FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

MINISTRY OF WATER, IRRIGATION AND ENERGY

ONE WaSH - CONSOLIDATED WATER SUPPLY, SANITATION AND HYGIENE ACCOUNT PROJECT (ONE WaSH -CWA) (P167794)

ENVIRONMENTAL AND SOCIAL MANAGEMENT

FRAMEWORK

Final Draft

December 2018
Ethiopia, Addis Ababa

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List of Acronyms

AAWSA	Addis Ababa Water and Sewerage Authority
CRGE	Climate resilient green economy
CSE	Conservation Strategy of Ethiopia
CWA	Consolidated WaSH Account
EA	Environmental Assessment
EBA	Environmental Baseline Assessment
EFCCC	Environment, Forest and Climate Change Commission
EFDR	Ethiopian Federal Democratic Republic
EHS-MP	Environment, Health and Safety Management Plan
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
EPE	Environmental Policy of Ethiopia
ESA	Environmental and social Auditing
ESIA	Environmental and social Impact Assessment
ESMF	Environmental and social management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Screening
ESSF	Environmental and Social Screening Form
FDRE	Federal Democratic Republic of Ethiopia
GoE	Government of Ethiopia
GTP	Growth and Transformation Plan
HSE-MP	Health, Safety and Environment Management Plan
MDGs	Millennium Development goals
MoUDH	Ministry of Urban Development and Housing
MoWIE	Ministry of Water, Irrigation and Electricity
OP	Operational Policy(World Bank)
OWNP-CWA	One Wash National Project – Consolidated Wash Account
REPA	Regional Environmental Protection Authority
PAP	Project Affected Persons
PCR	Physical Cultural Resources
PIM	Project Implementation Manual
PMP	Pesticide Management Plan
PMU	Project Management Unit
RAP	Resettlement Action Plan
REPA	Regional Environmental Protection Authority
RPF	Resettlement Policy Framework
SD	Sustainable development
SDGs	Sustainable Development Goals
ToR	Terms of Reference

ToT	Training of Trainers
UAP	Universal Access Plan
UWSSP	Urban Water Supply and Sanitation Project
WIF	WaSH Implementation Framework
WSS	Water Supply and Sanitation

Executive Summary

The ongoing One WaSH National Program (OWNP) has been implemented over a period of five years starting from July 2014. ONE WaSH-CWA (P167794) is designed considering the Ethiopian Growth and Transformation Plan II (GTP II) and SDG Goals. It is planned to come up with solutions for the implementation challenges faced during the implementation of OWNP phase I. ONE WaSH-CWA (P167794) focuses among other things on addressing implementation gaps from previous interventions, while adopting directives and indicators from GTP II by incorporating integrated water resources management, Climate Resilient-WaSH and Emergency WaSH giving especial attention to pastoralist community, flood prone, lowlands and drought prone areas of Ethiopia.

The ONE WaSH-CWA (P167794) Development Objective is to contribute to improving the health and well-being of population in rural and urban areas of Ethiopia by increasing sustainable and climate resilient water supply and sanitation access and the adoption of good hygiene practices. The intermediate objective of the Program is to achieve increased and sustained coverage of safely managed water supply and sanitation in rural and urban areas. The short-term objective of the Program is to achieve increased and sustained coverage of water supply and sanitation in rural and urban areas with basic water supply and sanitation service levels in Ethiopia in line with the GTPII targets (2015-2020).

ONE WaSH-CWA (P167794) has five major components. Component 1- Rural WaSH would support increasing access to water supply and sanitation services and promoting hygiene in rural areas; Component 2-Urban WaSHs would improve access to water supply and sanitation services in urban areas (small and medium towns) and to strengthen operational efficiency of urban water boards and utilities to effectively manage WSS service delivery. Component 3 - Institutional WaSH would support increasing and improving access to water supply and sanitation services in health facilities and schools. Component 4 - Climate Resilient WaSH (CR-WaSH) aims to support the study, design and implementation of WSS services in areas that are prone to recurrent droughts and floods; and Component 5-Project Management and Capacity Building: this component would support implementation of this project.

An Environmental and Social Management Framework (ESMF) was prepared for the ongoing One WaSH National Program (OWNP). ESMF was a preferred safeguards instrument for this program as the exact location and their potential adverse environmental and social impacts could not be identified prior to appraisal. The existing OWNP- ESMF is now updated to reflect the changes to be made under the ONE WaSH-CWA (P167794). This updated (ESMF) has been prepared in line with the environmental and social safeguards policies of the World Bank and the Ethiopian environmental policies and legislations. While updating the ESMF, considerable attention was given to the safeguards policies triggered by the Program (Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Physical Cultural Resources (OP/BP 4.11), Involuntary Resettlement (OP/BP 4.12), Safety of Dams (OP/BP 4.37), International Waterways (OP/BP 7.50), and Indigenous/Underserved Peoples (OP/BP 4.10).) The purpose of this ESMF is to provide guidance to WaSH staff, communities, and others participating in planning and implementation of ONE WaSH-CWA (P167794) regarding the sustainable environmental and social management of the water supply and sanitation projects.

The methodology used while updating the ESMF include, *inter alia*, review of relevant documents such as the ESMF of the existing OWNP (phase I) and ONE WaSH-CWA (P167794) program documents; consultation with key stakeholders in selected regional states of Ethiopia (Oromia, Amhara, SNNPR, Afar and Gambella) at different levels. The ESMF document has been updated following the environmental policy of Ethiopia and the World Bank's Environmental safeguards policy OP 4.01. According to the World

Bank safeguard policy OP 4.01, the proposed ONE WaSH-CWA (P167794) is a Category B as the major impacts are site-specific, reversible, temporary in nature and scope; can be easily and cost-effectively mitigated; have limited geographic footprint; and that mitigation measures are known.

ONE WaSH-CWA (P167794) will have considerable environmental and social benefits. Among other things, it can help to women and girls to have time that may be used productive activities such as spare of time to go to school, resulting improvements in overall economic productivity and development. It could also account for better comfort and better quality of life and domestic hygiene, reduction in WaSH related diseases such as dysentery, cholera and others. The program will also lead to capacity building and training, and resulting enhancement of organizational, financial and technical capacities at the federal regional, town and community level. Employment opportunity both during construction and operation phases are also additional benefits of the project.

However, some negative impacts may arise largely related to drilling of wells and development of surface water. These include, inter alia, water-borne diseases (e.g. malaria, skin diseases etc.) caused by lack of drainage in the immediate surroundings of the spring; reduced water flow downstream, potential for conflict between upstream and downstream users; ground water contamination through the well during construction or operation; potential for increased animal concentration in the surroundings of the water point, with resulting overgrazing, soil erosion and ecosystem degradation waste material extracted from the well or waste drilling cuttings and drilling mud (boreholes), if not disposed of or reclaimed properly; temporary increase in the suspended solids content of water and impact on users downstream during construction; for springs in mountainous areas, potential for impacts to fragile ecosystems and wetlands. The sanitation component can also have health hazards related to waste handling, odor and smell. There is also possibility of microbial water contamination. Health hazards associated with inappropriate location selection of sanitation systems in relation to water supply systems and on groundwater in situations where water table is shallow. Health hazards associated with unreliable emptying services of latrines and other individual sanitation systems. Land acquisition and loss of asset and livelihood because of the construction of different components of WaSH projects at different level which may result in impacts on permanent human settlement of urban, rural as well as pastoralists and host community that receive the resettled ones. In some cases, WaSH services may not be affordable for poorest of the poor and other vulnerable people in the community.

Various mitigation measures are proposed in this updated ESMF to avoid/minimize the likely negative environmental and social impacts. In order to avoid spillage of water and creation of stagnant pools of water at well head which will be a breeding ground for vectors of water-borne diseases and become a potential source of contamination, select well site where water drains away from well; do not construct well in a depression or on low-lying, poorly drained site; construct drainage ditches to divert run-off water around well site; construct concrete pad around the base of the well head; and build soak away pit. To minimize erosion along banks of drainage channel that can cause siltation of channel and loss of land water source contamination, it is important to stabilize sections of bank susceptible to erosion by planting shrubs and trees on uphill side of ditch to slow water runoff and trap sediments and other contaminating substances. There should be appropriate distance of a water supply system intake from potential sources of contamination e.g.it should be: (i) 50 m from latrines, cattle pens, refuse pits; (ii) 100 m from soak pits, trenches and sub-surface sewage disposal; (iii) 150 from cesspools, sanitary land fill areas, and graves. Hygiene awareness program is also essential for the protection of water supplies. Detail mitigation measures for the envisaged negative environmental and social impacts are annexed.

The updated ESMF also has clear provisions about subproject screening and approval procedures in ONE WaSH-CWA (P167794); institutional arrangements for the implementation of the ESMF showing staffing requirements and responsibilities of different stakeholders; and environmental and social safeguards compliance monitoring and reporting requirements. ONE WaSH-CWA (P167794) subprojects will be screened by safeguards focal persons who will be assigned by the client in each town/Woreda. The screening reports will be reviewed and cleared by environmental protection authority. The safeguards focal persons at Woredas/towns will also responsible for developing ESMPs where appropriate. Should a project activity require preparation of an ESIA, the client will recruit an independent consultant. The Woreda/town safeguards focal person will also be responsible for compliance monitoring and reporting. In relatively big regional states of Ethiopia (Amhara, Oromia, SNNP) the client will recruit safeguards specialist at zonal towns who will assist safeguards compliance requirements at operational levels. In each regional state of Ethiopia, environmental and social safeguards specialists will be deployed who will provide an over guidance for the implementation of the ESMF in their respective region. The client will also deploy environmental and social safeguards specialists at national /federal program coordination office who will be overseeing, monitoring and reporting on the implementation of the ESMF. The client is expected to prepare quarterly and annual environmental and social safeguards compliance reports. The client will also recruit an independent consultant that will conduct and environmental and social audit after two years of the program implementation.

While implementing various World Bank financed projects such as OWNP phase I, the Borrower has gained considerable experience in the preparation and implementation of safeguards instruments (e.g. ESMP, ESIA). However, experience has shown that there are still gaps/limitations that need to be addressed. These include limited technical capacity, lack of appropriate budget for implementation of the safeguards tools, turnover of qualified and experienced staff, and lack of safeguards staff at operational level. Capacity building is, therefore, given due attention in the ESMF of ONE WaSH-CWA (P167794). Beneficiaries of the capacity building activities include environmental and social safeguard specialists at federal, regional and Woreda/town levels, zonal and woredas focal persons, Town Water Boards, technical experts under the water supply and sanitation utilities and PMU coordinators. An estimated total budget of **2,586,580.00 USD** will be required to implement the ESMF, RPF and SA.

This ESMF will be applicable in all ONE WaSH-CWA (P167794) implementing regions, Woredas/towns and kebeles. It will be disclosed the MoWIE website after getting approval and no-objection from the World Bank.

2. Introduction

2.1. Purpose and Objectives of Updating the ESMF

The ESMF of the existing/ongoing OWNP was prepared and disclosed in 2013. As a continuation of the existing program, the government of Ethiopia is planning to implement the second phase of OWNP in all the 9 regional states and Dire Dawa city administration. The ESMF prepared for phase I of OWNP has therefore been updated for use in the second phase of the program. The existing ESMF has been updated in light of the World Bank policies triggered and the program activities envisaged in the second phase of the program. Updating the ESMF has been necessary to address the gaps observed in the phase I and incorporate the lessons learned from the ongoing project. The new program activities such as those related with climate resilient WaSH also necessitated updating of the ESMF.

2.2. Methodology used for Updating the ESMF

The methodology used for the updating of the ESMF include, *inter alia*, review of the relevant documents such as the ESMF of the existing OWNP (phase I) and ONE WaSH-CWA (P167794) program documents; consultation with key stakeholders in selected regional states of Ethiopia (Oromia, Amhara, SNNPR, Afar and Gambella) at different levels. The ESMF document has been updated following the environmental policy of Ethiopia and the World Bank's Environmental safeguards policy OP 4.01.

2.2.1. Review of Relevant Policies, Proclamations and Regulations

As stated earlier, the existing ESMF has been updated based on the relevant Ethiopian and the World Bank's safeguards policies and the ONE WaSH-CWA (P167794) program document. In addition, the Ethiopian climate resilience Water Safety Guideline was the reviewed. The information from the reviews was useful to propose measures helpful for addressing the gaps identified; and to propose mitigation measures for anticipated /likely negative impacts associated with the ONE WaSH-CWA (P167794) program sub-projects.

2.2.2. Consultations with selected Key Stakeholders

Providing accurate information about the program to people from the planning stage prevents misconception and builds trust between the affected population and the program and enhances transparency. Consultation has several objectives which include: sharing information, listening to feedback, engaging in decision making discussions, and involving people in participation in the implementation process. Consultations enable the program team to hold joint discussions with the affected people, share ideas about planning & implementation & benefit from local knowledge and make more informed decisions.

The Ethiopian legislations and policies as well as the World Bank policy OP 4.01 and OP 4.12 clearly states that public consultation should be held with selected key stakeholders during the preparation of the ESMF to draw up plans or mitigation of impacts associated with the implementation of project activities. Accordingly, different consultations were conducted in the course of updating the ESMF. Besides, consultations were conducted to get the necessary information for updating the RPF and SA. The consultations were held in selected program implementing regions (Oromia, Amhara, SNNPR, Afar and Gambella) among these two are emerging and predominantly pastoral regions.

The aim of these consultations was to provide information on the upcoming phase II OWNP for the participants and investigate their views towards its implementation and hence reflect their opinions on key elements of the ESMF, RPF and SA particularly, on the procedures and implementation arrangements, screening processes, compensation entitlements, conflict resolution and grievance redressing procedures

and on the environmental and social monitoring and evaluation processes. Specifically, the consultations were intended to:

1. share information about ONE WaSH-CWA (P167794): its components and activities;
2. obtain information about the needs and priorities of the communities, as well as information about their reactions to the proposed sub-projects and other activities related to the environmental and social safeguards;
3. get feedback on various mitigation and rehabilitation measures;
4. get cooperation and participation of communities in activities to be undertaken for implementing mitigation measures to reduce adverse impacts;
5. ensure transparency in all activities related to project planning and implementation;

This ESMF has therefore been updated following a series of consultations held with various stakeholders and communities. The issues of program-related land acquisition and the applicable standards to the program, including WB OP 4.12, have been discussed during the program preparation meetings and public consultation process conducted in August 28 to Sep 21, 2018. Consultations were conducted with governmental organizations, NGOs, regional PMU coordinators, Woreda and zonal focal persons, local community members including religious leaders, Elders, woman, youth representatives, and other relevant stakeholders. Three different checklists were to get the information necessary for updating of the ESMF, RPF and SA.

The specific locations where stakeholder consultations were conducted (in the Regions, Zone, Woreda/Town & Kebele) are outlined in Table 1.

Table 1: The specific locations where stakeholder consultations were conducted

No	Selected Region	Zone	Woreda/Town	Kebele	Community/Village
1	Oromia	South West Shewa Zone	Seden Sodo woreda	Alle Abayi Irrenso	Itenso Ale Abayi
		Oromia Special Zone Surroundimng Finfine	Welemera woreda	Wejidu	Wagidi
2	Amhara	Western Gojame Zone	North or Semien achefer woreda	Liben Small Town WSSP	Liben
		Western Gojame Zone	North achefer woreda	Kunzila- RPS	Kunzia- RPS
3	SNNP	Gedeo Zone	Wenago woreda	Sugale	Sugale
		Gedeo Zone	Dila Zuria Woreda	Dila Zuria	Dila Zuria
4	Afar	Zone 1	Chifera Town	Chifera	Chifera
5	Gambella	Nuer Zone	Lare woreda	Lare zuria kebele	Lare zuria kebele

Below are some of the photos taken during stakeholders' consultations in Woredas and Kebeles (at Gambella, Afar, Amhara, SNNPRS & Oromia, respectively)

The consultations were of great importance for strengthening program implementation. The main findings of the consultations with stakeholders is consolidated and presented in Annex VIII. The consultation process will also continue throughout the program cycle as per the requirement of the Bank.

3. Program Description and Component

ONE WaSH-CWA (P167794) is designed using Ethiopian Growth and Transformation Plan II (GTP II) Goals, strategic objectives with indicators for water, sanitation, hygiene and institution WASH. GTP II consist of 21 goals and 4 strategic objectives for water including: Increase safe water supply upgrading the service level and improve urban waste water management system; ensure good governance in rural water supply enhancing sustainability, effectiveness, efficiency; climate change resilience of the services; and building the sub-sectors capacity. The target set, and overall existing situation may demand and call for a pragmatic program to make available adequate and safe water supply, mobilize communities for a sustainable and improved sanitation and hygiene services to all people in all 9 regional states and 2 city administrations (Dire Dawa and Addis Ababa) of Ethiopia. In addition, inadequately served and drought prone pastoralist communities demand a robust and climate resilient water and sanitation services through CR-WASH and Emergency WaSH.

According to the revised ONE WaSH-CWA (P167794) program document the new ONE WaSH-CWA (P167794) is planned to achieve GTPII plan, which covers the period 2016-2020, the government of Ethiopia has prepared a Universal Access Plan (UAP), with the targets like Provide rural water supply access with GTP II minimum service level of 25 l/c/d within a distance of 1 km from the water delivery point for 85% of the rural population of which 20% are provided with RPS. And to Provide water supply access for 75% of the urban population with GTP II minimum service level of 100 l/c/d for Category 1 towns/cities, 80 l/c/d for Category 2 towns/cities, 60 l/c/d for Category 3 towns, 50 l/c/d for category 4 towns (all piped up to the premises) and 40 l/c/d for category 5 towns within a distance of 250 meters with piped system. In addition to this to carry out studies and designs of urban waste water management

for 36 category 1, 2 and 3 towns/cities and build waste water management systems for 6 towns /cities with populations of 200,000 or more and to reduce rural water supply schemes non-functionality rates to 7% and decrease NRW to 20%. The program is designed with the following five components.

