impact on water quality across the broader area.

Monitoring

A standardised water quality monitoring program has been developed for the project. The program is subject to review and update at least every two months from the date of issue. The site supervisor will be required to conduct a visual inspection and take water samples as appropriate for nitrates, phosphates, faecal coliforms, heavy metals, turbidity and oil/grease within or adjacent to their work area as a part of the daily site inspection checklist.

Reporting

All water quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MEFC must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to water quality is exceeded.

Table 2: Water Quality Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
W1: Elevated suspended solids, nitrates, phosphates, faecal coliforms, heavy metals, silt content and turbidity in surface and groundwater systems.	W1.1: Develop and implement a site specific EDSCPs to address drainage control, sediment and erosion controls and stockpiling of materials including soil during construction of all components of the projects. EDSCP measures to be inspected regularly to ensure all devices are functioning effectively.	Pre Earthworks	Site Supervisor	Initial set up and then as required with reporting to MEFCC and UNDP
	W1.2: Designated areas for storage of fuels, oils, chemicals or other hazardous liquids should have compacted impermeable bases and be surrounded by a bund to contain any spillage. Refuelling to be undertaken in areas away from water systems.	Construction and operation phase	All Personnel	Weekly with reporting to MEFCC and UNDP
	W1.3: Conduct regular surface and groundwater quality monitoring in location where the groundwater is likely to be impacted, including assessing the changes to groundwater quality.	Construction and operation phase	Site Supervisor	Weekly and as required with reporting to MEFCC and UNDP
	W1.4: Schedule works in stages to ensure that disturbed areas are revegetated and stabilized progressively and as soon as practicable after completion of works.	Pre Earthworks	Site Supervisor and MEFCC	Maintain records
	W1.5: Construction materials will not be stockpiled in proximity to aquatic environment that may allow for release into the environment. Construction equipment will be removed from in proximity to the aquatic environment at the end of each working day or if heavy rainfall is predicted	Construction and operation phase	Site Supervisor	Maintain daily records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
W2: Eutrophication of surrounding aquatic environments and impacts from elevated nutrient levels.	W2.1 Minimize the release of clays and very fine silts into the aquatic environment through the installation of sediment basins, rock checks and sediment fences in appropriate places as outlined in the EDSCPs. Sediment control structures to be inspected regularly.	Entire construction phase	All Personnel	Weekly with reporting to MEFC and UNDP
	W2.3 Manage the application of fertilizers and other chemicals (if required during rehabilitation of any site) to ensure that over application does not occur.	Post Construction	Site Supervisor	Maintain records
W3: Excessive use of groundwater leading to draw down of water table and possible land subsidence.	W3.1: Pump tests and groundwater quality studies should be carried out to determine suitability of groundwater and the safe yield.	Pre-construction	Site supervisor and MEFC	Maintain records
	W3.2: Care must be exercised not to over pump. Maximum pump regimes to be determined based on assessment data and monitoring	Post-construction	MEFC and farmers	Maintain records and report to MEFC
	W3.3: Farmers to be trained on proper irrigation practices	Post-construction	MEFC	Maintain records
W4: Water logging and salinization due to irrigation malpractice	W4.1: Provide training to farmers on proper irrigation practices	Post-construction	MEFC	Maintain records
	W4.2: Implement surface and groundwater monitoring systems	Post-construction	MEFC	Maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
W5: Increase of gross pollutants, hydrocarbons, metals and other chemical pollutants into the groundwater and/or surface water environment.	W5.1: Reuse suitable water runoff from site to supplement construction water supply.	Construction	All Personnel	Weekly with reporting to MEFC and UNDP
	W5.2: Designated areas for storage of fuels, oils, chemicals or other hazardous liquids should: 1. Have compacted impermeable bases; and 2. Surrounded by a bund to contain any spillage.	All phases	All Personnel	Weekly with reporting to MEFC and UNDP
	W5.3: Check all vehicles, equipment and material storage areas daily for possible fuel, oil and chemical leaks. Undertake refuelling at designated places away from water systems.	All phases	All Personnel	Daily and maintain records
	W5.4: Rubbish and waste materials to be placed in suitable facilities to ensure that they do not enter aquatic environments. Ensure all absorbent material is placed in contaminant bags prior to removal.	All phases	All Personnel	Weekly reporting to MEFC and UNDP
	W5.5: Minimize the use of herbicides and use only biodegradable herbicides that have minimal impact on water quality and fauna. Use only as per directions.	All phases	All personnel	Maintain records
	W5.6: Used oil traps and other effluent/discharge management interventions to be put in place;	All phases	All Personnel	Weekly reporting to MEFC and UNDP

Erosion, Drainage and Sediment Control

Soils in the project areas have been mapped using GIS. Seventeen major soil types have been observed.

Leptosols are widely spread, occurring in 16 project areas, and is mainly found in Tachgaynt (92%), Lasta (93%), and Bilo-Awale (77%). Leptosol also covers 30-40% of Thaetay-Keraro, Saesi-Tsadamba and Enebse-sarmidir. Cambisols dominate most of the project areas (24%) and are predominantly found in Jijiga (54%) Kebri-beyah (56%) and Halaba (45%) areas. Vertisols covering 13% of the project areas constitute 23 to 37% of Jijiga, Abobo and Itang areas. Nitisols covering 10% of project areas are dominantly found in Sherkole (82%). Luvisols are mainly found in Mareko and Sofi and to a lesser extent in Saesi-Tsadamba, Mieso, Guba, Enebse-sarmidir and Halaba areas. Fluvisols are found in western parts of the project areas, namely, Itang, Abobo, Guba, and Sherkole as well in Gewane and Yabelo areas.