Component 1-Rural WaSH: This component would support increasing access to water supply and sanitation services and promoting hygiene in rural areas. particularly, (i) development and rehabilitation of community water supply schemes in participating woredas; (ii) promotion of improved hygiene and sanitation practices through the application of behavior change campaigns and sanitation marketing initiatives; (iii) capacity building to strengthen and sustain participating woredas' capacity to plan, implement and manage water supply and sanitation services jointly with ONWP core implementing sectors (water, education, health and finance) as well as coordinating sectors (agriculture, pastoralist affairs and disaster risk management commission); (iv) develop and strengthen capacity of participating communities to effectively self-manage their water supply and sanitation facilities; and (v) strengthen capacity of respective water, health and education regional bureaus and woreda offices and Woreda WaSH Teams (WWTs) to increase the number of trained and skilled facilitators that can support community mobilization activities, provide technical support during design and construction of water supply systems and provide support to communities to establish operational community management systems or WaSH Committees (WaSHCOMs).

Component 2-Urban WaSH: This would improve access to water supply and sanitation services in urban areas (small and medium towns) and to strengthen operational efficiency of urban water boards and utilities to effectively manage WSS service delivery. This component includes (i) preparation of Business Plans that lay out strategies for WSS service delivery for current and future demands for water supply and sanitation (e.g. HH sanitation improvement, fecal sludge management, etc). These plans will also articulate prioritization and sequencing of investments in line with urban growth and demands; (ii) establishment and strengthening of urban water boards and utilities to effectively implement and manage WSS infrastructure and assets; (iii) construction, rehabilitation and optimization of urban water production, treatment and distribution systems; (iv) construction, rehabilitation and management structures for public and communal sanitation facilities; (v) capacity building for participating water boards and utilities to establish and strengthen O&M of WSS services in line with GoE's stepped approach sector policy for institutional development; (vi) preparation of feasibility and design studies for priority water supply and sanitation investments. For sanitation, the project will promote City-Wide Inclusive Sanitation approach that has been adopted by Addis Ababa and secondary cities across the country.

Component 3-Institutional WaSH: This component would support increasing and improving access to water supply and sanitation services in health facilities and schools. The project would finance: construction and rehabilitation of integrated water supply, sanitation and solid waste disposal facilities in schools and health facilities. Implementation of these activities will be closely linked with activities in component 1 (Rural WaSH) to ensure that institutions within the same geographic areas of targeted communities are provided with an integrated package of water supply and sanitation services. Standards for sanitation services in schools will follow MoE guidelines, while standards in health facilities will follow MoH guidelines. Capacity building through WWT will be provided to bureaus of education and health to provide technical support in procurement and contract management of proposed infrastructure development to address weaknesses in sub-par construction quality.

Component 4-Climate Resilient WaSH (CR-WaSH): This component aims to support the study, design and implementation of WSS services in areas that are prone to recurrent droughts and floods. This component is sub-divided into three pillars to effectively address (i) proactive planning and management; (ii) study and design resilient and sustainable infrastructure that cope with extreme climatic variability; and (iii)

dimension framework for support and resources mobilization in the event of emergencies. A potential grant proposal for the Green Climate Fund will be explored to complement proposed activities under this component.

Component 5-Project Management and Capacity Building: This component would support implementation of this project through: (i) capacity building, financing of additional implementation support and technical experts; (ii) project management and coordination between implementing agencies; (iii) procurement and contract management to improve implementation of proposed infrastructure; (iv) financial management; (v) operationalization of sector-wide Management Information System; (iv) application of environmental and social safeguards instruments and compliance; (v) knowledge management and experience sharing. This component will also finance procurement of equipment and goods required by federal, regional and Woreda implementing agencies to effectively manage and implement proposed activities.

4. Legal Frameworks

The first attempt to develop environmental regulations in Ethiopia dates back from 1989, when the development of the Conservation Strategy of Ethiopia (CSE) was launched. Before this CSE and Environmental Policy of Ethiopia (EPE) were finalized in 1997, the new Constitution of Ethiopia (1995) affirmed the right of every Ethiopian citizen to a clean and healthy environment and established the responsibility of the State in ensuring this right. A more comprehensive legal and regulatory framework was developed in 2002, in the form of three proclamations, namely (i) Proclamation to establish Environmental Protection unit, (ii) Proclamation on Environmental Impact Assessment, and (iii) Proclamation on Environmental Protection Control. Whereas these three proclamations provide the overall framework, the details of environmental and social management responsibilities to be implemented on the ground has been explicitly enacted through regulations, guidelines and standards developed based on the above frame works.

4.1. Review of Relevant Ethiopian Policies, Proclamations and Regulations

4.1.1. The Constitution of Ethiopia

The constitution of the Ethiopia, which was enacted in 1995, is the umbrella for all legislative frame-works in the country. The concept of sustainable development and the environmental rights of the people are clearly stipulated in the constitution, along with many other provisions. The concept of sustainable development and environmental rights are explicitly stated in article 43, 44 and 92 of the constitution of Ethiopia.

Article 43: The Right to Development identifies peoples' right to:

1. Improved living standards and to sustainable development; and
2. Participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community.

Article 44: Environmental Rights, all persons:

1. Have the right to a clean and healthy environment; and

2. Who have been displaced or whose livelihoods have been adversely affected as a result of state projects (PAPs) has the right to commensurate monetary or alternative means of compensation, including relocation with adequate state assistance.

Article 92: Environmental objectives are identified as:

1. Government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment;
2. The design and implementation of projects shall not damage or destroy the environment;
3. People have the right to full consultation and to the expression of views in the planning and implementation of environmental policies and projects that affect them directly;
4. Government and citizens shall have the duty to protect the environment;
5. Maintains land under the ownership of the Ethiopian people and the government but protects security of usufruct tenure;
6. Ensures the equality of women with men;
7. Maintains an open economic policy;

4.1.2. Environmental Policy of Ethiopia (EPE)

The Environmental Policy of Ethiopia was approved by the Council of Ministers in April 1997. Its conceptual framework was based on the findings and recommendations of the National Conservation Strategy of Ethiopia. This policy document, along with CSE was developed with the assistance from the International Union for the Conservation of Nature. EPE includes 9 policy objectives, 19 guiding principles, 10 sectoral policies (one of which is on Water Resources) and 10 cross-sectoral policies (one of which is on community participation and another on EIAs).

The goal of the Environmental Policy of Ethiopia is 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 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. For the effective implementation of the Environmental Policy of Ethiopia, the policy encourages the creation of an organizational and institutional framework from Federal to community levels. The Environmental Policy of Ethiopia provides a number of guiding principles that require adherence to principles of sustainable development; in particular, the need to ensure that EIA's:

1. Consider impacts on human and natural environments;
2. Provide for early consideration of environmental impacts in projects and projects design;
3. Recognize public consultation;
4. Include mitigation and contingency plans;
5. Provide for auditing and monitoring; and
6. Is a legally binding requirement.

7. Institutionalizes policy implementation

4.1.3. Ethiopian water resource management policy

This policy is issued with the overall goal to enhance and promote all national efforts towards the efficient, equitable and optimum utilization of the available Water Resources of Ethiopia for significant socioeconomic development on sustainable basis. The policy critically addresses gender issue in such a way that it promotes the full involvement of women in the planning, implementation, decision making and training as well as empower them to play a leading role in self-reliance initiatives.

The Sanitation Policy provides a means to develop a collaborative and cooperative framework for the development of sanitation systems and sanitation facilities through defined responsibilities of various governmental, non- governmental and other major stakeholders at all levels. It also clearly states that sanitation services are based on participation-driven and -responsive principles without compromising social equity. The Integrated WSS Policy recognizes that WSS services are inseparable and hence integrate the same at all levels through a sustainable and coherent framework.

4.1.4. Environmental proclamations, regulations and guidelines

4.1.4.1. Environmental Impact Assessment Proclamation, Proclamation No 99/200

This proclamation establishes the requirement of an EIA procedure for all projects, and clearly describes the procedures to be followed by project proponents with respect to EIAs. The EIA process described in the proclamation underscores the presence of consultation requirements where reports are to be made public, and the comments of the public (especially of the project affected people) are to be asked and taken into consideration in the review process undertaken by the federal or regional environmental agency in charge of the project. On top of this, the proclamation makes EIA mandatory for specified categories of activities undertaken either by the public or private sectors, or possibly, for the extension of EIA to policies, plans and programs in addition to projects. The proponent of the project (whether it is public or private body) must prepare an EIA following the requirements specified in the legislation (article 8) and associated guidelines. The EFCCC and/or the Environment and Climate Change Directorate in MoWIE that have full delegation and the other sector Ministries delegated by it and relevant Regional Environmental Agencies will then review the EIA and either approve the project (with or without conditions) or reject it.

The Proclamation on Environmental impact assessment requires, among other things:

1. Specified categories of projects to be subjected to an EIA and receive an authorization from the EFCCC or the relevant regional environmental agency prior to commencing implementation of the project.

2. Licensing agencies to ensure that the requisite authorization has been duly received prior to issuing an investment permit, a trade or operating license or a work permit to a business organization.

3. EFCCC or the relevant regional environmental agencies may issue an exemption from carrying out an EIA in projects supposed to have an insignificant environmental impact.

4. A licensing agency may suspend or cancel a license that has already been issued where the EFCCC change or the relevant regional environmental agency suspends or cancels environmental authorization.

5. Procedures that need to be followed in the process of conducting an EIA are described in the Proclamation and further elaborated in the draft EIA procedural guideline issued in 2003 E.C. Thus, a project developer is expected to act as follows:

6. Undertake a timely EIA, identifying the likely adverse impacts, and incorporating the means of their prevention.

7. Submit an environmental impact study report to the EFCCC, the delegated Environment and Climate Change Directorate under MoWIE or the relevant regional environmental agency for review and approval.

To put this Proclamation into effect the EFCCC has issued an EIA Directive (Directive no.1/2008) and other draft procedural guideline documents, which provide details of the EIA process and its requirements.

4.1.5. Regulation on Environmental Impact Assessment

Based on the Federal EIA Proclamation No 299/2002, many of the regional states have prepared and put in force their own EIA regulations. Some of these regional EIA regulations put stricter rules on the project proponents and EIA practitioners to facilitate for the preparation of EIA's with dependable and sufficient information that would enable sound decision making. In this regard, EIA regulation issued by the Addis Ababa City government can be worth mentioning. Regulation No 21/2006 has boldly put in its preamble that the purpose of issuing this regulation is to follow up and ascertain the development activities in Addis Ababa city so that they are all implemented in conformity with the conditions of the principle of sustainable development and without obstructing environmental security.

4.1.6. Environmental Pollution Control, Proclamation No 300/2002

Proclamation No. 300/2002 on Environmental Pollution Control primarily aims to ensure the right of citizens to a healthy environment and to impose obligations to protect the environment of the country. The proclamation is based on the principle that each citizen has the right to have a healthy environment on one hand and the obligation to protect the environment of the country on the other. The law addresses the management of hazardous waste, municipal waste, the establishment of environmental quality standards for air, water and soil; and monitoring of pollution. The proclamation also addresses noise and vibration as sources of environmental pollution and it seeks for standards and limits for it, providing for the maximum allowable noise level considering the settlement patterns. In general, the Proclamation provides a basis from which the relevant environmental standards applicable to Ethiopia can be developed, while sanctioning violation of these standards as criminally punishable offences.

Furthermore, it empowers the EFCCC and/or the Regional Environmental Authority to assign environmental inspectors with the duties and responsibilities of controlling environmental pollution. In order to ensure implementation of environmental standards and related requirements, inspectors belonging to the EFCCC or the relevant regional environmental agency are empowered by the Proclamation to enter, without prior notice or court order, any land or premises at any time, at their discretion. Such wide powers, emanating from the proclamation, are given to environmental inspectors

with a clear intention to protect the environment from pollution, to safeguard and ensure wellbeing of human health as well as to maintain the biota and the aesthetic value of nature.

4.1.7. Regulation No 159/2008, Prevention of Industrial Pollution Regulation

Pursuant to Proclamation 300/2002, a regulation to prevent industrial pollution was developed by the Federal EPA and endorsed by the Council of Ministers to ensure compatibility of industrial development with environmental conservation. This regulation confers important obligations to industrial operators. A factory subject to the regulations is obliged to prevent or minimize the generation and release of pollutants to a level not exceeding the environmental standards. The regulation also obliges industrial operators to handle its equipment, inputs and products in a manner that prevents damage to the environment and to human health. Moreover, the regulations urge industrial operators to prepare and implement an emergency response system of their own. On the other hand, industrial operators are required to prepare and implement internal environmental monitoring systems and keep written records of the pollutants generated and the disposal mechanisms used to get rid of the pollutants. In relation to it, factories are required by the regulation to submit annual compliance reports with the provision of the regulations.

4.1.8. Public Health Proclamation No 200/2000

Various aspects of public health issues including water quality control, waste handling and disposal, availability of toilet facilities and others are clearly addressed in the public health proclamation. This proclamation critically prohibits discharging untreated liquid waste generated from septic tanks, seepage pits, and industries into water bodies, or water convergences.

4.1.9. Expropriation of landholding for Public Purposes & Payment of compensation Proclamation No 455/2005.

The proclamation provides for the expropriation of landholdings for public purposes and payment of compensation and establishes the legal principles and framework for expropriation and compensation. Regarding the determination of compensation, the basis and amount of compensation is clearly explained in Article 7(1) which states that “land holder whose holding has been expropriated shall be entitled to payment of compensation for his property situated on the land and for permanent improvements he made”. Article 7(2) also states that “the amount of compensation for property situated on the expropriated land shall be determined on the basis of replacement cost of the property”. Under article 8(1) of this proclamation a displaced land holder whose land holding has been permanently expropriated shall in addition to the compensation payable under the articles of this proclamation be paid displacement compensation, which shall be equivalent to ten times the average annual income he secured to bring the five years preceding the expropriations of the land.

4.1.10. Regulation No 135/2007 of Council of Ministers

The regulation is all about the payment of compensation for property situated on land holdings expropriated for public purposes. It is issued by the council of Ministers for the purpose of not only paying compensation but also to assist displaced persons to restore their livelihood. It narrates clear procedures for implementation of proclamation No 455/2005, for compensation payment for property situated on expropriated land for public benefit. The regulation identified the type of properties eligible for payments

of compensation which includes buildings, fences, crops, perennial crops, trees, protected grass, improvement made on rural land; relocated property, mining license and burial grounds.

4.1.11. The Labor Law, Proclamation No 377/2003

The Labour Proclamation (which was revised in 2003) provides the basic principles, which govern labour conditions taking into account the political, economic and social policies of the GoE and in conformity with the international conventions and other legal commitments to which Ethiopia is a party. The requirements in terms of the protection of workforce health and safety are clearly stipulated in Article 92 of this proclamation. Moreover, this article narrates in detail about Occupational Safety and Health, Health and Working Environment, Prevention Measures and Obligations of the Employers, among others. The law prohibits child employment aged 14 and less and the engagement of young workers (between 14-18) in types of employments that are considered hazardous. The law limits the working hour of young worker to 7hrs and clearly states that they should not work nights (10 pm-6am), holidays, overtime and weekly rest days. Following the proclamation, the Ministry of Labor and Social Affairs defined type of job young workers should not be engaged in because it is harmful and unsafe.

The proclamation obliges an employer to take all the necessary measures to adequately safeguard the health and safety of the workers. Workforce health and safety is an important aspect considered for identifying the potential environmental, health and safety issues that can arise from the project under implementation.

4.1.12. Environmental Guidelines and Standards

The MoEFC has issued some guidelines and standards which are endorsed by the National Environmental Council. The purpose of these guidelines and directives is to ensure that development projects integrate environmental considerations in the planning process as a precondition for their approval. These include Directive No.1/2008, which was issued to determine projects subject to an EIA. According to this directive, the EIA Proclamation is to be applied to the types of projects listed under the directive. The types of projects subject to EIA in the urban sector include roads, solid waste facilities, WSS projects and any other project planned to be implemented in or near areas designated as protected. In a similar manner it is indicated that the National Environmental Council has endorsed certain effluent standards for specified industrial sectors. The endorsed effluent standards for the specified 12 industrial sectors are posted on the official website of the EFCCC but are not officially published in the same way as directive no.1/2008. As a result, these are widely considered as draft effluent standards for Ethiopia.The following three draft environmental guidelines are prepared by MoEF and being used with intention of protecting the general environment along with implementation of any developmental activities:

4.1.13. EIA Procedural Guideline (draft), November 2003

This guideline outlines the screening, review and approval process for development projects in Ethiopia and defines the criteria for undertaking an EIA. According to this EIA procedural guideline, projects are categorized into three schedules:

Schedule 1: This category includes projects that may have adverse and significant environmental impacts thus requiring a full EIA study.

Schedule 2: Projects whose type, scale or other relevant characteristics have potential to cause some significant environmental impacts but are not likely to warrant a full EIA study fall under this group.

Schedule 3: Projects which would have no impact and do not require an EIA.

However, projects situated in an environmentally sensitive area such as land prone to erosion; desertification; areas of historic or archaeological interest; important landscape; religiously important area, etc. will fall under Schedule I irrespective of the nature of the project.

Guideline for Environmental and Social Management Plan (draft), May 2004

These guidelines outline the fundamental contents that need to be featured while preparing an ESMP for proposed development projects in Ethiopia and provides template forms to be used for such purposes. The guideline also provides guidance on the preparation of institutional arrangements for implementation of ESMPs.

4.1.14. EIA Guideline, May 2000

The EIA guideline document provides essential information covering the following elements:

1. Environmental Assessment and Management in Ethiopia,
2. Environmental Impact Assessment Process,
3. Standards and Guidelines,
4. Issues for sector EIA in Ethiopia covering agriculture, industry, transport, mining, dams and reservoirs, tanneries, textiles, hydropower generation, irrigation projects and resettlement.

4.1.15. Environmental Policy

This document was developed together with the CSE with assistance from the World Conservation Union (IUCN). It includes 9 policy objectives, 19 guiding principles, 10 sectoral policies (one of which on Water Resources) and 10 cross-sectoral policies (one of which on Community Participation and another on EIAs). The principal features of the Environmental Policy are:

1. Provides for protection of human and natural environments
2. Provides for an early consideration of environmental impacts in projects / program design
3. Recognizes public consultation
4. Includes mitigation and contingency plans
5. Provides for auditing and monitoring
6. Establishes legally binding requirements
7. Institutionalizes policy implementation

Responsibilities in Dealing with EIAs – Competent Agency

The guidelines define the Competent Agency will have to take responsibility for the EIA process, including the review of the initial proposal, of the reports and of the final decision on the acceptability of the submitted EIA. It affirms the role of the EPA as the Competent Agency at the federal level in Ethiopia, and the role, in the long term, of regional environmental agencies when they are established, in dealing with EIAs at the regional level. However, in recognition of the fact that all regional environmental agencies will not be established soon, the document mentions that the Regional Environmental Coordination Committee must take the responsibility of EIAs at regional level, with technical support from the federal EPA where needed. The federal EPA should remain the Competent Agency for EIAs:

1. where programs may have inter-regional or inter-national impacts,
2. where they may entail impacts on environments of national or international significance,
3. where the proponent is a federal agency, including the Federal Investment Authority,
4. Or where the federal EPA agrees that an EIA be referred to it by the regional level due to its complexity or to the lack of capabilities at regional level.

4.2. The World Bank Safeguard Requirements

The purpose of World Bank safeguard policies is to ensure that environmental and social issues are addressed throughout the life cycle of bank financed projects. There are ten safeguard policies namely; OP 4.01 - Environmental Assessment, OP 4.04- Natural Habitats, OP 4.36- Forests, OP 4.09- Pest Management, OP 4.11- Physical Cultural Resources, OP 4.37 - Safety of Dams, OP 4.10- Indigenous Peoples, OP 4.12- Involuntary Resettlement, OP 7.50- International Waterways, and OP 7.60- Projects in Disputed Areas.

4.2.1. Applicable World Bank Safeguard Policies

The list of all World Bank Safeguard Policies, and their potential applicability to the project, as well as actions already taken or being taken to comply with them is presented below and it will be included in the PIM of ONE WaSH-CWA (P167794). Seven of the ten World Bank policies have been triggered by the ONE WaSH-CWA (P167794) implementation. They are OP 4.01 (Environmental Assessment), OP 4.12 (Involuntary Resettlement), OP 4.11 (Physical Cultural Resources), OP 4.37 (Safety of Dams), OP 4.04 (Natural Habitat), OP 4.10 (Indigenous/Underserved People) and OP 7.50 (International Waterways).

Table 2: World Bank Safeguard Policies and How They Are Addressed by the ONE WaSH-CWA (P167794) Project			
Policy	**Objectives**	**Conditions of Applicability and Process**	**Applicability to the OWNP II and Actions Taken**
OP 4.01 Environmental Assessment	The objective of this policy is to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. This policy is triggered if a project is likely to have potential (adverse) environmental risks and impacts on its area of influence. OP 4.01 covers impacts on the natural environment (air, water and land); human health and safety; physical cultural resources; and trans boundary and global environment concerns.	Depending on the project, and nature of impacts a range of instruments can be used: EIA, environmental audit, hazard or risk assessment and ESMP. When a project is likely to have sectoral or regional impacts, sectoral or regional EA is required. The Borrower is responsible for carrying out the EA.	**YES** Development of an ESMF per OP 4.01. The ESMF outlines an environmental and social screening process and includes an ESMP for the OWNP II. The ESMF will be included in the PIM.
OP 4.04 Natural Habitats	This policy recognizes that the conservation of natural habitats is essential to safeguard their unique biodiversity and to maintain environmental services and products for human society and for long-term sustainable development. The Bank therefore supports the protection, management, and restoration of natural habitats in its project financing, as well as policy dialogue and economic and sector work. The Bank supports, and expects borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development. Natural habitats are land and water areas where most of the original native plant and animal species are still present. Natural habitats comprise many types of terrestrial, freshwater, coastal, and marine ecosystems. They include areas	This policy is triggered by any project (including any sub-project under a sector investment or financial intermediary) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project).	**Yes**

	lightly modified by human activities but retaining their ecological functions and most native species.		
OP 4.36 Forests	The objective of this policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development and protect the vital local and global environmental services and values of forests. Where forest restoration and plantation development are necessary to meet these objectives, the Bank assists borrowers with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. The Bank assists borrowers with the establishment of environmentally appropriate, socially beneficial and economically viable forest plantations to help meet growing demands for forest goods and services.	This policy is triggered whenever any Bank-financed investment project (i) has the potential to have impacts on the health and quality of forests or the rights and welfare of people and their level of dependence upon or interaction with forests; or (ii) aims to bring about changes in the management, protection or utilization of natural forests or plantations.	**NO** Sub-Projects that may have significant adverse impacts on forest in the sense of OP 4.36 will not be financed by OWNP II.
OP 4.09 Pest Management	The objective of this policy is to (i) promote the use of biological or environmental control and reduce reliance on synthetic chemical pesticides; and (ii) strengthen the capacity of the country's regulatory framework and institutions to promote and support safe, effective and environmentally sound pest management. More specifically, the policy aims to (a) Ascertain that pest management activities in Bank-financed operations are based on integrated approaches and seek to reduce reliance on synthetic chemical pesticides (Integrated Pest Management (IPM) in agricultural projects and Integrated Vector Management (IVM) in public health projects. (b) Ensure that health and environmental hazards associated with pest management, especially the use of pesticides	The policy is triggered if: (i) procurement of pesticides or pesticide application equipment is envisaged (either directly through the project, or indirectly through on-lending, co-financing, or government counterpart funding); (ii) the project may affect pest management in a way that harm could be done, even though the project is not envisaged to procure pesticides. This includes projects that may (i) lead to substantially increased pesticide use and subsequent increase in health and environmental risk; (ii) maintain or	**NO** OWNP II does not include any pest management activities.

	are minimized and can be properly managed by the user. (c) As necessary, support policy reform and institutional capacity development to (i) enhance implementation of IPM-based pest management and (ii) regulate and monitor the distribution and use of pesticides.	expand present pest management practices that are unsustainable, not based on an IPM approach, and/or pose significant health or environmental risks.	
OP 4.11 Physical Cultural Resources	The objective of this policy is to assist countries to avoid or mitigate adverse impacts of development projects on physical cultural resources. For purposes of this policy, "physical cultural resources" are defined as movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above ground, underground, or underwater.	This policy applies to all projects requiring a Category A or B Environmental Assessment under OP 4.01, projects located in, or in the vicinity of, recognized cultural heritage sites, and projects designed to support the management or conservation of physical cultural resources.	**YES** Physical cultural resources will be addressed through the environmental and social screening process outlined in this ESMF. In addition, the Environmental Guidelines for Contractors include a provision for handling chance finds. Any sub- project which the screening process demonstrates may entail negative impacts on cultural property will not be financed by the OWNP II.
OP 4.10 Indigenous **Peoples**	The objective of this policy is to (i) ensure that the development process fully respects the dignity, human rights, economies and cultures of indigenous peoples; (ii) ensure that adverse effects during the development process are avoided, or if not feasible ensure that these a minimized, mitigated or compensated; and (iii) ensure that indigenous peoples receive culturally appropriate and gender and intergenerationally inclusive social and economic benefits.	The policy is triggered when the project affects the indigenous peoples (with characteristics described in OP 4.10 paragraph 4) in the project area.	**Yes** .
OP 4.12 Involuntary **Resettlement**	The objective of this policy is to (i) avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; (ii) assist displaced persons in improving their former living standards, income earning capacity, and production	This policy covers not only physical relocation, but any loss of land or other assets resulting in: (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii)	**YES** Development of a Resettlement Policy Framework as prescribed by OP 4.12

	levels, or at least in restoring them; (iii) encourage community participation in planning and implementing resettlement; and (iv) provide assistance to affected people regardless of the legality of land tenure.	loss of income sources or means of livelihood, whether or not the affected people must move to another location. This policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.	
OP 4.37 Safety of Dams	The objectives of this policy are as follows: For new dams, to ensure that experienced and competent professionals design and supervise construction; the borrower adopts and implements dam safety measures for the dam and associated works. For existing dams, to ensure that any dam that can influence the performance of the project is identified, a dam safety assessment is carried out, and necessary additional dam safety measures and remedial work are implemented.	This policy is triggered when the Bank finances: (i) a project involving construction of a large dam (15 m or higher) or a high hazard dam; and (ii) a project which is dependent on an existing dam. For small dams, generic dam safety measures designed by qualified engineers are usually adequate.	**YES** Small retaining structures, such as maturation and facultative ponds may be financed under the project under OWNP II . These could be classified as small dams depending on their design.
OP 7.50 Projects on International Waterways	The objective of this policy is to ensure that Bank-financed projects affecting international waterways would not affect: (i) relations between the Bank and its borrowers and between states (whether members of the Bank or not); and (ii) the efficient utilization and protection of international waterways. The policy applies to the following types of projects: (a) hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial and similar projects that involve the use or potential pollution of international waterways; and (b) detailed design and engineering studies of	This policy is triggered if any adverse effects are anticipated in (a) any river, canal, lake or similar body of water that forms a boundary between, or any river or body of surface water that flows through two or more states, whether Bank members or not; (b) any tributary or other body of surface water that is a component of any waterway described under (a); and (c) any bay, gulf strait, or channel bounded by two or more	**YES** Though, it wouldn't be expected that significant, this program involves abstraction of water from some Ethiopian river basins.

	projects under (a) above, include those carried out by the Bank as executing agency or in any other capacity.	states, or if within one state recognized as a necessary channel of communication between the open sea and other states, and any river flowing into such waters.	
OP 7.60 Projects in Disputed Areas	The objective of this policy is to ensure that projects in disputed areas are dealt with at the earliest possible stage: (a) so as not to affect relations between the Bank and its member countries; (b) so as not to affect relations between the borrower and neighboring countries; and (c) so as not to prejudice the position of either the Bank or the countries concerned.	This policy will be triggered if the proposed project will be in a "disputed area". Questions to be answered include: Is the borrower involved in any disputes over an area with any of its neighbors. Is the project situated in a disputed area? Could any component financed or likely to be financed as part of the project situated in a disputed area?	**NO** No sub-project in disputed areas will be financed under OWNP II.

According to the World Bank's safeguard policy (OP 4.01), projects are categorized based on the results obtained from the environmental and social Screening Process. All projects proposed for World Bank financing are supposed to undergo the screening process. The screening process used by the World Bank classifies proposed projects into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental and social impacts.

1. **Category A:** a proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.
2. **Category B:** a proposed project is classified as Category B if its potential adverse impacts on human populations or environmentally sensitive areas including wetlands, forests, grasslands, and other natural habitats are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

3. **Category C:** a proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.
4. **Category FI:** a proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts

4.3 Comparison between Ethiopian Legislation and Bank Policies

Project Categorization in World Bank and Ethiopian legislation: it is interesting to observe that environmental screening is the cornerstone of both Ethiopian legislation and World Bank policies pertaining to EA. Both screening processes address the need for further EA and its level and scope. The categorizations that result from the screening processes are slightly different in their definition, but still are roughly equivalent.

In general, it is understood that "Schedule 1" and "Category A" are roughly equivalent as they both include projects with potential significant adverse impacts that demands a full-fledged ESIA. In a similar manner, "Schedule 2" and "Category B" projects are more or less similar in their definitions; both categories refer projects with less impacts than those of Category A or Schedule 1 projects. Under OP 4.01, category B projects require environmental work at the appropriate level, be it an ESMP, an ESIA or the implementation of mitigation measures in the context of an environmental and social screening process as outlined in this ESMF. However, it has to be noted that equivalency assessment is not yet done for the WB and Ethiopian categorization systems. This is to mean that a subproject which is category A as per the WB OP 4.01 doesn't necessarily mean that it is schedule 1 as per the Ethiopian EIA provision.

This approach is not in contradiction with the Ethiopian guidelines. However, the Ethiopian guidelines do not make provisions for the screening of sub-projects of a smaller scale than those listed in Schedules 1 and 2, and which may have negative localized impacts which will require mitigation. Therefore, this ESMF has been prepared to bridge this gap to ensure that the ONE WaSH-CWA (P167794) sub-projects are implemented in an environmentally friendly and socially acceptable manner.

"Schedule 3" and "Category C" are also equivalent and they require no further environmental and social assessment.

Ethiopia has a comprehensive framework for assessing and managing environmental impacts of development projects. However, the Ethiopian framework does not provide clear requirements or guidance on the following two aspects:

- Public consultation and disclosure, and

- Environmental and social screening process for small-scale sub-projects that could have negative localized impacts;

Another issue is that while most of the responsibility for assessing, mitigating and monitoring environmental and social impacts falls under regional environmental agencies, these either do not exist or lack the capability to carry out the tasks assigned to them by law. Otherwise, Ethiopian requirements are generally consistent with World Bank policies.

4.4. Consultation and Disclosure Requirements

OP 4.01 requires that for "all Category A and B projects, the borrower consults project- affected groups and local nongovernmental organizations (NGOs) about the project's environmental and social aspects and takes their views into account. The borrower initiates such consultations as early as possible. For Category A projects, the borrower consults these groups at least twice: (a) shortly after environmental and social screening and before the terms of reference for the ESAIA are finalized; and (b) once a draft ESIA report is prepared." OP 4.01 further requires that "for meaningful consultations between the borrower and project affected groups and local NGOs on all Category A and B projects proposed for IBRD or IDA financing, the borrower provides relevant material in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted". Category B reports for a project proposed for IDA financing are to be made available to project-affected groups and local NGOs, and public availability in the borrowing country of any Category B ESIA report for projects proposed for IDA funding are prerequisites to Bank appraisal.

Even though public consultation and disclosure are addressed by various pieces of Ethiopian legislation and guidelines, including the Constitution itself, they include no clear requirements nor arrangements, but rather recommendations. The EPA confirms that it is indeed including public consultation as a good practice recommendation in the environmental screening and ESIA process. However, as the federal EFCCC does not have the resources to involve itself strongly in all projects in the regions, that would require public consultation as part of the environmental and social impact assessment process, it has to rely on regional EPAs, where these exist or on local authorities in general to organize and document public consultation. There is little experience and capacity in Ethiopia in this respect and this is undoubtedly an area where the ONE WaSH-CWA (P167794) will have to strengthen capacity (see chapter 9, Capacity building and Training).

While Ethiopian legislation is to-date less stringent than Bank policies in this respect, there is, however, no limitation in the Ethiopian legislation as to the extent and scope of consultation and disclosure, nor as to who should be consulted. Therefore, there is no real contradiction between Ethiopian legislation and Bank policies, which can be applied in their public consultation and disclosure aspects without violating Ethiopian law.

Environmental and social screening process for small-scale subprojects: As mentioned earlier, Ethiopian guidelines do not make provisions for the screening of small- scale sub-projects which could nevertheless have negative localized environmental and social impacts requiring mitigation. Therefore, the provisions of OP 4.01 for screening, assignment of environmental category, application of appropriate environmental and social mitigation measures and/or preparation of separate ESIA reports, review and clearance of screening results and/or separate ESIA reports, consultations, and monitoring are applied to the ONE WaSH-CWA (P167794).

5. Environmental and Social baseline conditions

5.1. Geographic Overview

Ethiopia is currently divided into nine regional states(Oromia, Amhara, SNNPR, Tigray, Afar, B/Gumuze, Gambella Ethiopian Somali, Harari) and two city administrations(Addis Ababa and Dire Dawa).The country is located in the horn of Africa, between 3º and 15ºN latitude and 33º and 48ºE longitude and covers a land surface area (including water bodies) of 1,127,127 km² and has a population of over 90 million. It is a country of great geographical and climatic diversity, which has given rise to many and varied ecological systems through wide variety of eco-climatic zones that mainly reflect the contrasts in altitude that include 6 zones, i.e. Wurch, High Dega, Dega, Weyna Dega, Kolla, Berha. The two zones highest in elevation are usually grouped into one single zone (Wurch/High Dega). The altitude ranges from 4,620 m above sea level at the highest peak, Ras Deshen, to 110 m below sea level in the Danakil Depression. The East African Rift Valley separates the northern and south-western highland from the south-eastern highland.

Overall, Ethiopia is a country of great geographical and climatic diversity, which has given rise to many and varied ecological systems. The rainfall pattern in Ethiopia is influenced by two rain-bearing wind systems, one bringing the monsoonal wind systems from the South Atlantic and the Indian Ocean and the winds from the Arabian Sea. The two wind systems alternate, causing different rainfall regimes in different parts of the country.

5.2. Eco-Climatic Zoning of the Country

5.2.1. Wurch – High Dega

Wurch – High Dega are areas at altitudes 3,200 and above. They cover a total surface of 0.6% of the country, in the highest mountainous areas of Wollo, Gonder and Gojam (all in Amhara Regional State). The climate is cold, annual rainfall is in the range of 1,000 to 1,600 mm, with grassland forming most of the vegetation. These areas support less than 1% of the population, mainly active in cattle and sheep rearing. They include protected natural areas. In this eco-climatic zone, the low density of population results in few potential threats to the natural environment. However, these areas have potential for water catchment serving population located downstream in lower areas. Some environmental and social issues that will need to be considered in the event of these high-altitude areas being used for water supply activities are the following:

1. Vulnerability of local high altitude eco-systems,
2. Presence of protected areas, and risks implied by induced access into these areas,
3. Erosion that may be caused by construction activities on steep slopes.