Other major soil types constitute less than two percent of project areas and are localized to one or two sites; Andosols to Adami-tulu-Jido-kombolcha and Zeway-Dugda, Regosols to Gewane and Mieso, Acrisols to Guba and Sherkole, Plinthosols and Planosols to Abobo and Itang and Calicisols to Kebribeyah. Generally, Gleysols, Solonetz, Arenosol, and Alisol have very small occurrences within the project areas. These major soil types have 2-7% coverage in areas such as Adami-tulu-Jido-kombolcha, Thaetay-Keraro, Saesi-Tsadamba, Itang and Sofi, exception is Arenosol which cover 32% of Halaba.

Soil erosion depends on several parameters such as type of soil, slope, vegetation, the nature of topography and rainfall intensity. The loss of soil stability and soil erosion can take place due to the removal of vegetation cover, and numerous construction activities. It can cause the loss of soil fertility and induce slope instability. Land preparation for the project could result in blockage or alteration of natural flow paths causing changes in the drainage patterns in the area. Effective and efficient mitigation measures can not only reduce, but could improve the conditions over the existing conditions.

The project will undertake physical and biological soil and water conservation treatments, rehabilitation of degraded forest lands, expansion of forest plantations, development of groundwater wells, development of small scale irrigation schemes and construction of weather stations and buildings. All these activities have the potential to cause erosion if not properly managed.

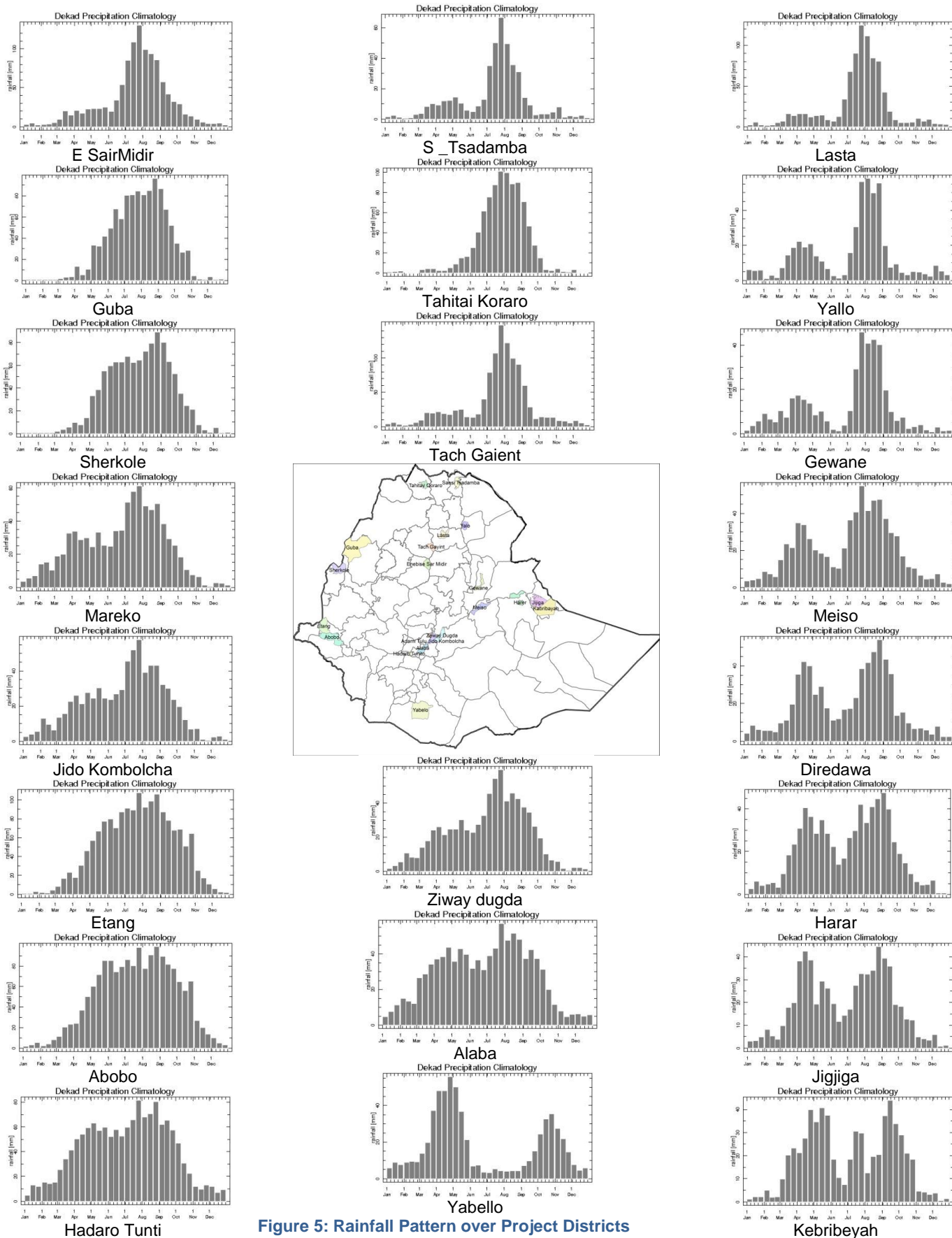
Activities that have the potential to cause erosion should be undertaken with the likely weather conditions in mind. Figure 5 shows typical rainfall by month for each of the project areas.

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. no build-up of sediment in the aquatic environments and/or surface and/or groundwater as a result of construction and operation activities;
- b. no degradation of water quality on or off site of all projects;
- c. all water exiting the project site and/or into groundwater systems is to have passed through best practice erosion, drainage and sediment controls; and
- d. effective implementation of site-specific EDSCP.