5.2.2. Dega

Dega is found between altitudes of 2,400 and 3,200 m asl, in Tigray, Wollo, Gonder, and Gojam in Amhara Regional State, and in Harrerge, Arsi and Bale in Oromia Regional State. Rainfall is in the range of 1,000 to 2,000 mm annually, but some areas may experience erratic distribution of rains. Primary vegetation typically comprises of various species of coniferous shrubs and trees. Many springs and rivers originate in this area. This area supports about 20% of the population on 10% of the country surface, with farming systems combining subsistence and cash crops with cattle rearing.

The population of Dega areas has increased faster than the national average in the last 20-30 years, due to influx of population from other zones. Towns are expanding in this area. However, water sources, whether ground or surface water, are generally sufficient to accommodate this increasing population without significant environmental impacts caused by water withdrawals. However, care needs to be taken on the following issues.

1. Conflicts between upstream and downstream users in the case of significant abstractions for urban water supply;
2. Potential for pollution of water courses and of ground water by deficient sanitation in urban and semi-urban areas;
3. Erosion that may be caused by construction activities on steep slopes

5.2.3. Weyna Dega

Weyna Dega is found between altitudes of 1,500 and 2,400 masl and occupies a vast majority of the surface of the western half of Ethiopia, with about 30% of the total country surface. It is home to about 70% of the population of the country. Most of the surfaces of the main four Regional States (Amhara, Oromia, SNNP and Tigray) fall in Weyna Dega. Rainfall can vary between 800 and 1,600 mm, hence the subdivision between wet Weyna Dega, in the South West (SNNP), and dry Weyna Dega in the center and northern parts of the country. These are the most densely populated areas in the country, as they have historically been the most attractive to human settlement due to their temperate climate. The main two water sheds are those of the Abbay River (Blue Nile) and Awash River.

Like in the Dega zone, Weyna Dega areas experience a steep increase of the population, particularly of the urban population, and the general inadequacy of sanitation and industrial effluent treatment result in water contamination that may affect both shallow groundwater and surface water courses. Some of the potential environmental issues related with WSS are:

1. Conflicts between upstream and downstream users;
2. Contamination of shallow to medium-depth groundwater by inadequate sanitation, especially in urban areas;
3. Contamination of surface water by untreated discharges of industrial effluents and by inadequate urban sanitation;
4. Locally, over-abstraction of ground water or surface water for urban water supply;
5. Potential for water borne diseases from inadequate drainage around water points;
6. High solid content of surface water resulting from erosion in the water shed; and
7. Erosion caused by construction activities, in addition to the general tendency to erosion.

5.2.4. Kolla

Kolla are semi-arid areas found between 500 and 1,500 m asl, in parts of Western Tigray, Western Gonder (Amhara), in the South of Oromia Regional State (Borena) and the North of Somali Region. Temperatures are higher than in the highlands, and annual rainfall may vary between 200 and 800 mm, with erratic distribution in time and space. As a result, the vegetation is that of a dry savanna. Human activities are pastoral, with some cultivation in the most favorable areas. The population density in kola areas is low, estimated to be 10 percent of the total population.

5.2.5. Bereha

Berha corresponds to the arid lowlands found in Afar, Somali, Benshangul Gumuz, and Gambella Regional States, as well as in the western parts of Tigray and Gonder (Amhara), and in the East of Oromia Regional State (Harrerge and Bale). The annual rainfall is usually less than 200 mm, and temperatures are high. Population density is very low (less than 5% of the total population). Agriculture is only possible where the presence of a perennial water source allows for irrigation. Otherwise, predominantly nomadic groups base their livelihoods on pastoral activities. The main environmental and social risks in Kolla and Bereha Areas are in relation with the influx of pastoral and semi-pastoral population (and their livestock), or sedentary farmers from other areas, that may result from the development of permanent water points. Such water points (deep boreholes or livestock watering ponds) result in adverse environmental and social impacts in an already fragile environment, such as overgrazing and the resulting vegetation degradation, deforestation, and conflicts between settlers and pastoralists.

5.3 Main Environmental Issues Related to Water and Sanitation in Each Eco-Climatic Zone

Wurch – High Dega

In this eco-climatic zone, the low density of population results in few potential threats to the natural environment. However, these areas have potential for water catchment serving population located downstream in lower areas. Some environmental and social issues that will need to be considered in the event of these high-altitude areas being used for water supply activities are the following:

1. Vulnerability of local high altitude eco-systems,
2. Presence of protected areas, and risks implied by induced access into these areas,
3. Erosion that may be caused by construction activities on steep slopes.

Dega

The population of Dega areas has increased faster than the national average in the last 20-30 years, due to influx of population from other zones. Towns are expanding in this area. However, water sources, whether ground or surface water, are generally sufficient to accommodate this increasing population without significant environmental impacts caused by water withdrawals. However, care needs to be taken on the following issues.

1. Conflicts between upstream and downstream users in the case of significant abstractions for urban water supply;
2. Potential for pollution of water courses and of ground water by deficient sanitation in urban and semi-urban areas;

3. Erosion that may be caused by construction activities on steep slopes.

Weyna Dega

Like in the Dega zone, Weyna Dega areas experience a steep increase of the population, particularly of the urban population, and the general inadequacy of sanitation and industrial effluent treatment result in water contamination that may affect both shallow groundwater and surface water courses. Some of the potential environmental issues related with WSS are:

1. Conflicts between upstream and downstream users;
2. Contamination of shallow to medium-depth groundwater by inadequate sanitation, especially in urban areas;
3. Contamination of surface water by untreated discharges of industrial effluents and by inadequate urban sanitation;
4. Locally, over-abstraction of ground water or surface water for urban water supply;
5. Potential for water borne diseases from inadequate drainage around water points;
6. High solid content of surface water resulting from erosion in the water shed; and
7. Erosion caused by construction activities, in addition to the general tendency to erosion.

Kolla and Berha Areas

The main risks in these zones are in relation with the influx of pastoral and semi-pastoral population (and their livestock), or sedentary farmers from other areas, that may result from the development of permanent water points. Such water points (deep boreholes or livestock watering ponds) result in adverse environmental and social impacts in an already fragile environment, such as overgrazing and the resulting vegetation degradation, deforestation, and conflicts between settlers and pastoralists.

6. Potential Environmental & Social Impacts of the Water Supply & Sanitation Investments

The likely impacts of water supply and sanitation investments/activities, the list of activities to be financed in the phase II of OWNP are outlined below. The physical components of the water supply systems likely to be considered under this Program, for both rural and urban settings, are summarized in Table 3:

Table 3: Physical Components Considered under Rural & Urban Water Supply Sub-Programs

System	Water production	Water treatment and storage	Water distribution
Rural	Hand-dug well	None	Hand-Pump
	Drilled well	None	Hand-Pump
	Drilled well with submersible pump	Small capacity, on-site storage and treatment	Limited piped distribution network with a few public taps, or on-site distribution

	Spring development	On-site storage	On-site distribution or Gravity distribution system with a few public taps
Pastoralists	Surface water (run-off, pond, small dam)	None	None
	Pastoral open well	None	None
	Pastoral drilled well with submersible pump (with generator or solar)	None	On-site troughs and taps
Urban	Spring catchment	Raw water treatment system and storage	Gravity distribution system
	River intake (run of river)	Raw water treatment plant and treated water storage	Pressure transmission and distribution system with public and private taps
	River intake with existing, rehabilitated dam	Raw water treatment plant and treated water storage	Pressure transmission and distribution system with public and private taps
	Drilled well(s) with submersible pump(s)	Raw water treatment plant and treated water storage	Pressure transmission and distribution system with public and private taps
	Combination of the above	Raw water treatment plant and treated water storage	Pressure distribution system with public and private taps

Phase II of OWNP will promote the integration of sanitation with improvements to water supply. For rural sanitation, improved pit latrines will be the choice in the vast majority of communities. However, the Program would not directly fund the construction of latrines but build capacity and train private artisans to build them for households on a demand-supply, market-driven, basis. In Urban Systems, individual disposal systems such as latrines and septic tanks may be applicable in fringe areas of towns, and in general where low density of dwellings allow. However, urban system will likely include, at least in bigger towns and in association with the latter individual disposal systems, a piped sewerage collection system in the core areas, with a waste water treatment plant, which may include treatment ponds where land is available or more compact plants otherwise.

6.1. Potential Impacts of the Water Supply Systems

OWNP II will have a range of beneficial impacts associated with the Water Supply Systems which among other things include:

1. Gain of time, especially for women and girls, that may be used for other, productive activities, spare of time to go to school;

2. Better comfort and better quality of life and domestic hygiene;

3. Reduction in water-borne diseases such as dysentery, cholera and others;

4. Gain of productivity, due to improved animal health, and potentially improved grazing opportunities if water points are adequately located;

5. Gain of time, not only for women and girls but also for males who usually are within the pastoralist groups those responsible for watering the animals, which time spared can be used for other, productive activities including spare time to go to school;

6. Capacity building and training in the community, and resulting enhancement of organizational, financial and technical capacities of community;

7. Employment opportunity both during construction and operation phases;

8. Capacity building and training in the town, and resulting enhancement of organizational, financial and technical capacities of town.

However, the water supply systems can also have different negative impacts on the biophysical or human environment which are outlined in Table 4 (mitigation measures are outlined in Annex VII).

Table 4: Potential Environmental and Social Impacts of the Water Supply Systems

1. Potential adverse impacts that different rural water systems	
System	**Potential Adverse Impacts**
Rural Hand-Dug Well with Hand-Pump and Rural Drilled Well with Hand-Pump	1. The community is made dependent on a more sophisticated system that will require maintenance, organization, and finance 2. Water-related diseases (malaria, skin diseases) caused by lack of drainage in the immediate surroundings of the well 3. Ground water contamination through the well during construction or operation 4. Waste material extracted from the well (hand-dug wells) or waste drilling cuttings and drilling mud (boreholes), if not disposed of or reclaimed properly 5. Water will have to be paid for, which may not be affordable l to the poorest in the community 6. Land requirements for the well pad
Rural Drilled Well with Submersible Pump and small distribution system	1. Same as above, plus: 2. Land requirements for taps and pipelines
Spring development with on-site storage and point of use	1. Water-borne diseases (e.g. malaria, skin diseases etc) caused by lack of drainage in the immediate surroundings of the spring 2. Water will have to be paid for, which may not be affordable to the poorest in the community 3. Reduced water flow downstream, potential for conflict between upstream and downstream users

	4. Temporary increase in the suspended solids content of water and impact on users downstream during construction 5. For springs in mountainous areas (Wurch/High Dega and Dega areas), potential for impacts to fragile ecosystems and wetlands
Spring catchment with on-site storage and distribution	1. Same as above, plus: 2. Land requirements for taps and pipelines
2. Potential Environmental and Social Impacts of Pastoral Water Supply Systems	
System	**Potential Adverse Impacts**
Surface Water (Pond, Dam, Run-Off)	1. Water-borne diseases (malaria) caused by standing water 2. Potential bacteriological contamination downstream (if a water course has been dammed to create the water point) 3. Potential for increased animal concentration in the surroundings of the water point, with resulting overgrazing, ecosystem and grazing resources degradation 4. Potential for permanent human settlement of pastoralists or others 5. Potential for social conflicts between traditional users of the area and settlers or pastoralists coming from other areas to water their livestock
Pastoral Open Well	1. Water-borne diseases (malaria, skin diseases…) caused by lack of drainage in the immediate surroundings of the well, which may affect both humans and animals 2. Ground water contamination through the well during construction or operation 3. Potential for increased animal concentration in the surroundings of the well, with resulting overgrazing, ecosystem and grazing resources degradation 4. Potential for permanent human settlement of pastoralists or others 5. Potential for social conflicts between traditional users of the area and settlers or pastoralists coming from other areas to water their livestock 6. Potential adverse impact on physical cultural resources

Pastoral Well with Submersible Pump	1. Same as above, plus: 2. The community is made dependent on a more sophisticated system that will require maintenance, organization, and finance Water will have to be paid for, which may not be affordable to the poorest in the community
3. Potential Adverse Environmental Impacts of Urban Water Supply Systems	
Component	**Potential Adverse Environmental Impacts (Bio-Physical)**
Spring development	1. Disturbance to topsoil created by earthmoving works and heavy vehicle traffic at construction phase 2. Reduced water flow downstream due to water abstraction, potential for conflict between upstream and downstream users related with this reduction of flow 3. For springs in mountainous areas, potential for impacts to fragile ecosystems and wetlands related with the catchment (where the natural flow downstream feeds a marsh or wetland) 4. Limited loss of flora and fauna
Well and well fields	1. Disturbance to topsoil created by earthmoving works and heavy vehicle traffic at construction phase 2. Noise, dust and vibration 3. Impact of ground water abstraction on ground water table level and its availability to other users 4. Impact of ground water abstraction on potential changes in water salinity where there is a complex balance within the aquifer between fresh water and salty water 5. Impact of the chemicals contained in the drilling fluids on groundwater quality 6. Limited loss of flora and fauna 7. Potential impact on physical cultural resources
Dam rehabilitation and operation	1. Disturbance to topsoil created by earthmoving works and heavy vehicle traffic at construction phase 2. Noise, dust and vibration
Raw Water Treatment Plants	1. Disturbance to topsoil created by earthmoving works and heavy vehicle traffic at construction phase

	2. Potential impacts associated with reagent management and disposal 3. Potential impacts associated with treatment sludge management and disposal 4. Noise, dust and vibration at construction phase, noise and vibration at operation phase 5. Loss of flora and fauna
Transmission Pipelines	1. Disturbance to topsoil created by earthmoving works and heavy vehicle traffic at construction phase 2. Potential leaks at operation phase with health risks associated with standing water 3. Dust at construction phase 4. Loss of flora and fauna
Public Taps	1. Potential leaks at operation phase with health risks associated with standing water, particularly malaria
4.Potential Adverse Social Impacts of Water Supply Systems	
Component	**Potential Adverse Social Impacts**
All systems	2. Land requirements at construction phase (staging areas, access roads, storage areas) 3. Long-term land requirements at operation phase and associated potential for physical displacement and impacts on livelihoods 4. In areas where the distribution network is expanded, water that was previously free of charge will have to be paid for, which may be detrimental to the poorest in the community 5. The town water supply is made dependent on a more sophisticated system that will require enhanced organization for maintenance, revenue collection and generally management 6. Increase in malaria due to risks of development of standing water Impacts on public health due to increased dust, noise, traffic accidents, and increased wastes, particularly asbestos/cement pipes

6.2. Potential Impacts of Rural Systems on Groundwater

In no known situation in Ethiopia a hand-dug well fitted with a hand-pump likely to have any long-term impact on the groundwater table, even if considered cumulatively (group of wells in a large community

for instance). The maximum daily abstraction of such a well is that of the pump, which will not exceed 20 m3/day, and will usually be between 3 and 10 m3/day. This level of abstraction is always balanced by the natural recharge of the water table. The same applies to drilled wells fitted with hand-pumps.

6.3. Potential Impacts of the Sanitation Systems

The sanitation investments in this project can have various potential beneficial impacts which, *inter alia*, include reduction in water-borne diseases such as dysentery, reduction in the potential for outbreaks of epidemic infectious diseases such as cholera, capacity building and training in the town or community, and resulting enhancement of organizational, financial and technical capacities of town, and provision of employment for construction and operation. There are also potential negative impacts associated with the sanitation activities which are outlined in Table 5.

Table 5: Potential Environmental and Social Impacts of Sanitation Systems

System	Potential Adverse Impacts
Latrines and other individual sanitation systems	1. Impact on groundwater in situations where water table is shallow 2. Impact of potential improper sludge disposal 3. Health hazards associated with inappropriate sitting of sanitation systems in relation to water supply systems 4. Health hazards associated with unreliable emptying services
Piped sewerage system and waste water treatment works	1. Potential impact of effluent discharge on water bodies 2. Potential impact of effluent infiltration on soils and groundwater where infiltration is used as a disposal method 3. Potential impact of the handling of sludge and other sanitation- related solid waste 4. Increase in the number of mosquito larvae and related increase in mosquito-borne diseases, primarily malaria 5. Land acquisition requirements for pipelines, treatment works and other structures 6. The cost of the sanitation service will have to be recovered, which may be detrimental to the poorest in the community 7. The town is made dependent on a more sophisticated system that will require maintenance, organization, and finance 8. Potential impacts on physical cultural resources

Proposed mitigation measures for environmental and social impacts of the program are outlined in Table 6. The World Bank Group Environmental, Health, and Safety Guidelines (EHSG) for Water and Sanitation will be applicable while preparing ESMPs (also presented in Table 6).

https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines. The EHS Guidelines for Water and Sanitation include information relevant to the operation and maintenance of (i) potable water treatment and distribution systems, and (ii) collection of sewage in centralized systems (such as piped sewer collection networks) or decentralized systems (such as septic tanks subsequently serviced by pump trucks) and treatment of collected sewage at centralized facilities.

Table 6. Possible Mitigation Measures for the Environmental and Social impacts

No	Potential Negative Environmental Impact	Possible Mitigation Measures	Time schedule for implementation	Responsible Institution
1	Both surface water and groundwater supplies can become contaminated with potentially toxic substances of natural and anthropogenic origins, including pathogens, toxic metals (e.g. arsenic), anions (e.g. nitrate), and organic compounds. Such contamination might result from natural sources, actions or releases that are routine (e.g. discharges within permit limits), accidental (e.g. from a spill), or intentional (e.g. sabotage).	Recommended measures to protect the quality of the water supply include: 1. Determine the area that contributes water to the source (e.g. watershed of a stream or recharge area for groundwater), identify potential sources of contamination with the area, and collaborate with public authorities in the implementation of management approaches to protect the source water quality, such as: 1. Zoning ordinance provisions 2. Facility inspection or hazardous material survey program 3. Development and implementation of educational campaigns to promote best management practices that reduce the risk of water contamination 4. Incorporation of surface water protection into regional land use planning 5. Evaluate the vulnerability of the water source to disruption or natural events, and implement appropriate security measures as necessary, such as: 6. Continuously monitor raw water for surrogate parameters (such as pH conductivity, total organic carbon [TOC], and toxicity) 7. Inspect sites at random times 8. For reservoirs and lakes, implement a neighborhood watch program with local park staff and other community users of the reservoir/lake	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU

		9. Equip wellheads with intrusion alarms		
2	Community health and safety impacts associated with water treatment include: Drinking water quality and supply and Hazardous chemicals	Recommended measures related to water treatment include: 10. Ensure that treatment capacity is adequate to meet anticipated demand; 11. Construct, operate and maintain the water treatment facility in accordance with national requirements and internationally accepted standards26 to meet national water quality standards or, in their absence, WHO Guidelines for Drinking Water Quality; 12. Evaluate the vulnerability of the treatment system and implement appropriate security measures, such as: • Background checks of employees • Perimeter fencing and video surveillance • Improve the electrical power feeds to the facilities. Recommended measures to prevent or minimize potential community health risks associated with the water distribution system include: 1. Construct, operate, and manage the water distribution system in accordance with applicable national requirements and internationally accepted standards; 2. Construct and maintain the distribution system so that it acts as a barrier and prevents external contamination from entering the water system by, for example: i. Inspecting storage facilities regularly and rehabilitate or replace storage facilities when needed. This may include draining and removing sediments, applying rust proofing, and repairing structures	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU

		ii. Ensuring that all installation, repair, replacement, and rehabilitation work conforms to requirements for sanitary protection and materials quality iii. Testing material, soil, and water quality and implementing best practices to prevent corrosion, such as cathodic protection iv. Preventing cross- connections with sewerage systems. v. Separating water lines and sewer pressure mains (e.g., at least 10 ft apart or in separate trenches, with the sewer line at least 18 inches below the water line) Maintain adequate water pressure and flow throughout the system, for example by: • Implementing a leak detection and repair program • Reducing residence time in pipes • Maintaining positive residual pressure of at least 20 pounds per square inch (psi) • Monitoring hydraulic parameters, such as inflows, outflows, and water levels in all storage tanks, discharge flows and pressures for pumps, flows and/or pressure for regulating valves, and pressure at critical points, and using system modeling to assess the hydraulic integrity of the system • Prevent introduction of contamination from the distribution system itself, for example by: • Minimizing microbial growth and biofilm development (e.g. by ensuring adequate residual disinfection levels). Collect samples from several locations throughout the distribution system, including the farthest point, and test for both free and combined chlorine residual to ensure that adequate chlorine residual is maintained		

		• Choosing residual disinfectant (e.g. chlorine or chloramines) to balance control of pathogens and formation of potentially hazardous disinfection byproducts • Using construction materials that do not contribute to release undesirable metals and other substance or interact with residual disinfectants		
3.	Spillage of water and creation of stagnant pools of water at well head which will be a breeding ground for vectors of water-borne diseases and become a potential source of contamination	Select well site where water drains away from well; do not construct well in a depression or on low-lying, poorly drained site; construct drainage ditches to divert run-off water around well site; construct concrete pad around the base of the well head (see modular design); and build soak away pit Coordinate activities with ongoing Rural Water Supply and Sanitation Project as appropriate Conduct awareness creation campaign	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
4	Contamination of well water by users (during transportation, storage and use processes) Contamination of water due to intervention of animals	Install hand pump on the well and do not allow users to draw water by lowering containers into the well; ensure well head is properly sealed. Conduct awareness creation campaign for the beneficiaries Protect the water source from animal entrance and keep animals at reasonable distance from the source Water quality testing	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
5	Contamination of well water by seepage from pit latrines	Do not construct latrines within a minimum of 30 m of the hand dug well, 60 m is preferable (please refer the sanitary check list below)	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
6.	Overexploitation of aquifers	Consult with regional hydro-geologist or regional EPA Catchment management, at least at the micro-shed level, consult with agricultural bureaus or wereda experts	Pre-construction, during construction and operation	Ministry of Water & irrigation & electricity; PMU
7.	Environmental impacts associated with water	1. Evaluate potential adverse effects of surface water withdrawal on the downstream ecosystems and use	During construction and operation	Ministry of Water & irrigation

	withdrawal and to protect water quality	appropriate environmental flow assessment to determine acceptable withdrawal rates; 2. Design structures related to surface water withdrawal, including dams and water intake structures, to minimize impacts on aquatic life. For example: i. Limit maximum through-screen design intake velocity to limit entrainment of aquatic organisms ii. Avoid construction of water intake structures in sensitive ecosystems. If there are threatened, endangered, or other protected species within the hydraulic zone of influence of the surface water intake, ensure reduction of impingement and entrainment of fish and shellfish by the installation of technologies such as barrier nets (seasonal or year-round), screens, and aquatic filter barrier systems iii. Design water containment and diversion structures to allow unimpeded movement of fish and other aquatic organisms and to prevent adverse impacts on water quality iv. Design dam outlet valves with sufficient capacities for releasing the appropriate environmental flows v. Avoid construction of water supply wells and water intake structures in sensitive ecosystems; 3. Evaluate potential adverse effects of groundwater withdrawal, including modeling of groundwater level changes and resulting impacts to surface water flows, potential land subsidence, contaminant mobilization and saltwater intrusion. Modify extraction rates and locations as necessary to prevent unacceptable adverse current and		and electricity (MoWIE); PMU

		future impacts, considering realistic future increases in demand.		
8	Wastewater from water treatment projects include filter backwash, reject streams from membrane filtration processes, and brine streams from ion exchange or demineralization processes. These waste streams may contain suspended solids and organics from the raw water, high levels of dissolved solids, high or low pH, heavy metals, etc.	Recommended measures to manage wastewater effluents include: 1. Land application of wastes with high dissolved solids concentrations is generally preferred over discharge to surface water subject to an evaluation of potential impact on soil, groundwater, and surface water resulting from such application; 2. Recycle filter backwash into the process if possible; 3. Treat and dispose of reject streams, including brine, consistent with national and local requirements.	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
9	Water treatment may involve the use of chemicals for coagulation, disinfection and water conditioning. In general, potential impacts and mitigation measures associated with storage and use of hazardous chemicals	Recommended measures to prevent, minimize, and control potential environmental impacts associated with the storage, handling and use of disinfection chemicals in water treatment facilities include: For systems that use gas chlorination: 1. Install alarm and safety systems, including automatic shutoff valves, that are automatically activated when a chlorine release is detected 2. Install containment and scrubber systems to capture and neutralize chlorine should a leak occur 3. Use corrosion-resistant piping, valves, metering equipment, and any other equipment coming in contact with gaseous or liquid chlorine, and keep this equipment free from contaminants, including oil and grease 4. Store chlorine away from all sources of organic chemicals, and protect from sunlight, moisture, and high temperatures 5. Store sodium hypochlorite in cool, dry, and dark conditions for no more than one month, and use equipment constructed of corrosion-resistant materials;	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU

		6. Store calcium hypochlorite away from any organic materials and protect from moisture; fully empty or re-seal shipping containers to exclude moisture. Calcium hypochlorite can be stored for up to one year; 7. Isolate ammonia storage and feed areas from chlorine and hypochlorite storage and feed areas; 8. Minimize the amount of chlorination chemicals stored on site while maintaining a sufficient inventory to cover intermittent disruptions in supply; 9. Develop and implement a prevention program that includes identification of potential hazards, written operating procedures, training, maintenance, and accident investigation procedures; 10. Develop and implement a plan for responding to accidental releases.		
10	Water system leaks can reduce the pressure of the water system compromising its integrity and ability to protect water quality (by allowing contaminated water to leak into the system) and increasing the demands on the source water supply, the quantity of chemicals, and the amount of power used for pumping and treatment. Leaks in the distribution system can result from improper installation or maintenance, inadequate corrosion protection, settlement, stress from traffic and vibrations, frost loads, overloading, and other factors.	Recommended measures to prevent and minimize water losses from the water distribution system include: 1. Ensure construction meets applicable standards and industry practices; 2. Conduct regular inspection and maintenance; 3. Implement a leak detection and repair program (including records of past leaks and unaccounted- for water to identify potential problem areas); 4. Consider replacing mains with a history of leaks of with a greater potential for leaks because of their location, pressure stresses, and other risk factors	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU

11.	Occupational health and safety impacts associated with the operational phase of water and sanitation project such as: accidents and injuries, chemical exposure, exposure to pathogens and vectors and noise	i. Use fall protection equipment when working at heights; ii. Maintain work areas to minimize slipping and tripping hazards; iii. Use proper techniques for trenching and shoring; v. Implement fire and explosion prevention measures in accordance with internationally accepted standards; The following procedures are recommended to prevent, minimize, and control chemical exposure at water and sanitation facilities include: 1. Implement a training program for operators who work with chlorine and ammonia regarding safe handling practices and emergency response procedures; 2. Provide appropriate personal protective equipment (including, for example, self-contained breathing apparatus) and training on its proper use and maintenance. 3. Prepare escape plans from areas where there might be a chlorine or ammonia emission; 4. Install safety showers and eye wash stations near the chlorine and ammonia equipment and other areas where hazardous chemicals are stored or used; 5. If source water contains radioactive substances, locate water treatment units and water treatment sludge areas as far as possible from common areas (e.g., offices); 6. Conduct radiation surveys at least annually, especially in areas where radionuclides are removed;	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
12.	Child labor	Refer to Ethiopian Labor Law 377/2003 which provides for gender equality on work place and strictly prohibits child labor	During construction and operation	Ministry of Water & irrigation and

				electricity (MoWIE); PMU
13.	Labor influx issues	Contractors shall prepare and implement Code of conduct for workers including GBV and SEA	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
14.	Septic tanks			
14.1	Soil and water pollution due to seepage from tanks	1. Ensure regular emptying; conduct hygiene education campaign to raise awareness of the health risks of exposed sewage; establish and support affordable pump out services 2. Promote and facilitate correct septic tank design and improvement of septic tank maintenance. Septic tank design should balance effluent quality and maintenance needs	During \operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
15	Sewers			
15.1	Soil and water pollution	Ensure regular maintenance	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
15.2	Construction impacts	Refer to 1 Annex V	During construction	Ministry of Water & irrigation and electricity (MoWIE); PMU
16	Sewerage maturation ponds			
16.1	Construction impacts	Refer to Table Annex V	During construction	Ministry of Water &

				irrigation and electricity (MoWIE); PMU
16.2	Possible land acquisition	Refer to RPF or OP 4.12	During construction	Ministry of Water & irrigation and electricity (MoWIE); PMU
16.3	Sludge disposed of indiscriminately and causing health risks	Ensure that sludge is properly dried and disposed of in a manner that poses no risk to human health	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
16.4	Animals accessing sewage ponds and transmitting diseases to people	Install and maintain proper fencing to prevent animals from entering the area	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
16.5	Incompletely treated waste water contaminating surface water streams	Operate ponds in a manner that only allows waste water meeting prescribed quality standards leaving the treatment site; ensure that ponds are sized and operated to retain waste water for an adequate period to complete the treatment process	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
17	Storm water drainage			
17.1	Construction impacts	Refer to Annex V	During construction	Ministry of Water & irrigation and electricity (MoWIE); PMU
17.2	Possible land acquisition	Refer to RPF or OP 4.12	During construction	Ministry of Water & irrigation

				and electricity (MoWIE); PMU
17.3	Erosion along banks of drainage channel causing siltation of channel and loss of land. Water source contamination	Stabilize sections of bank susceptible to erosion; plant shrubs and trees on uphill side of ditch to slow water runoff and trap sediments and other contaminating substances	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
18	Public, school and Health post toilets			
18.1	Contamination of water supply sources	Ensure latrines are located at least 30 m from hand dug wells and springs, and 60 m from boreholes (refer and apply the sanitation survey checklist below)	During construction and operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
18.2	Latrines overflowing and creating health risks through people and animals coming in contact with human wastes	Conduct hygiene education campaign to raise awareness of the health risks of exposed human waste and promote the support and use of municipal or private sector cleaning services among the beneficiaries Establish school WaSH club, and create awareness on the hygiene and sanitation practices for students and administrative staffs	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
18.3	Flies and rodents carrying diseases from the latrines	Block pathways for flies, i.e. by putting a screen over the vent and installing lid on the hole; ensure latrines are constructed with a suitable superstructure to prevent entry of rodents into vault	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU
18.4	Open defecation	Conduct hygiene education campaign to raise awareness of the health risks of open defecation, and promote the use of latrines	During operation	Ministry of Water & irrigation and electricity (MoWIE); PMU

7. ESMF Process and Implementation Arrangement

7.1 Subproject Screening and Approval Process

7.1.1 Subproject Screening

Environmental and social screening (ESS) is the first important step in the ESMF processes. It is the initial examination of the project's environmental and social impacts to categorize the sub-projects according to the above regulations and to determine the next necessary step for the proper implementation of the ESMF. Therefore, the field personnel (the safeguards focal persons at Woreda/ town level) in charge of the screening should undertake the ESS and categorization properly to decide the required next step of the ESMF process and procedures. The safeguards specialists at Zonal offices, where applicable, will assist the screening process when needed. ESS will help to propose whether a proposed subproject will further require a full-fledged ESIA and RAP or ESMP, ARAP, as per procedures outlined in the ESMF and Resettlement Policy Framework (RPF). Environmental Screening will be conducted for each subproject planned under ONE WaSH-CWA (P167794) prior to any construction activities after the exact project location is identified. ESS will therefore be primarily conducted by the environment and social safeguards focal persons to be assigned at Woredas/Towns while regional level or federal level safeguards specialists can give the necessary support and supervision during the process when required (specially in relatively risky subprojects).

Environmental and Social Screening of subprojects will be carried out using the form in Annex I. Conducting field visits to the subproject site and developing an understanding of the biophysical and social environments including the urban setting around the project site is essential to appraise how the subproject activities will interact with the environment. The aim of the screening form is to assist in identifying potential impacts based on field investigations in the area of the subproject site. The screening mechanism seeks to focus on those subprojects with potentially adverse environmental and social impacts or whose impacts are not fully known. Thus, appraisal of the subproject site and having adequate level of information about future subproject activities is essential to anticipate, identify and imagine the magnitude of potential environmental impacts which is necessary for conducting the screening exercise. The Environmental and Social Screening Reports will briefly describe: the proposed subproject and its potential adverse impacts; categorization of the subproject; characteristics of the location (sensitivity of the area); degree of public interest; institutional arrangement, and environmental and social enhancement and monitoring considerations.

The screening form (Annexed) formalizes a rapid field investigation to screen on-site and decide whether any environmental and social issues that require specific attention and supplemental Environmental and Social Assessment work is required. It is mandatory that all sub-projects under the proposed ONE WaSH-CWA (P167794) to go through the screening process to avoid any neglect in screening potential environmental and social issues. According to the Ethiopian EIA guideline and the world bank environmental safeguard policy OP4.01, projects are categorized in to three "schedules" based on their potential environmental and social impacts: as Schedule 1, Schedule 2 and Schedule 3 and as Category A, Category B and Category C, respectively. The ONE WaSH-CWA (P167794) is likely to include several types of sub- projects, resulting from the demand of towns and communities that will vary in magnitude and technical scope, from the rural hand-dug well to full urban water supply and sewerage systems. Annex II shows the likely categorization of the subprojects.

Thus, all subprojects are subject to environmental and social screening after identification. The outcome of environmental screening exercise will be classifying the proposed subproject into one of Category A, B or C. It should be noted that if any of the subprojects may fall under Category A, it will not be eligible for

financing under the ONE WaSH-CWA (P167794) and will not be proceeded with; instead it will be subjected to redesign, re-routing or resizing the subproject. Category A sub-projects are those for which the Environmental Baseline Assessment concludes that changes to the design or the sitting/routing of facilities are required. These changes may be needed to eliminate unacceptable adverse impacts such as: impact on a fragile eco-system, impossibility to drain run-off water from the water point site, impact on inhabited dwellings, impact on structures used for commercial activities or other businesses, impact on graves or other cultural resources (physical cultural resources), and impact on land use and/or users. Changes in the subproject designs may include: re-siting of the water point or of another project component; re-routing of a pipe-line or wastewater trunk lines; change in the location of wastewater treatment facilities, or fecal sludge and other types of waste disposal sites; changes in the location of an effluent discharge; and changes in processes used for raw water treatment or wastewater treatment for instance to improve efficiency or to reduce land take.

Subprojects for which the screening process does not identify any specific environmental or social issues are categorized as "C". A subproject categorized as "C" will not require any further environmental and social assessment work. However, the contractor is still required to implement the environmental guideline for construction contractors and prepare an EHSMP to demonstrate how it will deliver the protection measures set out in the Environmental Guidelines for Construction Contractors (Annex V). This guideline is to be integrated to any request for proposals and construction contract related with the subject subprojects and need to have a strong enforcement mechanism for the proper implementation. If any subprojects entail significant social impacts and requires the development of a RAP this will be conducted in accordance to the procedures outlined in the RPF of ONE WaSH-CWA (P167794).

7.1.2 Review and Approval of Screening Reports

The environmental and social screening reports will be reviewed and cleared by the respective Regional Environmental Protection and Land Administration Offices. Depending on the quality of the screening report, the environmental protection authority may:

1. Approve the subproject categorization and recommend next actions;
2. Seek for amendment and/or recommend for change on subproject categorization;
3. Reject the document with comments as to what is required to submit an acceptable Screening Report.