By following the management measures set out in the ESMP, construction and operation activities of the projects will not have a significant impact as a result of sedimentation across the broader area.



Monitoring

A standardised sediment control monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. The site supervisor will be required to:

- a. conduct site inspections on a weekly basis or after rainfall events exceeding 20mm in a 24 hour period;
- b. develop a site-specific checklist to document non-conformances to this ESMP or any applicable EDSCPs; and
- c. communicate the results of inspections and/or water quality testing to the Site Supervisor and ensure that any issues associated with control failures are rapidly rectified and processes are put in place to ensure that similar failures are not repeated.

It is the responsibility of the site supervisor to:

- a. conduct daily inspections of EDSCP control measures as part of the Daily Check Procedure; and
- b. consult with MEFCC and UNDP staff when a non-conformance is suspected and amend accordingly.

Reporting

All sediment and erosion control monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MEFCC must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to erosion and sediment control is exceeded.

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Table 3: Erosion, Drainage, Sediment Control Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E1: Loss of soil material and sedimentation to the surface and/or groundwater systems from site due to earthwork activities	E1.1: Develop and implement an EDSCP for any surface works, embankments and excavation work, water crossings and stormwater pathways.	Construction phase	All Personnel	Maintain records
	E1.2: Ensure that erosion and sediment control devices are installed, inspected and maintained as required.	Construction phase	All Personnel	Maintain records
	E1.3: Schedule/stage works to minimize cleared areas and exposed soils at all times.	Pre and during construction	Site Supervisor	Maintain records
	E1.4: Incorporate the design and location of temporary and permanent EDSC measures for all exposed areas and drainage lines. These shall be implemented prior to pre-construction activities and shall remain onsite during work	Pre and during construction	Site Supervisor	Maintain records
	E1.5: Schedule/stage proposed works to ensure that major vegetation disturbance and earthworks are carried out during periods of lower rainfall and wind speeds.	Pre and during construction	Site Supervisor	Maintain records
	E1.6: Strip and stockpile topsoil for use during revegetation and/or place removed soils back on to agricultural lands.	Pre and during construction	Site Supervisor	Maintain records
	E1.7: Schedule/stage works to minimize the duration of stockpiling topsoil material. Vegetate stockpiles if storage required for long periods.	During construction	All Personnel	Maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E1: Loss of soil material and sedimentation to the surface and/or groundwater systems from site due to earthwork activities	E1.8: Locate stockpile areas away from drainage pathways, waterways and sensitive locations.	Pre and during construction	Site Supervisor	Maintain records
	E1.9: Design stormwater management measures to reduce flow velocities and avoid concentrating runoff.	Pre and during construction	Site Supervisor	Maintain records
	E1.10: Include check dams in drainage lines where necessary to reduce flow velocities and provide some filtration of sediment. Regularly inspect and maintain check dams.	Pre and during construction	Site Supervisor	Maintain records
	E1.11: Mulching shall be used as a form of erosion and sediment control and where used on any slopes (dependent on site selection), include extra sediment fencing during high rainfall.	During construction	All Personnel	Maintain records
	E1.12: Bunding shall be used either within watercourses or around sensitive/dangerous goods as necessary.	During construction	All Personnel	Maintain records
	E1.13: Grassed buffer strips shall be incorporated where necessary during construction to reduce water velocity.	During construction	Site Supervisor	Maintain records
	E1.14: Silt fences or similar structures to be installed to protect from increased sediment loads.	During construction	Contractors	Maintain records
	E1.15: Excess sediment in all erosion and sediment control structures (eg. sediment basins, check dams) shall be removed when necessary to allow for adequate holding capacity.	During construction	Contractors	Maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E2: Soil contamination	E2.1: If contamination is uncovered or suspected (outside of the project footprints), undertake a Stage 1 preliminary site contamination investigation. The contractor should cease work if previously unidentified contamination is encountered and activate management procedures and obtain advice/permits/approval (as required).	Construction phase	All Personnel	Daily and maintain records
	E2.2: Adherence to best practice for the removal and disposal of contaminated soil/ material from site (if required), including contaminated soil within the project footprints.	Construction phase	All Personnel	Daily and maintain records
	E2.3: Drainage control measures to ensure runoff does not contact contaminated areas (including contaminated material within the project footprints) and is directed/diverted to stable areas for release.	Construction phase	All Personnel	Daily and maintain records
	E2.4: Avoid importing fill that may result in site contamination and lacks accompanying certification/documentation. Where fill is not available through on site cut, it must be tested in accordance with geotechnical specifications.	Construction phase	All Personnel	Daily and maintain records

Noise and Vibration

All construction and operation activities have the potential to cause noise nuisance. Vibration disturbance to nearby residents and sensitive habitats is likely to be caused through the use of vibrating equipment. Blasting is not required to be undertaken as part of this project.

The project activities are being implemented in areas that are predominately rural in nature (used for farming and grazing) or woodland and therefore do not have existing significant noise sources. The use of machinery or introduction of noise generating facilities could have an adverse effect on the environment and residents if not appropriately managed. It is assumed that there are no sensitive receptors in proximity to the projects.

Contractors involved in construction and rehabilitation activities should be familiar with methods of controlling noisy machines and alternative construction procedures as contained within specific Ethiopian legislation or in its absence, international good practice may be used if the legislation has not been enacted.