7.1.3 Preparation and approval of safeguards instruments

Following the approval of the screening report by the REPAs, a subproject categorized as "B" will either implement mitigation measures based on preparation of a separate ESIA (see Annex III) report or by preparing a simplified (preliminary) ESMP (see Annex IV) that will be conducted by a qualified consulting firm or by the Borrower's safeguards experts, respectively. For all category B subprojects in ONE WaSH-CWA (P167794), the contractor will be required to prepare an environment, health and safety management plan (EHSMP) to demonstrate how the environmental guideline (Annex V) for construction contractors will be applied and the requirements of the ESIA and ESMP will be incorporated. The contactor is required to incorporate the requirements of the ESIA and/or ESMP as well as the relevant measures in the environmental guidelines for construction contractors (Annex V) in their prepared Environment, Health and Safety Master Plan (EHSMP).

The ESIA/ESMP will be reviewed and approved by the Competent Agency and by MoWIE WSSD safeguard team, Environment and Climate Change Directorate and the World Bank country office safeguard

specialists. The findings of the ESIA/ESMP will feed into the formulation of the selected contractor's contract, along with the requirement for the contractor to prepare a Construction ESMP that detail exactly the actions they will take to achieve the requirements of the contract.

Community level consultations will be undertaken while preparing site specific safeguards instruments such as SIA, ESMP, RAP/ARAP. Pertinent officials of the program implementing regions, woredas and towns particularly regions/Woredas/towns, land administration, office of women, Water and sanitation utilities, Environmental protection office, small micro and small enterprises offices will be consulted and required to assist during the preparation of the inventory of affected assets, the census of PAPs and the Detailed Measurement Survey (DMS). The processes and mechanisms ensuring the active involvement of PAPs and other stakeholders will be detailed in the RAPs which will also include an appendix with date, list of participants, and minutes of consultation meetings. Once a RAP/ARAP for a subprogram has been prepared and approved by implementing agencies which includes MoWIE and participating regions/woredas/towns and WB it will be disclosed at relevant office for public comments. Besides, a letter in Amharic/other local language, summarizing compensation eligibility and entitlement provisions, will be sent to all PAPs before the initiation of the compensation/rehabilitation process. Consultation will specifically take consideration of the following local organizations: Council of Elders at local level, Community Based Organizations (CBOs), Non-Governmental Organizations (NGOs) present at local, regional or federal levels.

One of the beneficial project impacts of the proposed ONE WaSH-CWA (P167794) is the creation of job opportunities for citizens during construction as well as operation phases. Especially during these two phases of the projects, Occupational Safety and Health of workers should be given special attention. In this respect, Labor law of Ethiopia (Proclamation No 377/2003) gives exclusive right to workers to work in a safe and healthy environment and to use personal protective equipment whenever necessary. Additionally, Article 92 of this proclamation clearly narrates the requirements in terms of the protection of workforce health and safety. The proclamation requires an employer to take the necessary measures to adequately safeguard the health and safety of workers. To manage health, safety and environmental issues regarding the community and workers; the environmental guideline for the construction contractors shall be used as a critical input. This guideline will be used by the safeguards and procurement experts to supplement existing clauses within the standard contract documents as necessary for the program. This Environmental guideline for construction contractors will be applicable to all subprojects under the ONE WaSH-CWA (P167794).

Examples of issues requiring further ESIA studies, in cases where specific environmental or social issues are identified include: potential conflicts between upstream and downstream users; possible impacts (but not adverse) on a fragile ecosystem; impacts on land without physical displacement or significant impacts on livelihoods; potential for heavy traffic at construction phase through inhabited areas; construction in water bodies (pipeline river crossings, construction of wastewater trunk lines); and construction through areas with contaminated soil.

The purpose of the ESIA is to generate sufficient information on significant impacts, which will be used to determine whether or under what conditions the subproject should proceed. The responsibility of preparing the ESIA is that of the project proponent, which in this case the regional or federal PMUs. The cost of conducting the ESIA will be covered by the same. Implementing entities will need to procure the consultancy service to prepare the ESIAs. Hence, there will be a need to develop a comprehensive Terms of Reference (ToR) to develop a comprehensive scope of work for consultants who will carry out the EIA for the proposed subprojects. As a starting procedure to develop the ESIA ToR, scoping of the subprojects

will be needed. Based on the nature and type of the subprojects, the scoping can be carried either by a team of experts or by the environment and social focal persons of the implementing agencies.

The outcome of scoping is a ToR that will guide the undertaking of ESIA study for the proposed subproject under consideration. Before undertaking the ESIA the ToR has to be reviewed and agreed upon by the relevant REPA and the World Bank. As part of the ESIA process ESMPs will be prepared and implemented. Effective implementation of the ESMP will ensure that the appropriate mitigation measures have been employed to avoid and/or minimize any potential impacts resulting from the proposed activity. The contents of an ESMP should include:

1. A description of the possible adverse effects that the ESMP is intended to address;
2. A description of planned mitigation measures, and how and when they will be implemented;
3. A description of who will be responsible for implementing the proposed mitigation and enhancement measures;
4. A description of who will be responsible for monitoring the implementation of the mitigation and enhancement measures;
5. A program for monitoring the environmental and social impacts of the project, both positive and negative;
6. A cost estimate and source of funds.

Mitigations will be detailed in the ESMP and may include the following:

1. Extensive consultation with upstream and downstream users to avoid conflict with the objective of reaching an agreement on water use that can be implemented and monitored by local authorities;
2. Specific construction arrangements to minimize physical footprint and negative impacts on fragile ecosystems, topsoil and flora;
3. Compensation per resettlement policy framework or Ethiopian proclamation,
4. By-passes of heavy traffic out of inhabited areas, speed limits, speed bumps, safety awareness with children and adults;
5. Control and management of discharge of wastewater effluents and disposal of fecal sludge;
6. Excavation and disposal of contaminated soil prior to construction.

A monitoring and supervision plan for the ESMP that summarizes key areas on which internal and external monitoring and supervision will focus should be prepared. The monitoring and supervision plan should identify the critical risks to implementation of the ESMP and how such risks will be monitored during implementation. Regional environmental protection and land management offices would advise the regional WaSH PMUs and town utilities on its role for carrying out external environmental monitoring and supervision of the ESMP for Category B subprojects within the overall plan for the project. The ESMP prepared for that specific subproject should outline the appropriate budget required to implement the mitigation measures, monitoring, and for training and capacity building and the ESMP need to clearly indicate the responsible body and time for implementation and monitoring as well.

During the study of the ESIA and ESMP, the consultant, the regional and town safeguards experts and the woreda or zonal safeguard focal person together with other members of the federal MoWIE safeguards team will have to ensure the quality of the ESIA study by conducting joint field visit to subprojects. The ESIA and ESMP will then be presented by the consultant to the MoWIE, regional PMU and others for

further internal review and approval. The draft ESIA will then be submitted to the relevant regional environmental protection and land administration office with an official application for review and approval. Finally, the ESIA will be sent to the World Bank country office for review and clearance. Furthermore, the very final version of the ESIA is required to be disclosed on the regional PMU, MoWIE and the World Bank websites and the executive summary should be translated in to local languages and posted to the public.

According to the Ethiopian EIA guidelines the prepared ESIAs and ESMPs will be reviewed by the regional safeguard experts, Regional Environmental Protection and Land Administration Office, as follows:

1. Review of the scope of work (Terms of Reference);
2. Review of the draft ESIA/ESMP; and
3. Clearance of the final ESIA/ESMP.

ESIAs will be reviewed by the World Bank as follows:

1. No-objection on the scope of work (TOR) and consultant contract;
2. Review of the ESIA in parallel to submission to the Competent Agency

Subprojects likely to have only a small number of issues for further investigation may be considered for the preparation of a simplified (preliminary) ESMP only, rather than a full ESIA. The preparation of ESMPs will be carried out by the Woreda/Town level safeguards focal persons, and if need be with the help of the regional federal environmental and social safeguards experts. The preliminary ESMP examines the subproject's few potential negative and positive environmental impacts identified during scoping and recommends any measures (additional to those presented in the contractors EHS-MP) needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance which will be summarized in the ESMP. Undertaking the preparation of the Preliminary ESMP involves:

1. A field assessment of the subproject area to identify likely environmental and social impacts;
2. Proposal of possible mitigation measures;
3. Impact analysis;
4. Consultation with beneficiaries and affected communities; etc.

7.1.4. Consultation and disclosure for category ''B'' subprojects

For all category "B" subprojects, public consultation will include the following steps:

1. Identification of interested parties (beneficiary neighboring communities, communities potentially affected by the subprojects, downstream water users, communities downstream from effluent discharges, local authorities, regional authorities);
2. Information on the proposed subprojects (that may or mayn't require further ESIA/ESMP studies) and its likely impacts, seeking feedback on impact identification and general mitigation measures as they are described in this ESMF.
3. Initial step of consultation, before further environmental assessment work is undertaken: one initial meeting with each of the identified parties, presenting the subprojects and seeking input on the scope of work for further ESIA (as required) work;
4. Second step of consultation, after further ESIA (as required) work is completed: presentation of the results of the environmental assessment, including presentation of identified impacts and proposed mitigations, seeking input on these proposed environmental management measures; this second step will include dissemination to

identified interested parties of a brief summary of the environmental assessment in local language.

On average, it is estimated that 2 to 5 meetings will be required for each of the above two steps of consultation for Category "B" subprojects. The consultation will be undertaken by consultants or by the safeguards specialists in charge of further environmental work (ESIA/ESMP). Any consultation meeting will be documented.

Disclosure

In conformance with OP 4.01, ESIA reports related with Category "B" subprojects will be made available to the public as follows:

1. Disclosure (one copy of the ESIA report, plus copies of the brief summary (the executive summary) translated into local language mentioned in the previous section) at the regional WaSH PMU's office where the public can see it and its website;
2. Disclosure (at least one copy of the full report and copies of the summary in local language) at the MoWIE website.
3. Disclosure (at least one copy of the full report and copies of the summary in local language) at the World Bank country office in Addis Ababa;
4. Disclosure through the World Bank Infoshop.

7.2 The Institutional Arrangements for the Environmental and Social Safeguards implementations

The responsibilities of different administrative units for safeguards compliance in ONE WaSH-CWA (P167794) are outlined below.

Ministry of Water, Irrigation and Energy (MoWIE): Will be responsible for overall implementation of the ESMF including the deployment of environmental and social safeguards specialists, periodic compliance monitoring and reporting. It will arrange office and other facilities for the safeguards specialists. It will facilitate the recruitment of consultants for ESIA (when needed) and environmental audits. It will plan and implement safeguards capacity building activities.

Regional Water Bureaus (RWBs): will be responsible for deployment of environmental and social safeguards specialists at regional and zonal water bureaus. They will be responsible for deployment of safeguards focal persons at beneficiary Woredas/Towns. They are also responsible compliance monitoring and reporting. The Regional Water Bureaus will assist the woreda and town water boards to secure and supervise the work of the consultants including environmental assessments. They will responsible for overall follow up of the implementation of the proposed mitigation measures for each sub programs in their respective regions.

Regional Environmental Protection Authorities: are expected to review and clear ESSs, ESIAs, and RAP/ARAP documents. They may carry out spot checks at towns/woredas so as to check proper implementation of environmental and social screening and environmental and social management plans.

Woredas: Woreda will be responsible for assigning safeguards focal persons who will be responsible for ESS, ESMP ARAPs, monitoring and evaluation. They are also responsible to allocate budget and implement mitigation measures proposed by the general ESMP, ESS, ESIA and RAP/ARAP study documents accordingly.

Towns / Utilities: Woreda will be responsible for assigning safeguards focal persons who will be responsible for ESS, ESMP ARAPs, monitoring and evaluation and are also responsible to allocate budget and properly address mitigation measures proposed by the general ESMP, ESS, ESIA and RAP/ARAP study documents for their respective subprograms.

Community Water and Sanitation Committees: Water and Sanitation Committees will act on behalf of the community in planning and managing its water and sanitation facilities. Each Community Water and Sanitation Committee will be responsible for facilitating participatory planning and ensuring that implementation of mitigation measures will be carried out.

Environmental and Social Safeguards Staffing for ONE WaSH-CWA

Table 8 summarizes the safeguards staff /focal persons to be deployed for effective implementation of the ESMF of ONE WaSH-CWA .

Administrative Unit	**Number of Safeguards Experts to be recruit/delegated**
Federal level, MoWIE	One environmental specialist and one social safeguards specialist dedicated for safeguards compliance in ONE WaSH-CWA (P167794) will be deployed
Regional level	One environmental specialist and one social safeguards specialist dedicated for safeguards compliance in ONE WaSH-CWA (P167794) (Amhara, SNNPR, Somalia, Tigray and Oromia, Afar, Benshagul Gumuz, Gambela, Harari regions and Dire Dawa city administration) will be deployed.
Zonal level	In the big Regional States (Oromia, Amhara, SNNP & Tigray), one Safeguards Specialist Responsible for both Environmental and Social activities will be deployed at Zonal towns
Woreda level	A safeguards focal person will be assigned/delegated in each beneficiary Woreda.
Small towns	A safeguards focal person will be assigned/delegated in each beneficiary town.

7.3. Grievance Redress Mechanism (GRM)

A grievance redress mechanism will be established /strengthened to allow complaints about any activities regarding flooding, water pollution, water quality and quantity, equity and inclusion and resettlement issues etc… as well as their responses. The project will ensure that the Grievance mechanism is gender sensitive during committee formation and implementation. It will ensure that women are represented in the GRM committee and the GRM equally address grievances received from men and women.

Potential grievances/disputes

Grievance procedures are required to ensure that peoples are able to present their complaint or concerns, without cost, and with the assurance of a timely and satisfactory resolution of the issue. Grievances will be actively managed and tracked to ensure that appropriate resolution and actions are taken. A clear time schedule will be defined for resolving grievances, ensuring that they are addressed in an appropriate and timely manner, with corrective actions being implemented, and the complainant will be informed of the outcome. The grievance redress procedure of the Project does not replace existing

legal processes. Based on consensus, the procedures will seek to resolve issues quickly in order to expedite the receipt of entitlements, without resorting to expensive and time-consuming legal actions.

Registration of Grievances

Any grievance that may arise due to the implementation of the Project will be filed at the GR office established for the project. The committee will assess the nature of the grievance and provide solution with in the timeframe indicated in the RP. The overall process of grievance is as follows:

(i) The process of grievance redress will start with registration of the grievances to be addressed;
(ii) The Project will use a local mechanism which in most case called Grievance Redress Committee (GRC) as detailed below and the committee members which includes local leaders of the affected people, and 2 representatives from the PAPs, and
(iii) The response time will depend on the issue to be addressed but it should be addressed with efficiency.

First Instance-Amicable Settlement and Appeal Court

The grievance redress procedure of the Project does not replace existing legal processes. However, the international experience of resettlement shows that such grievance redress mechanism helps to solve most of the complaints without formal procedures. So as it enable both speeds up implementation of the Project as well as timely satisfaction of complaints. In addition, courts of law may be viewed as slow and involving somewhat complicated procedures. People may prefer such matters to be first handled by a "first instance" mechanism, on the model of traditional dispute-resolution mechanisms. It usually appears that many grievances have roots in misunderstandings, or result from neighbor conflicts, which usually can be solved through adequate mediation using customary rules. Most grievances can be settled with additional explanation efforts and some mediation. GRCs will be established at the community level at each participating regions/zones/Woredas/cities/towns and kebeles with technical support from MoWIE if needed.

Grievance Redress Committee

The grievance Redress committee will be formed through the client at each participating /zones/Woredas/ /towns/kebele level and shall be comprised of the following:

a. Zonal/Woreda/Municipality/kebele representative — Chair person
b. Zonal/woreda/keble Agricultural office representative
c. Community representative — Member
d. Representatives of PAPs — Member
e. Women affairs office — Member
f. Representative of Implementing Agency at each level — Secretary and Member

It is essential to include representative of Implementing Agency in the grievance redress committee so that essential information on inventories, entitlements, and compensation rates, etc. can be provided to the committee members for review of complaint.

Grievance Redress Procedure

Grievance redress procedure will comprise of the following steps.

1. As a first step, all complaints and grievances relating to any aspect of the Project should be properly documented by implementing committee and address through consultations with the PAPs in a transparent manner and effective manner.
2. If the PAPs do not get any response from the implementing committee within 5 days of filling the complaint, or if the matter is not resolved to the satisfaction of the PAPs, the person will submit the complaint to the grievance redress committee count having jurisdiction.
3. If the matter remains unresolved within 15 days of filling compliant to the grievance redress committee, the person will forward the complaint to the regular court having jurisdiction.

Or a party dissatisfied with a decision made by the grievance redress committee may appeal to the next GRM level. A party dissatisfied with the decision made at any of the GRM level, may appeal to as may be appropriate, to the regular court within 30 days from the date of the decision. The decision of the court shall be final.