The detail, typical equipment sound power levels, provides advice on project supervision and gives guidance noise reduction. Potential noise sources during construction may include:

- a. heavy construction and forestry machinery;
- b. power tools and compressors;
- c. delivery vehicles;
- d. drill rigs; and
- e. pumps

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. noise from construction and operational activities must not cause an environmental nuisance at any noise sensitive place;
- b. undertake measures at all times to assist in minimizing the noise associated with construction activities;
- c. no damage to off-site property caused by vibration from construction and operation activities; and
- d. corrective action to respond to complaints is to occur within 48 hours.

Monitoring

A standardized noise monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will:

- a. ensure equipment and machinery is regularly maintained and appropriately operated; and
- b. carry out potentially noisy construction activities during 'daytime' hours only; i.e. 7am to 5.30pm.

Reporting

All noise monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MEFCC must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to noise is exceeded.

Table 4: Noise and Vibration Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
N1: Increased noise levels	N1.1: Select plant and equipment and specific design work practices to ensure that noise emissions are minimized during construction and operation including all pumping equipment.	All phases	Contractor	Maintain records
	N1.2: Specific noise reduction devices such as silencers and mufflers shall be installed as appropriate to site plant and equipment.	Pre and during construction	Contractor	Maintain records
	N1.3 Minimize the need for and limit the emissions as far as practicable if noise generating construction works are to be carried out outside of the hours: 7am-5.30pm	Construction phase	All Personnel	Daily and maintain records
	N1.4: Consultation with nearby residents in advance of construction activities particularly if noise generating construction activities are to be carried out outside of 'daytime' hours: 7am - 5.30pm.	Construction phase	All Personnel	Daily and maintain records
	N1.5 The use of substitution control strategies shall be implemented, whereby excessive noise generating equipment items onsite are replaced with other alternatives.	Construction phase	All Personnel	Daily and maintain records
	N1.6 Provide temporary construction noise barriers in the form of solid hoardings where there may be an impact on specific residents.	Construction phase	Site Supervisor	Daily and maintain records
	N1.7 All incidents complaints and non-compliances related to noise shall be reported in accordance with the site incident reporting procedures and summarized in the register.	Construction phase	Site Supervisor	Maintain records
	N1.8 The contractor should conduct employee and operator training to improve awareness of the need to minimize excessive noise in work practices through implementation of measures.	Pre and during construction	Contractor	Maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
N2. Vibration due to construction	N2.1: Identify properties, structures and habitat locations that will be sensitive to vibration impacts resulting from construction and operation of the project.	Pre and during construction	Contractor	Maintain records
	N2.2: Design to give due regard to temporary and permanent mitigation measures for noise and vibration from construction and operational vibration impacts.	Pre-construction	Contractor	Maintain records
	N2.3: All incidents, complaints and con-compliances related to vibration shall be reported in accordance with the site incident reporting procedures and summarized in the register.	Construction phase	Site Supervisor	Maintain records
	N2.4: During construction, standard measure shall be taken to locate and protect underground services from construction and operational vibration impacts.	Construction phase	Site Supervisor	Maintain records

Air Quality

All construction, drilling and rehabilitation activities have the potential to cause air quality nuisance.

The project areas are predominantly rural or woodland in character. Existing air quality reflects those environments, with dust being the main air quality nuisance.

Contractors involved in construction and operation activities should be familiar with methods minimizing the impacts of deleterious air quality and alternative construction procedures as contained in Ethiopian legislation or international good practice.

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. release of dust/particle matter must not cause an environmental nuisance;
- b. undertake measures at all times to assist in minimizing the air quality impacts associated with construction and operation activities; and
- c. corrective action to respond to complaints is to occur within 48 hours.

Monitoring

A standardized air monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will:

- a. ensure all stockpiles are covered so as to not allow dust to generate; and
- b. the requirement for dust suppression will be visually observed by all personnel daily and by MEFCC and UNDP staff when undertaking routine site inspections (minimum frequency of once per week).

Reporting

All air quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MEFCC must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to air quality is exceeded.

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Table 5: Air Quality Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
A1: Increase in dust levels at sensitive locations	A1.1: Implement effective dust management measures in all areas during design, construction and operation.	Pre and during construction	All Personnel	Daily and maintain records
	A1.2: Install dust gauges at locations identified for significant construction lay down and stockpiling areas.	During construction	Site Supervisor	Daily and Weekly Reports
	A1.3: Manage dust/particulate matter generating activities to ensure that emissions do not cause an environmental nuisance at any sensitive locations	During construction	Site Supervisor	Daily and maintain records
	A1.4: Construction activities should minimizing risks associated with climatic events.	During construction	Site Supervisor	Daily and maintain records
	A1.5: Implement scheduling/staging of proposed works to ensure major vegetation disturbance and earthworks are minimized.	Entire construction	Contractor	Daily and maintain records
	A1.6: Ensure that materials to be stockpiled onsite are not ordered and/or purchased until they are required for works.	Entire construction	Contractor	Daily and maintain records
	A1.7: Locate material stockpile areas as far as practicable from sensitive receptors.	During construction	Site Supervisor	Daily and maintain records
	A1.8: Source sufficient water of a suitable quality for dust suppression activities complying with any water restrictions.	During construction	Site Supervisor	Daily and maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
A1: Increase in dust levels at sensitive locations	A1.9: Schedule revegetation activities to ensure optimum survival of vegetation species.	During construction	Site Supervisor	Maintain records
	A1.10: Ensure an air quality management plan is developed and implemented.	Pre and during construction	Contractor	Maintain records
	A1.11: Rubbish skips and receptacles should be covered and located as far as practicable from sensitive locations	During construction	Site Supervisor	Maintain records
	A1.12: Restrict speeds on roads and access tracks.	During construction	Site Supervisor	Daily and maintain records
	A1.13: Cover loads of haul trucks and equipment and plant when not in use and in transit.	During construction	Site Supervisor	Daily and maintain records
A2: Increase in vehicle emissions (including odours and fumes)	A2.1 Ensure construction vehicles are switched off when not in use.	During construction	Site Supervisor	Daily and maintain records
	A2.2 Ensure only vehicles required to undertake works are operated onsite.	During construction	Site Supervisor	Daily and maintain records
	A2.3 Ensure all construction vehicles, plant and machinery are maintained and operated in accordance with design standards and specifications.	During construction	Site Supervisor	Daily and maintain records

Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
A2. Increase in vehicle emissions (including odours and fumes)	A2.4 Develop and implement an induction program for all site personnel, which includes as a minimum an outline of the minimum requirements for environmental management relating to the site.	Pre and during construction	Contractor	Daily and maintain records
	A2.5 Locate construction car park and vehicle/plant/equipment storage areas as far as practicable from sensitive locations.	During construction	Site Supervisor	Daily and maintain records
	A2.6 Direct exhaust emissions of mobile plant away from the ground.	During construction	Site Supervisor	Daily and maintain records
	A2.7 Rubbish skips and receptacles should be covered and located as far as practicable from sensitive locations.	During construction	Site Supervisor	Daily and maintain records

Chemical and Fuel Management

The key types of chemicals and fuels likely to be stored on-site during construction and drilling of groundwater bores include but are not limited to:

- a. diesel and unleaded petrol for the refuelling of plant equipment and generators;
- b. grease etc used during construction and drilling operations; and
- c. agri-chemicals.

If not handled, stored or used appropriately, contamination of land and the surface water and groundwater systems could occur. The accidental discharge of hazardous materials during construction and operation activities is a potential risk to the local environment. Accordingly, all oil, grease, diesel, petrol and chemicals should be stored off site within a bunded area.

Potential activities which could result in spills are:

- a. use of machinery and vehicles – potential for fuels, oils and lubricant spills;
- b. transport, storage and handling of fuels, machinery oils, grease;
- c. transport, storage and handling of cement/asphalt(bitumen) and other construction materials;
- d. potential release of any chemicals used in irrigation schemes or forestry operations into the surrounding environment; and
- e. impacts associated with hazardous materials will primarily be associated with the storage and handling during the construction and operation phase.

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. ensure a Material Safety Data Sheet (MSDS) Register should be developed for all chemicals and fuels retained on site;
- b. handling and storage of hazardous material is in accordance with the relevant legislation and best management practices;
- c. all spills are reported to MEFCO within **one hour** of occurrence; and
- d. no spills enter the local aquatic environments; and
- e. prevent the uncontrolled release of oil, grease and diesel to the environment;
- f. no spills of hazardous materials;
- g. no chemical spills into the groundwater aquifers; and
- h. no contamination of land due to spills of hazardous materials.

Monitoring

A chemical and fuel management program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor should:

- a. conducted daily chemical and fuel assessments as part of their daily check procedure;
- b. manage the selection, purchase, storage, handling and disposal of chemicals to ensure minimal environmental impact;
- c. regularly inspect equipment that uses fuel, lubricants and/or hydraulic fluid;
- d. regular inspect all equipment used in the sterilization and purification process for leaks etc;
- e. develop procedures and install equipment to contain, minimize and recover spills; and
- f. provide staff with procedures and training in spill prevention and clean up.

Reporting

The MEFCC must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level as a result of a chemical or fuel leak or spill.

Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Table 6: Chemical and Fuels Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
C1 Poor management of chemicals and fuels	C1.1: Prepare spill management plan addressing measures	Pre-construction	Contractor	Maintain records and weekly reporting
	C1.2: Store/handle all chemicals, fuels, oils and potentially hazardous materials as specified in relevant standards and guidelines. All hazardous materials to be approved for use onsite. All hazardous materials and construction fuel will be stored in appropriate storage facilities (e.g. fuel/chemicals will be stored in a bunded area).	During Construction	Site Supervisor	Daily and maintain records
	C1.3: Hydrocarbon wastes shall be stored in colour coded and labelled drums placed around fuelling depots and disposed of.	During Construction	Site Supervisor	Daily and maintain records
	C1.4: Where possible, fuel and chemical storage and handling shall be undertaken at central fuel and chemical storage facilities, such as petrol stations/site depot.	During Construction	Site Supervisor	Daily and maintain records
	C1.5: Onsite storage of fuel and chemicals shall be kept to a minimum.	During Construction	Site Supervisor	Daily and maintain records
	C1.6: Emergency clean up kits for oil and chemical spills will be available onsite and in all large vehicles.	During Construction	Site Supervisor	Daily and maintain records

Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
C1 Poor management of chemicals and fuels	C1.7: Refuelling activities to preferentially occur off site however if required onsite ensure refuelling activities occur in designated areas of the site where appropriate temporary protection measures have been designed/located and are no less than 20 meters from surface waters and drainage lines.	During Construction	Site Supervisor	Daily and maintain records
	C1.8: Farmers/Foresters to be appropriately trained in the use of agri-chemicals	Post-construction	MEFCC	Maintain records

Social Management

The project has been designed with the assistance of stakeholders and aims to provide benefits to the broader community. Nonetheless, as with any project that involves construction, drilling or changes in land use, some dissatisfaction can occur and conflicts may arise. It is important that potential areas of tension are recognized early and appropriate actions taken to avoid or minimize conflict.

The project and its sub-projects do not require involuntary resettlement and large scale expropriation of land. However some sub-projects may require land for locating water wells, irrigation plots, metrological stations, storage facilities that may encroach on private properties. The Ethiopian government laws and GCF performance standards contain appropriate provisions with regards to compensation.