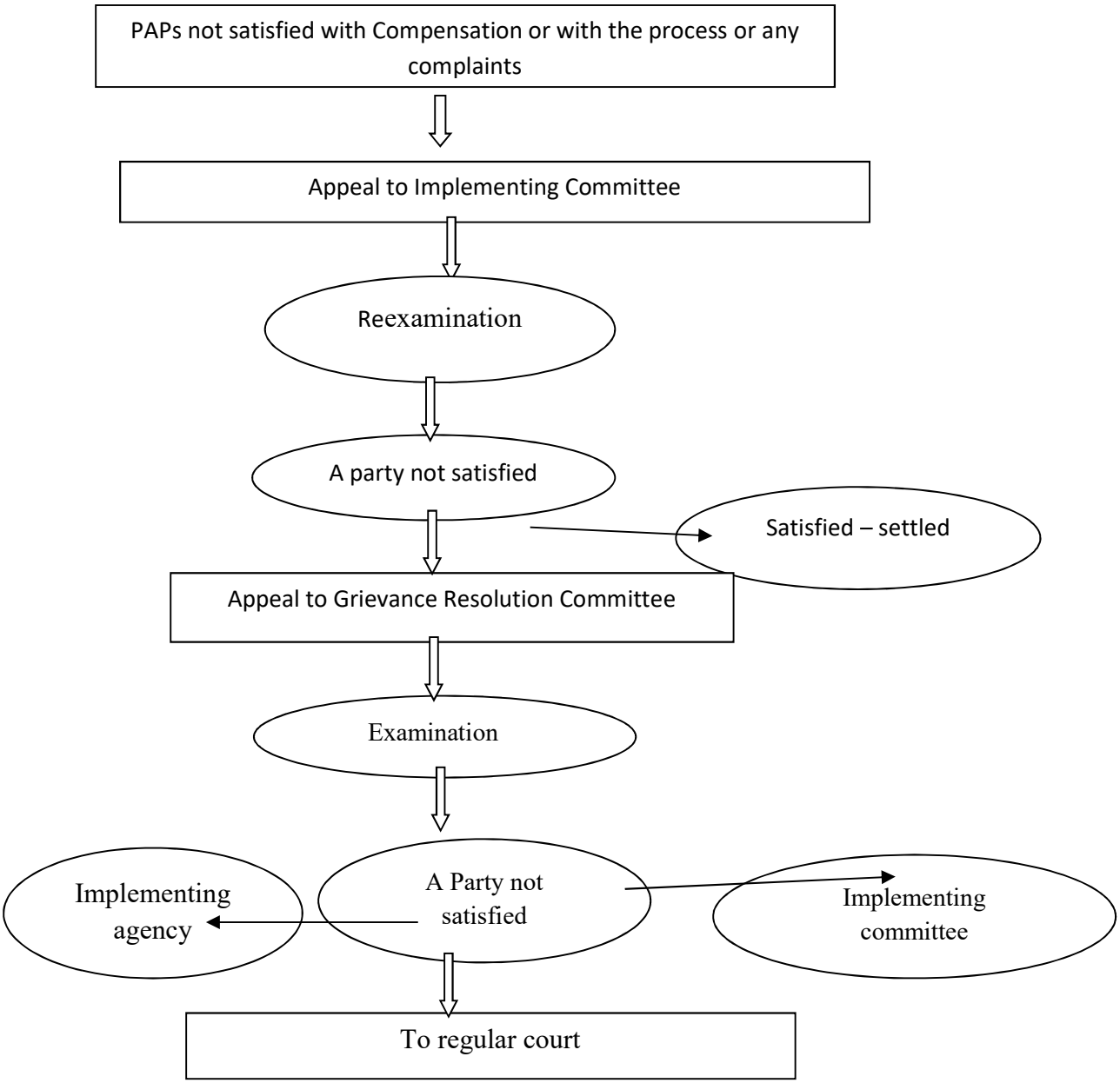
All the types of grievance should be recorded. Sample Grievance Form depicted in Annex 9 of the RPF of this project. This grievance format is subject for revision by the grievance resolution committee before the start of their duties. The format will be distributed to the compensation implementation committee, the grievance resolution committee as well as to the other stakeholder's implementers of the resettlement action plan. The format should contain relevant information such as the name of the complaint and address, the types and details of grievances, the decision made, the date and the signature of the parties. The complaint, the receiver of the complaint, implementers should get the copy of the grievances.

Appeal to Court

If the grievance procedure which will be established at local level fails to provide a result, they can pursue further action by submitting their case to the appropriate court of law. Courts of law shall be considered as a "last resort" option, which in principle should only be triggered where first instance amicable mechanisms have failed to settle the grievance/dispute. However, the constitution allows any aggrieved person the right of access to court of law.

World Bank Grievance Redress Services

Communities and individuals who believe that they are adversely affected by the World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org. Grievance/Dispute Management Mechanism works as indicated in the figure below.



7.4. Chance finds procedure for culturally significant artefacts

The Project team and contractors will follow national procedures and guidelines and ESMF procedures for reporting chance finds, in the event of any physical cultural resources are sighted. A national entity for coordinating and facilitating the archiving, safekeeping and documentation of physical cultural resources, Authority for research & Conservation of Cultural Heritage (ARCCH), has been in existence and operational for a long time and will provide advice to the project, particularly in the event that chance finds are made.

It is required by Ethiopian legislation that ARCCH should be aware of and/or approve any developmental activity which may affect physical cultural resources; such resources are found by chance. In the event that there could be potential impact on a physical cultural resource, the project will take the necessary steps of carrying out public consultations, engaging with cultural or religious leaders and notifying local authorities to seek their consent before any decision on and implementation of subproject is made. The Contractor is responsible for familiarizing themselves with the following "Chance Finds Procedures", in case culturally valuable materials are uncovered during excavation, including:

➢ Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;

➢ Protect artefacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts

➢ Prevent and penalize any unauthorized access to the artefact

➢ Restart construction works only upon the authorization of the relevant authorities.

Requirements for chance finds are also outlined in the Act. Article 41 which states that: "*Any person who discovers any cultural heritage in the course of excavation connected with mining, explorations, building works, road construction or other similar activities shall report to the Authority and protect and keep same intact until the Authority takes delivery thereof*". The Authority shall take all appropriate measures to examine, take delivery and register the Cultural heritage so discovered. Where the Authority fails to take appropriate measures within 6 months, the person that discovered the cultural heritage may be released from the responsibility by submitting a written notification with a full description of the situation to the Regional Government official.

7.5. Monitoring of the Implementation of the ESMF

After the approval of subprojects for implementation (i.e., after getting clearance of the safeguards instruments) by the Environment Protection Authority, the recommended mitigation measures will be implemented at operational levels (towns/kebeles). With the support from the regional safeguards experts, the Woreda/town safeguards focal persons will be responsible for the effective implementation monitoring of the mitigation measures at any stage of the project operation. The zonal and regional environmental and social safeguards specialists will also monitor the implementation of ESMF, SA & RPF. Hence, the safeguards specialists, either as a team or individually, will inspect the implementation of the mitigation measures. The specialists will monitor that the proper procedures are being followed in screening the ONE WaSH-CWA (P167794) activities and in the implementation of the mitigation measures in the towns/ kebeles/woredas.

Safeguards performance monitoring in ONE WaSH-CWA (P167794) will involve monitoring of the compliance, effectiveness of the ESMF, SA and RPF. Purpose of result monitoring is to support compliance with safeguard policies, to identify the occurrence of any unforeseen safeguard issues, to determine lessons learnt during project implementation, to provide recommendations for improving future performance, and to provide an early warning about potential cumulative impacts. Performance monitoring requires that inspection of:

1. The various safeguards instruments have been prepared for ONE WaSH-CWA (P167794) subprojects to the required standard, within the required timelines;

1. The safeguards instruments have been reviewed and approved by the responsible entities;

2. Environmental and social mitigation measures have been/are being implemented and that mitigation measures are effective;

3. Relevant Federal, Regional, Woreda and Kebele level ONE WaSH-CWA (P167794) staff have been trained in accordance with the capacity building proposals;

4. Reports are prepared and delivered as required.

The monitoring requirements of ONE WaSH-CWA (P167794) are summarized in Table 7 below:

Table 9. Environmental and Social Safeguard Monitoring Requirements for ONE WaSH-CWA (P167794)

Requirement	Stage	By whom	Final review/ Approval
Environmental and social screening of each subproject	After identification of subproject sites	Woreda/Town level safeguards focal persons with support of Zonal/Regional safeguards specialists	REPLAs or MOWIE
ESIA/ESMP preparation (if required)	Prior to start of any physical works of subprojects	ESIA (by independent consultant) ESMP (by Woreda/town level safeguards focal persons with support of Zonal/Regional specialists)	REPLAs or MOWIE and World Bank
Environmental and social safeguards monitoring (spot-checks)	Regularly during project implementation	All safeguards specialists from federal to operational levels	
Joint implementation monitoring and support mission	Every six months (twice a year) in all program implementing regions.	MoWIE, MoH, MoE, MoFEC, and development partners (e.g. the World Bank)	
Environmental monitoring and reporting	Quarterly and Annually during project implementation	Implementing agencies (Regional and Federal WaSH offices)	MoWIE
Audits on ESMF and RPF implementation	Mid-term	An independent consultant	MoWIE

In sum, to ensure proper implementation of the safeguards tools and/or address other unforeseen environmental impacts, environmental and social safeguards monitoring will be conducted at all levels (city, regional, federal). Environmental monitoring will involve periodic checkups of subprojects to look for efficiency of control measures and will take place on a "spot check" bases as it might be difficult to monitor all subprojects. Spot checks will be conducted as reviewing of reports produced and physical inspections on site. Every utility is required to monitor or conduct physical spot checks at regular intervals during the year and ensure on at least 50% or more of their respective subprojects annually. Subprojects that require preparation of an ESMP need to be monitored as per the proposed monitoring plan. Spot checks/inspections will be conducted bi-annually by MOWIE to ensure compliance. MOWIE will prepare quarterly and annual on environmental and social safeguards compliance reports. A brief annual

environmental monitoring report will be developed and reviewed by MoWIE. Such reports will be consolidated and summarized into a federal level annual report that will be prepared by MoWIE and submitted to the Environment unit under the MoWIE and the World Bank.

All the project implementing regions will develop brief quarterly and annual environmental monitoring report to the review of the MoWIE. The report contents will be the following:

1. A summary of Environmental and Social Screening reports, with a table summarizing which subprojects have been assigned each of the screening categories;
2. A summary of ESIAs developed during the year;
3. A summary of environmental monitoring carried out on systems at both construction and operation phases;
4. Lists of outstanding issues and the responsible body for implementation;
5. Types of training provided or training demands;
6. If an environmental permit was not granted by REPLA, explain why;
7. If no objection is obtained for ESIA studies from the World Bank, and whether these documents are disclosed on time both through the implementing agencies website and the World Bank info shop based on the disclosure requirements
8. Documentation practices for environmental instruments (ESS reports, ESMP, ESIA, RAP/ARAP etc.); and,
9. Specific challenges encountered in the course of project implementation processes, including aggregated data from sites.

These reports from all project implementing regions will be verified, consolidated and summarized into a federal level annual report to be prepared by the MoWIE using the quarterly and annual environmental compliance reporting templates (Annex VI)

Environmental and social audits on ESMF and RPF implementation will be prepared by the environmental and social specialists contracted by MoWIE and delivered to the Environment unit under MoWIE and the World Bank. Therefore, an independently-commissioned environmental and social audit will be carried out at least twice in the program life cycle. An audit is necessary to indicate, among others: To what extent environmental and social considerations are being incorporated into the local government planning process during the project cycle; whether the screening is being applied correctly; whether ESIAs and / or ESMPs are being prepared and the contracts reviewed and updated to reflect particular sub-project issues; that mitigation measures are being identified and implemented by the implementing entities; and to check that ONE WaSH-CWA (P167794) sub-projects are being correctly implemented. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

Overall, the following indicators and parameters will be used for compliance monitoring:

1. Documentation of community consultation in planning, implementation and monitoring
2. Environmental and social screening checklist filled or not;
3. Environmental Management Plan (ESMP) was prepared or not;
4. Documentation of safeguards tools
5. Approval of safeguards instruments by the competent authority

6. Environmental enhancement and impact mitigation measures mentioned in Environmental and Social Management Plan have been incorporated and considered during project planning, design and site selection;
7. Social adverse impact identified, and mitigation measures mentioned in Environmental and Social Management Plan, social management plan with in SAR and RPF have been incorporated and considered during project planning, design and site selection;
8. Compensation effected according to the agreement made
9. Establishment and functionality of GRM

8. Major Gaps and Lessons Learned during the Implementation of OWNP- phase I

Throughout the implementation period of the existing OWNP, it was clearly observed that water supply; sanitation and hygiene investments of the project resulted in positive outcomes. It helped to provide safe drinking water and sanitation services to rural and urban populations in Ethiopia. It also helped for reduction of water borne diseases and accounted for wellbeing of the productive community. In addition, it helped to minimize the time needed for fetching of water by the women and to drop out girls from schools.

The major gaps related to safeguards compliance during the implementation of OWNP phase I include:

1. At the onset of the program implementation, in some cases, the environmental and social screening forms were not filled on time according to the regional plan and the ESMF requirement. This is because regional safeguards experts for the ongoing project were not recruited on time to conduct environmental and social risk screening. This was one of the critical challenges faced during implementation of the OWNP phase I.
2. Screening reports in some cases did not have the expected quality as there have been problems in relation to project categorization because of lack of capacity. To address this, different continuous capacity building trainings and experience sharing workshops were organized and delivered by the MoWIE and the World Bank to the regional environmental and social safeguard experts and other stakeholders to improve capacity limitation in conducting ESS and other safeguard related activities. Capacity building activities will also be given attention in the second phase.
3. High safeguards staff turnover which is mainly due to low salary scale of the environmental and social safeguards experts. In some cases, the safeguard experts have been demanded to perform non-safeguard activities for long time and this has an impact on safeguard implementation performance of the program.
4. Lack of enforcement mechanism for the ESMF implementations such as conducting ESS before proceeding to construction bid and starting the construction activities,
5. In some cases, failure to incorporate the Environmental guideline for Construction Contractors in bidding documents.
6. In some cases, lack of adequate and meaningful public consultation as required.
7. Less or no attention given to the water quality, absence of qualified water quality experts, standard water quality laboratory and equipment, improper data recording and reporting practices at regional and town level.

8. Almost all the program implementing regions, woredas and towns fail to incorporate integrated water shade management to reduce water contamination from source to user mouth as well as to ensure the project sustainability despite climate change negatively affects the water quality, quantity and project functionality.

Hence, all these things will be taken as a very important lesson and shall be considered and appropriately addressed (in accordance to the updated ESMF, RPF and SA documents) in the proposed ONE WaSH-CWA (P167794).

Most of the environmental and social impacts of subprojects in OWNP phase I are associated with construction phase of water supply and sanitation schemes. The impacts are found to be localized and easily manageable. However, the capacity of the implementing agencies, budget allocation for safeguards compliance and the attention could still be further improved. Experiences have also shown that there were two major gaps in implementing the ESMF and RPF during phase I of the OWNP project. These were limited technical capacity at all levels and absence of budget for the implementation of the ESMP mitigation measures. To address this; trainings on environmental and social management, Ethiopian and the World Bank safeguard policies and legal frameworks, project screening, monitoring and evaluation skills, public consultation, participatory planning, and environmental and social audit will continuously be provided to environmental and social safeguards experts and other implementing agency staff members by the environmental and social safeguard experts of MoWIE and the World Bank. In addition, monitoring of the ESMF implementation and backstopping support on technical issues provided by the environmental and social safeguard specialists mentioned above.

The issues of water quality and catchment management were also among the great challenges towards ensuring sustainability of the water supply schemes, both in terms of quality and quantity. Therefore, this ESMF will also try to address these and other related issues by providing the required priority for the management of water quality and water resource protection and other related activities. As part of this ESMF, the Climate Resilient Water Safety Plan (CR-WSP) guideline will also be applicable to help manage the aforesaid challenges. Water quality test kits and laboratory reagents will be procured and supplied to implementing agencies. Water quality analysis will be conducted by experts to be deployed at least at regional levels.

The safeguards instruments prepared for the OWNP phase one particularly the RPF missed to include Gender Action Plan (GAP), Gender Action Plan. Practically women are more benefited from the water supply, sanitation and hygiene project. More importantly, the effort made by the ongoing project to address the needs of women through (i) construction of separate latrine for boys and girls in schools, so that decreasing female students dropout; and (ii) creating access to potable water in nearby distances benefits women and girls, who are the primary beneficiaries of improved service, in terms of less of a burden and more time to be involved in education and economic activities is very encouraging. However, to improve further, the new RPF of the ONE WaSH-CWA (P167794) projects incorporate an independent Gender Action Plan and citizen engagement mechanisms. The same is true in case of Grievance redressing mechanism (GRM). RPF prepared for the OWNP phase one has put a separate section on GRM but it lacks clarity mainly on establishment of grievance committee at local level. Thus, the new update of RPF put clear and practical strategy how grievance committee should be established at lower level. For example, for small schemes which will be implemented at woreda level and which has very small impacts, the project can address through established Water and Sanitation Committee (WaSHCo) jointly with the PAPs. This is because, the likelihood of the adverse impacts of construction of small schemes is minimal and can be treated with the available water committee at local level. In addition, the availability and accessibility

of WaSHCo at each sub-project level is very simple. For adverse impacts as usual the project can handle the grievance through establishment of a separate grievance committee at sub-project level based on the need arise.

The attention given to provide safe water supply to the rural and urban program beneficiaries was very low. Therefore, the planned phase two program should give due attention to water quality related issues by incorporating and proper implementation of climate resilience water safety plan, integrated water shade management. Therefore, it is necessary to establish water quality testing laboratories, upgrading the existing ones, recruiting qualified water quality experts at least at regional and big town level and conducting frequent water quality testing by taking samples as frequent as possible. There is also a need to create well organized data recording, management and reporting system.

Environmental and social screening risk checklist is revised because, the social part of the checklist of the ongoing project is very narrow and generic, on the other hand, the checklist is commonly used for the bigger projects that have adverse impacts and smaller Projects that do not have an impact. Therefore, the ESMF updating includes updating the ESS checklist as:

1. The social safeguard section of the environmental and social risk screening checklist will be more elaborative to avoid confusions
2. Separate environmental and social risk checklist has been prepared for smaller and bigger projects (Annex VII). Because the ESS for small size schemes that have insignificant adverse environmental and social impacts will most probably to be filled by woreda/zonal focal persons including for water supply, sanitation and hygiene projects at schools and health institutions. Another ESS risk checklist has also been prepared for big schemes that might have adverse impacts and to be completed by regional safeguard experts or even in collaboration with the MoWIE safeguard experts as required and as per the regional request for support.