A Woreda Coordination Office will be established in each of the 22 participating woredas under the office of the Woreda Administrator, and headed by woreda/landscape project coordinators. The Woreda Project Coordinators will run day-to-day project activities and processes, engage stakeholders, and mobilize communities at target landscape level. Within each Woreda, kebele/village committees will engage in project implementation, their responsibilities including but not being limited to beneficiary selection, mobilizing community contribution and representing the community in project management.

Performance Criteria

The following performance criteria have been set for the project:

- a. the community has been consulted and project elements have been designed with their informed consultation and participation throughout the project;
- b. all stakeholders are appropriately represented;
- c. avoid adverse impacts to local community during construction and operations and where not possible, minimize, restore or compensate for these impacts;
- d. community land use is maximized and where minor additional areas of land required, then acquisition is negotiated and compensation provided;
- e. cultural heritage is not adversely impacted;
- f. community health and safety is protected and overall well-being benefits derived from the project;
- g. complaint and grievance mechanisms are put in place and proactively managed; and
- h. long-term social benefits are achieved.

Monitoring

Local stakeholders and community members have a key role to play in the implementation and monitoring of the project.

Consultation with stakeholders will continue. This will help ensure that stakeholders continue to be aware of the project, its progress and any changes in the project. It will also assist in identifying any issues as they arise.

At the kebele (community) levels, Development Agents (DAs) will be responsible for advisory support and extensions services to local beneficiaries (mainly farmers). DAs will be responsible for distributing material inputs and providing technical training and backstopping in the implementation of programme activities.

Reporting

Records of all consultations are to be kept and reported on monthly basis.

The MEFCC must be notified in the event of any individual or community complaint or dissatisfaction and ensure the Grievance Redress Mechanism is complied with.

Table 7: Social Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
SM1: Changes in land use leading to conflict	SM 1.1: Carry out community consultation on the purpose and benefits of making changes to land use	Pre-construction	MEFCC	Maintain records
	SM 1.2: Get community buy-in on change of land use	Pre-construction	MEFCC	Maintain records
	SM 1.3: Use community land or compensate in accordance to the requirements of the rural land administration and use proclamation (No. 456/2005)	Pre-construction	MEFCC	Maintain records
	SM 1.4: Prepare the bylaw and pre-test it at selected woredas and kebeles before making use of the bylaws in project implementation	Pre-construction	MEFCC	Maintain records
	SM 1.5: Ensure compliance with the Grievance Redress Mechanism process	Throughout project	MEFCC	Maintain records
SM2: Long-term conflict related to benefit sharing	SM 2.1: Carry out community consultation on the purpose and benefit sharing	Pre-construction	MEFCC	Maintain records
	SM 2.2: Develop community led and owned by law, which clearly stipulates benefit sharing from the use of this communal land and is endorsed by the community	Pre-construction	MEFCC	Maintain records
	SM 2.3: Ensure compliance with the Grievance Redress Mechanism process	Throughout project	MEFCC	Maintain records
SM3: Water allocation conflict	SM 3.1: Carry out community consultation on water supply system, purpose and management	Pre-construction	MEFCC	Maintain records
	SM 3.2: Develop a water supply management plan with agreed allocation sharing provisions	Pre-construction	MEFCC	Maintain records

Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
SM3: Water allocation conflict	SM 3.3: Ensure compliance with the Grievance Redress Mechanism process	Throughout project	MEFCC	Maintain records
SM4: public nuisance caused by construction/operation activities (eg noise, dust etc)	SM 4.1: Carry out community consultation prior to undertaking activities	Pre-construction	MEFCC	Maintain records
	SM 4.2: Implement appropriate management plans (refer to Noise, Air, ESCP, and Waste sections of ESMP)	Construction and operation	Site supervisor and MEFCC	Daily and maintain records
	SM 4.3: Ensure compliance with the Grievance Redress Mechanism process	All phases	MEFCC	Maintain records

Waste Management

The MEFCC advocate good waste management practice. The preferred waste management hierarchy and principles for achieving good waste management is as follows:

- a. waste avoidance (avoid using unnecessary material on the projects);
- b. waste re-use (re-use material and reduce disposing);
- c. waste recycling (recycle material such as cans, bottles, etc.); and
- d. waste disposal (all petruscible and/or contaminated waste to be dumped at approved landfills).

The key waste streams generated during construction are likely to include residual sediment and construction wastes such as:

- a. the excavation wastes unsuitable for reuse during earthworks;
- b. wastes from construction and drilling equipment maintenance. Various heavy vehicles and construction equipment will be utilized for the duration of the construction and drilling phase. Liquid hazardous wastes from cleaning, repairing and maintenance of this equipment may be generated. Likewise leakage or spillage of fuels/oils within the site needs to be managed and disposed of appropriately;
- c. non-hazardous liquid wastes will be generated through the use of workers' facilities such as toilets; and
- d. general wastes including scrap materials and biodegradable wastes

Contractors involved in construction and operational activities should be familiar with methods minimizing the impacts of clearing vegetation to minimize the footprint to that essential for the works and rehabilitate disturbed areas. By doing these activities, the projects should minimize the impact of waste generated by the project.

Performance Criteria

The following performance criteria are set for the construction of the projects:

- a. waste generation is minimized through the implementation of the waste hierarchy (avoidance, reduce, reuse, recycle);
- b. no litter will be observed within the project corridor or surrounds as a result of activities by site personnel;
- c. no complaints received regarding waste generation and management;
- d. any waste from on-site portable sanitary facilities will be sent off site for disposal by a waste licensed contractor; and
- e. waste oils obtained from the oil separator will be collected and disposed or recycled off-site, local oil companies or shipped for recycling.

Monitoring

A waste management monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue.

Reporting

The MEFCC must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to waste is exceeded.

Table 8: Waste Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
WT1: Production of wastes and excessive use of resources	WT1.1: Preference shall be given to materials that can be used to construct the project that would reduce the direct and indirect waste generated.	Pre and during construction	Contractor	Maintain records
	WT1.2: Daily waste practices shall be carried out unless these are delegated to the activities of external waste management bodies.	During construction	Site Supervisor	Daily and maintain records
	WT1.3: The use of construction materials shall be optimized and where possible a recycling policy adopted.	During construction	Site Supervisor	Weekly and maintain records
	WT1.4: Separate waste streams shall be maintained at all times i.e. general domestic waste, construction and drilling waste and contaminated waste. Specific areas on site shall be designated for the temporary management of the various waste streams. Adequate signage and colour coded bins will be used for each waste streams.	During construction	Site Supervisor	Weekly and maintain records
	WT1.5: Any contaminated waste shall be disposed of at an approved landfill.	During construction	Site Supervisor	Weekly and maintain records
	WT1.6: Recyclable waste (including oil and some construction waste) shall be collected separately and disposed of correctly.	During construction	Site Supervisor	Weekly and maintain records
	WT1.7: Waste sites shall be sufficiently covered daily to ensure that wildlife does not have access.	During construction	Site Supervisor	Daily

Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
Production of wastes and excessive use of resources	the Government of Ethiopia requirements. WT1.14: On-site storage of fuel and chemicals shall be kept to a minimum.	During Construction	Contractor	Daily, maintain records and report any incidents
	WT1.9: Fuel and lubricant leakages from vehicles and plant including drill rigs shall be immediately rectified.	During construction	Site Supervisor	Daily and maintain records
	WT1.15: Any waste oils and lubricants are to be collected and transported to recyclers or designated disposal sites as soon as possible.	During Construction	Site Supervisor	Daily and maintain records
	WT1.10: Major maintenance and repairs shall be carried out off-site whenever practicable.	During construction	Site Supervisor	Weekly and maintain records
	WT1.16: Any dangerous goods stored on site shall be stored in accordance with Ethiopian regulations.	During Construction	Contractor	Daily and maintain records
	WT1.11: Disposal of trees shall be undertaken in accordance with one or more of the following methods: a. Left in place; b. Chipped and mulched; and Large trunk sections may be sold/passed on to a commercial mill.			
	WT1.12: Hydrocarbon wastes shall be stored in colour coded and labelled drums placed around fuelling depots.	During Construction	Site Supervisor	Daily and maintain records
	WT1.13: Where possible, fuel and chemical storage and handling shall be undertaken at central fuel and chemical storage facilities, such as petrol stations.	During Construction	Site Supervisor	Daily and maintain records

Annex 1. Delegation of Authority provided by the Environment Protection Authority to the Ministry of Water and Energy with regards to the approval or disapproval of the implementation of projects in the water and energy sector on the basis of the review of an environment impact assessment document³

Article 1

Responsibilities of the Ministry of Water and Energy

1. The MoWE, in accordance with the list annexed to this document, should examine the impacts of the implementation of new development projects or substantial expansion or change of existing projects or re-development of discontinued projects and must approve or disapprove with or without preconditions and monitor the implementation of the project.
2. The MoWE must ascertain that the project proponent has not engaged any staff from the ministry or from federal or regional environment agencies and the ministry must require a signed testimony from the proponent.
3. In case very serious unforeseen issues arise after the submission of the EIA report, the MoWE must require for the EIA to be revised or redone, in order for the ministry to examine the new situation.
4. The MoWE must submit copies of EIA documents of development projects to the EPA at least every quarter.
5. The MoWE must ensure that its environmental unit has adequate capacity to implement its delegation of authority.
6. In order to accomplish the tasks under this delegation of authority the MoWE may confer with the EPA as required.

Article 2 Responsibilities of the EPA

1. In order for the MoWE to be able conduct impact studies, review of EIAs and make decisions, the EPA will prepare and provide environmental laws, standards and other necessary documents
2. The EPA will provide training and capacity building on review of EIAs to the environment unit staff of the MoWE.

³ Unofficial translation from the Amharic Version, Gedion A. 2016

3. In case the EPA considers that the decision taken by the MoWE on the EIA document is erroneous the EPA has the right to correct the error.
4. In case a project proponent is not satisfied with the decision of the MoWE on the EIA, the proponent will first address his dissatisfaction to the MoWE officials and in case the issue is not resolved the proponent can submit his case to the EPA. The EPA, after receiving the proponent's written complaint, will provide its decision to both the MoWE and the proponent within 15 days.
5. The EPA may take measures to enhance the implementation of this delegation of authority
6. The EPA may improve the list of development projects annexed to the delegation of Authority.

This delegation of authority will be effective on the date it is signed by the EPA and MoWE

Environment Protection Authority
Energy

Ministry of Water and

List of projects that fall under the water and energy sector as per the EIA proclamation number 299/1995

1. Dam Construction
 - a. Dams over 15 meter height
 - b. Reservoir size over 3 million cubic meter
 - c. Hydropower over 10MW
2. Irrigation development-Over 3000 hectares
3. Petroleum and energy sector projects
- 4.Storage tanks 25,000liters and over
- 5.Any water and energy project within 300 meters of an environmentally sensitive area.



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Resilient nations.*

Guidance for Submitting a Request to the Social and Environmental Compliance Unit (SECU) and/or the Stakeholder Response Mechanism (SRM)

Purpose of this form

- **If you use this form, please put your answers in bold writing to distinguish text**
- **The use of this form is recommended, but not required. It can also serve as a guide when drafting a request.**

This form is intended to assist in:

- (1) Submitting a request when you believe UNDP is not complying with its social or environmental policies or commitments and you believe you are being harmed as a result. This request could initiate a 'compliance review', which is an independent investigation conducted by the Social and Environmental Compliance Unit (SECU), within UNDP's Office of Audit and Investigations, to determine if UNDP policies or commitments have been violated and to identify measures to address these violations. SECU would interact with you during the compliance review to determine the facts of the situation. You would be kept informed about the results of the compliance review.

and/or

- (2) Submitting a request for UNDP "Stakeholder Response" when you believe a UNDP project is having or may have an adverse social or environmental impact on you and you would like to initiate a process that brings together affected communities and other stakeholders (e.g., government representatives, UNDP, etc.) to jointly address your concerns. This Stakeholder Response process would be led by the UNDP Country Office or facilitated through UNDP headquarters. UNDP staff

would communicate and interact with you as part of the response, both for fact-finding and for developing solutions. Other project stakeholders may also be involved if needed.

Please note that if you have not already made an effort to resolve your concern by communicating directly with the government representatives and UNDP staff responsible for this project, you should do so before making a request to UNDP's Stakeholder Response Mechanism.

Confidentiality If you choose the Compliance Review process, you may keep your identity confidential (known only to the Compliance Review team). If you choose the Stakeholder Response Mechanism, you can choose to keep your identity confidential during the initial eligibility screening and assessment of your case. If your request is eligible and the assessment indicates that a response is appropriate, UNDP staff will discuss the proposed response with you, and will also discuss whether and how to maintain confidentiality of your identity.

Guidance

When submitting a request please provide as much information as possible. If you accidentally email an incomplete form, or have additional information you would like to provide, simply send a follow-up email explaining any changes.

Information about You

Are you...

1. A person affected by a UNDP-supported project?

Mark "X" next to the answer that applies to you:

Yes:

No:

2. An authorized representative of an affected person or group?

Mark "X" next to the answer that applies to you:

Yes:

No:

If you are an authorized representative, please provide the names of all the people whom you are representing, and documentation of their authorization for you to act on their behalf, by attaching one or more files to this form.

3. First name:

4. Last name:

5. Any other identifying information:

6. Mailing address:

7. Email address:

8. Telephone Number (with country code):
9. Your address/location:
10. Nearest city or town:
11. Any additional instructions on how to contact you:
12. Country:

What you are seeking from UNDP: Compliance Review and/or Stakeholder Response

You have four options:

- Submit a request for a Compliance Review;
 - Submit a request for a Stakeholder Response;
 - Submit a request for both a Compliance Review and a Stakeholder Response;
 - State that you are unsure whether you would like Compliance Review or Stakeholder Response and that you desire both entities to review your case.
13. Are you concerned that UNDP's failure to meet a UNDP social and/or environmental policy or commitment is harming, or could harm, you or your community? Mark "X" next to the answer that applies to you: Yes: No:
 14. Would you like your name(s) to remain confidential throughout the Compliance Review process?

Mark "X" next to the answer that applies to you: Yes: No:

If confidentiality is requested, please state why:

15. Would you like to work with other stakeholders, e.g., the government, UNDP, etc. to jointly resolve a concern about social or environmental impacts or risks you believe you are experiencing because of a UNDP project?

Mark "X" next to the answer that applies to you: Yes: No:

16. Would you like your name(s) to remain confidential during the initial assessment of your request for a response?



Environmental and Social Management Plan

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Mark "X" next to the answer that applies to you: Yes: No:

If confidentiality is requested, please state why:

17. Requests for Stakeholder Response will be handled through UNDP Country Offices unless you indicate that you would like your request to be handled through UNDP Headquarters. Would you like UNDP Headquarters to handle your request?

Mark "X" next to the answer that applies to you: Yes: No:

If you have indicated yes, please indicate why your request should be handled through UNDP Headquarters:

18. Are you seeking both Compliance Review and Stakeholder Response?

Mark "X" next to the answer that applies to you: Yes: No:

19. Are you unsure whether you would like to request a Compliance Review or a Stakeholder Response? Mark "X" next to the answer that applies to you: Yes: No:

Information about the UNDP Project you are concerned about, and the nature of your concern:

20. Which UNDP-supported project are you concerned about? (if known):

21. Project name (if known):

22. Please provide a short description of your concerns about the project. If you have concerns about UNDP's failure to comply with its social or environmental policies and commitments, and can identify these policies and commitments, please do (not required). Please describe, as well, the types of environmental and social impacts that may occur, or have occurred, as a result. If more space is required, please attach any documents. You may write in any language you choose

23. Have you discussed your concerns with the government representatives and UNDP staff responsible for this project? Non-governmental organizations?

Mark "X" next to the answer that applies to you: Yes: No:

If you answered yes, please provide the name(s) of those you have discussed your concerns with

Name of Officials You have Already Contacted Regarding this Issue:

First Name	Last Name	Title/Affiliation	Estimated Date of Contact	Response from the Individual

24. Are there other individuals or groups that are adversely affected by the project?

Mark "X" next to the answer that applies to you: Yes: No:

25. Please provide the names and/or description of other individuals or groups that support the request:

First Name	Last Name	Title/Affiliation	Contact Information

Please attach to your email any documents you wish to send to SECU and/or the SRM. If all of your attachments do not fit in one email, please feel free to send multiple emails.



Environmental and Social Management Plan

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Submission and Support

To submit your request, or if you need assistance please email: project.concerns@undp.org