9. Capacity Building and Implementation Budget

During the implementation of OWNP-CWA phase I, financed by different donors, including the World Bank; DFID, AfDB and UNICEF, Regional Water Bureaus (RWBs), Town utilities and many woredas have gained some experience and progressively developed capacity. However, capacities in the regions are still low with regard to environmental and social safeguard implementation practices. As mentioned above capacity limitation at different level is still one of the challenges despite the capacity building and training delivered at different times. Therefore, a special initiative is needed to develop the capacity of the RWBs, woredas, towns, and communities as well as other stakeholders like the regional environmental protection and land administration office experts to support implementation of the Rural, Urban and institutional Water supply and sanitation (WSS) projects concerning the social and environmental aspects and to effectively deliver their responsibilities, implementing agencies at each level will need to be further strengthened.

ONE WaSH-CWA (P167794) ESMF implementation includes,

1. conduct capacity assessment of each region and implementing agencies at each level to take inventory of existing capacity and identify gaps, and

2. Based on the findings of the assessments tailored capacity building packages will be provided. The implementing agencies are the WaSH Ministries (MoWIE, MoH, and MoE) and their respective bureaus and offices at the regional and woreda/town levels.

Training Workshop for MoWIE, RWBs And Federal EFCCC & Regional EPLA Developing **Capacity on the ESMF Process**

The following institutions will need environmental and social safeguard training for the safeguard experts that directly involved in the implementation of the program to ensure effective implementation of the ESMF. The main implementing agencies, about 23 individuals (4 safeguard experts from Oromia, Amhara, and SNNPR each, two safeguard experts from Tigray, and Ethiopian Somali regions each and 1 safeguard expert from Gambella, B/Gumuz, Harrari, and Afar each, 2 safeguard experts from Addis Ababa and Dire Dawa each),

1. Five environmental and social safeguard experts of MoWIE WSSD that directly involved in the implementation of the WSSPs of the program,
1. Two experts (one environmentalist and one social expert) from MoWIE Environment and Climate Change Directorate that are delegated by EFCCC to review and clearance of ESS, ESIA, RAP study documents.
2. 2 experts from EFCCC (one environmentalist and one social expert)
3. 11 experts from all Regional Environmental Protection and Land Administration offices including Addis Ababa and Dire Dawa (one individual for each regional and the two city administrations),

Developing Capacity in the ESMF, RPF, and SA

The updated Resettlement Policy Framework and the Social Assessment documents for the proposed ONE WaSH-CWA (P167794) are also areas of capacity building requirement. In this training engineers and technicians (about 5 individuals at the MoWE) will also taking part. Thus, environmental and social safeguard trainings to ensure effective implementation of the ESMF, RPF and SA will be addressed in a proposed 6-day workshop targeting the above participants. This workshop will be facilitated by MoWE. The training will be delivered by the MoWE and the EFCCC environmental and social specialists, with the support from the World Bank environmental and social specialists. In this training that will be organized by MoWIE safeguard team in collaboration with the World Bank country office environmental and social safeguard experts where the updated ESMF, RPF and SA will be launched and discussed and the areas that the training will address are the following:

1. Review of the Ethiopian environmental policies, laws, regulatory and administrative frameworks,
2. Review of the World Bank's safeguard policies,
3. ESMP and environmental guidelines applicable to construction contractors,
4. Environmental and social screening process (with one practical exercise on a real site),
5. Assignment of environmental categories,
6. Carrying out of the environmental work as discussed in the ESMF,
7. Review and clearance of the ESS, ESIA and RAP reports,

8. Preparation of terms of reference for carrying out ESIA and RAP by using the generic ToR in the ESMF
9. How to monitor safeguard implementation
10. Water quality management and climate resilience water safety plan
11. Integrated Water shade management in relation to sustainability and safety of water supply and sanitation projects in the program.
12. Climate resilience WaSH
13. Waste management issues (safe disposal of domestic, industrial and construction wastes etc.)
14. Environmental Impacts of the projects on groundwater, surface water and other as per the ESMF
15. Social impacts of the projects as per the updated RPF,
16. Resettlement (relocation and compensation for the lost property and income) as per the roles and regulations of Ethiopia and the World Bank,
17. The benefits of public consultation,
18. World Bank requirements related with public consultation,
19. Areas of the water supply, sanitation and hygiene projects where public consultation is required,
20. Public consultation process in view of the ESMF, RPF and SA requirements,
21. Public consultations during project design
22. Requirements and procedures for RAP/ARAP
23. Case studies based on categorization of common cases (spring developments, wells and groups of wells, pipelines, waste water treatment ponds, rehabilitation works etc),
24. Discussion of, and amendments to, the revised environmental and social screening forms during ESMF update.

This capacity building training should also aim at reviewing and refining some aspects of the process, particularly the forms, toolkits and guidelines as well as reporting formats proposed in this updated ESMF, in view of their smooth implementation by the different parties involved in the process of implementing the water supply and sanitation projects in the program.

The capacity building training will be organized in Addis Ababa and its cost is estimated as follows:

1. Participants' per-diem, including accommodation and meals:

USD 30 per day x 6 days x 70 participants (estimate)

Sub-total= USD 12,600.00

2. Trainers' fees:

USD 50 per day x 16 days (including preparation) x 5 trainers

Sub-total: USD = 4000.00

Logistics of the training, including participants' transport from water bureaus and woredas, meeting room and transport to site for practical exercise= USD 20,000.00

3. Contingencies (10%) = USD 3660.00

Total: USD 40,260.00

Grand Total for three rounds

3x40,260=120,780.00

Training and Technical Assistance to Program Implementers

Developing Awareness of the ESMF, RPF and SA and Environmental and social screening Process

1. Representatives of town water boards (at least 1 from each program implementing utilities),
2. Professionals involved with water supply and sanitation at the municipal levels (at least 1 technical staff member for each ONE WaSH-CWA (P167794) implementing towns towns),
3. Environmental and social safeguard focal persons at the woreda or zonal level (at least 1 for each of the program implementing woredas),
4. Technical staffs (engineers, technicians, and water quality experts) and environmental and social safeguard specialists (focal persons) from the program woredas (at least 1 from each program implementing woredas),
5. Engineers and technicians and environmental specialists in municipal authorities with potential involvement in water and sanitation issues (at least 1 individual from each WaSH-II towns),
6. Staff from construction supervision consultants and contractors, 1 from each (for each sub programs).

The four-day training where the updated ESMF, RPF and SA will be presented and discussed and with the objective of reviewing and refining some aspects of the process, particularly the revised ESS forms, toolkits, reporting formats and guidelines proposed in this updated ESMF, in view of their smooth implementation by the different parties involved in the process of implementing the water supply and sanitation projects.

This capacity building training will be facilitated by the respective water bureaus, MoWIE and each regional EPLA. The training will be conveyed by the ToT members and will address the topics indicated in the above section. The workshop will be organized in each respective regional capital cities. Its cost (excluding the cost of consultants and contractors) is estimated as follows, and will be refined after ONE WaSH-CWA (P167794) participating woredas and Towns are identified:

7. Participants' per-diem, including accommodation and meals:

USD 30 per day x 4 days x300 participants (estimate)

Sub-total: USD 36,000.00

8. Trainer's fees:

USD 50.00 per day x 10 days (including preparation) x 3 ToT members x 60 (batches of trainees)

Sub-total: USD 90,000.00

9. Estimated logistics of the workshop, including participants' transport from water utilities and woredas, meeting room and transport to site for practical exercise: USD 100,000.00
10. Contingencies (10%): USD 22,600.00

Total: USD 248,600.00

Grand Total for three rounds

3x248,600=745,800.00 (the detail is presented in Table 8).

Table 10. Budget Estimate for training

Types of Activities	Budget for the five-year plan (2020-2025)					Total budget (USD)
	Year 1	Year 2	Year 3	Year 4	Year 5	
Training for MoWIE, BWBs, EFCCC, and REPLA	40,260	20,130	20,130	40,260	-	120,780
Training for regional and Town safeguard experts, Woredas and /or zonal safeguard focal persons, communities and others	248,600	124,300	124,300	248,600	-	745,800.00
Conducting ESS	50,000	40,000	30,000	-	-	120,000.00
Conducting ESIA and RAP	40,000	50,000	30,000	20,000	10,000	150,000.00
Review process of ESS, ESIA and RAP	5,000	20,000	10,000	10,000	5,000	50,000.00
Implementation of mitigation measures in the ESS, ESIA, RAP and ESMP	220,000	280,000	340,000	240,000	220,000	1,300,000.00
Monitoring and auditing	10,000	10,000	30,000	10,000	40,000	100,000.00
Total Estimate	**613,860**	**544,430**	**584,430**	**568,860**	**275,000**	**2,586,580.00**

ANNEXES

Annex I: Proposed Environmental and Social Screening Form

The Environmental and Social Screening Form (ESSF) has been designed to assist in the evaluation of sub-projects of the OWNP project in Ethiopia. The form is designed to place information in the hands of implementers and reviewers so that impacts and their mitigation measures, if any, can be identified and/or that requirements for further environmental analysis be determined.

The ESSF contains information that will allow reviewers to determine the characterization of the prevailing local bio-physical and social environment with the aim to assess the potential sub-project impacts on it. The ESSF will also identify potential socio-economic impacts that will require mitigation measures and/or resettlement and compensation.

The ESSF is to be completed by competent safeguard specialists from the regional water bureaus. The completed ESSF will be reviewed and approved by each respective REPAs.

In cases where information is 'not known', this should be clearly indicated at the relevant question or comment.

Scheme Type: _____

Sector: _____

Region: _____

Name of Town/Wereda in which the sub-project to be implemented:

Name of the Reviewing and Approving Authority:

Name, job title, and contact details of the person responsible for filling out this ESSF:

Name:

Job title:

Telephone numbers:

E-mail address:

Date:

Signature:

Part A: Brief Description of the Sub - Project

Please provide information on the type and scale of the sub-project (area of location, required land).

Provide information about the type and components of the schemes, including support/ancillary structures, e.g. water source development, pipe linings, construction of reservoirs, access road, construction of toilet, etc.

Part B: Brief Description of the Environmental Situation and Identification of Environmental and Social Impacts

Environmentally sensitive areas or threatened species

Are there any environmentally sensitive areas or threatened species (specify below) that could be adversely affected by the project?

i. Intact natural forests: Yes_____ No _____

ii. Riverine forest: Yes _____No_____

iii. Surface water courses, natural springs: Yes _____No_____

iv. Wetlands (lakes, rivers, swamp, seasonally inundated areas): Yes ____No_____

v. How far is the nearest wetland (lakes, rivers, seasonally inundated areas)? ----------

vi. Area of high biodiversity: Yes _____No_____

vii. Habitats of endangered / threatened, or rare species for which protection is required under Ethiopian national law/local law and/or international agreements: Yes_____ No _____ Not Known_____

viii. Others (describe). Yes _____No_____

Rivers and Lakes Ecology

Is there a possibility that, due to construction and operation of the sub-project, the rivers and lake ecology will be adversely affected? Attention should be paid to water quality and quantity; the nature, productivity and use of aquatic habitats, and variations of these over time.

Yes _____No_____

Comments:

Site Hydrogeology (according to available information)

Type of aquifer (continuous, fracture)

Depth of aquifer

Seasonal fluctuations

Known quality problems

Surface Water

What is the water course in the surrounding of the site?

Nature (river, stream, spring, lake)

Distance to site

Downstream/upstream the site

Give an assessment of potential water course sensitivity to water point construction and operation

Drainage conditions on-site

Description of present drainage conditions on site (site topography, infiltration capacity of soil):

Risks of water retention (site in a low point):

Feasibility of simple drainage improvements to eliminate water retention problems:

Water Use and Water Users

Describe the water use in the vicinity of the site:

Is there potential for conflict between users; if so, how should this conflict be solved? _____ _____

Protected areas

Does the sub-project area (or components of the sub-project) occur within/adjacent to any protected areas designated by government (national park, national reserve, world heritage site etc.)? Yes_____ No_____

If the project is outside of, but close to, any protected area, is it likely to adversely affect the ecology within the protected area areas` (e.g. interference with the migration routes of mammals or birds). Yes_____ No_____

Contamination and pollution hazards

Is there a possibility that the sub-project will be at risk of contamination and pollution hazards (from latrines, dumpsite, industrial discharge, drilling oils etc.)? Yes _____No_____

Landscape/aesthetics

Is there a possibility that the project will adversely affect the aesthetic attractiveness of the local landscape? Yes _____No_____

Historical, archaeological or cultural heritage site

Could the sub- project alter any historical, archaeological, cultural heritage traditional (sacred, ritual area) site, cemetery, graves, or require excavation? Yes _____No_____

Degradation and/or depletion of resources during construction and operation

Will the operation involve use of considerable amounts of natural resources (construction material, water spillage, land, energy from biomass etc.) or may lead to their depletion or degradation at points of source? Yes _____No_____

Will the quarries have to be rehabilitated?

Solid or Liquid Wastes

Will the project generate solid or liquid wastes? (Including human excreta/sewage, hospital waste,) Yes _____No_____

If "yes", does the sub-project include a plan for their adequate collection, treatment and disposal?

Yes _____No_____

Public Health

Will the sub-project contribute to an increase in malaria due to an increase in water supply?

Yes _____No_____

Comments: _____

Block of access and routes or disrupt normal operations in the general area

Will the project interfere or block access, routes etc. (for people, livestock and wildlife) or traffic routing and flows? Yes _____No_____

Will the sub-project activities reduce other people's access to their economic resources, like land, pasture, water, public services or other resources that they depend on? Yes _____No_____

Public Consultation

Has public consultation and participation been sought? Yes _____No_____

Document meetings in the meeting form and attach to this ESSF

Part D: SOCIAL RISK SCREENING CHECKLIST

OWNP-CWA phase two Investment subproject name:

Location: _____ (region, district, Kebele & specific name of the place where the sub-project is located)

Type of activity: _____(new construction, rehabilitation, periodic maintenance, etc)

Proposed Date of Works Commencement: _____ site area in ha_____

2. Impact identification and classification:

When considering the location of OWNP-CWA investment project, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable – it indicates a real risk of causing adverse impacts involving resettlement and compensation. The following table should be used as a reference.

Table 1: Impact Identification and Classification

Issues	**Site sensitivity**		
	Low	**Medium**	**High**
Involuntary Resettlement	No land take/ no land acquisition	If the activity takes less than 20% of households land	If the activity takes more than 20% of households land
	No economic or physical displacement	If it displaces less than 200 people	If it displaces greater than 200 people
	No non-Land Economic Displacement		

Table 2: Checklist of Impacts

Construction, upgradation, rehabilitation and/or expansion of education, water supply, human health, and Access Road, etc;	Potential for Adverse Impacts			
	None	Medium	Low	High
Economic or physical resettlement required				
Does the activity take more than 20% of households land				
Does the activity displace greater than 200 people				
New settlement pressures created				
Other (specify)				

Table 3: Detailed Questions

Public participation/information requirements	
Does the public be informed, consulted or involved in the process of the ground activity?	
Has consultation been completed? Indicate the timeframe of any outstanding consultation process.	
Has consultation been completed? Indicate the timeframe of any outstanding consultation process.	

Land and Resettlement	
How will the OWNP-CWA go about land acquisition and property losses?	
Will people's livelihoods be affected in any way, therefore requiring some form of compensation?	
Will people need to be displaced, and therefore require compensation and resettlement assistance?	
Are the relevant authorities aware of the need for a Resettlement Process, involving a census, valuation, consultation, compensation, evaluation and monitoring?	
What level or type of compensation is planned?	
Who will monitor actual payments?	
Actions	
List outstanding actions to be cleared before OWNP phase two investment sub-project appraisal.	
Recommendations	
Requires an RAP/ARAP is to be submitted	
Does not require further social studies	

Part E: Mitigation Measures

For all "Yes" responses above, describe briefly the measures taken to this effect.

S.N	Identified Impacts	Mitigation measures	Responsible body	Time Schedule	Cost Estimate	Remark

Based on the likely environmental and social impacts as deduced from the baseline features identified in section A, B and C, and knowledge of the project, categorize the subproject as follows.

Subprojects Categorization (tick applicable box)

A

- Category A: This sub-project has been categorized as A (Schedule 1) due to one or more major adverse impacts, and therefore cannot be funded under the OWNP II. It will be either re-

designed or re-submitted to the environmental screening process after re-design or abandoned.

B

- Category B: This sub-project has been categorized as B (Schedule 2) due potential environmental issues that are likely to be readily mitigated: further Environmental Assessment work is required. Preparation of separate ESIA (and/or ESMP) to get a better understanding of the potential and social issues that have been identified in the screening process will be carried out to identify necessary mitigation measures.

C

- Category C: No significant environmental issue identified, no specific mitigation required; sub-project implementation can proceed. Environmental Guidelines for Construction Contractors shall be incorporated into construction contract and applied.

Prepared by (name, position, and signature): Date: ----------

Reviewed by (name, position, and signature): Date: ----------

Cleared by (name, position, and signature): Date: ----------

Annex II: Categorization of Sub-Projects to be considered under the ONE WaSH-CWA

SN	Type of Sub-project (system)	Ethiopian Regulation
1.	Rural Drilled Well with Submersible Pump and small distribution system	2
2.	Spring catchment with on-site storage and distribution	2
3.	Spring development, treatment and gravity transmission and distribution system	2
4.	Surface Water (Pond, Dam, Run-off…)	2
5.	Pastoral open well	2
6.	Dam upgrade to ensure compliance with safety requirements	2
7.	Raw water treatment plant	2
8.	Transmission pipeline	2
9.	Distribution pipelines and distribution network	2
10.	Well or well fields with pumping station(s), treatment and pressure distribution system	2, unless groundwater withdrawal is more than 4,000 m3/day
11.	Rehabilitation or expansion of existing transmission or distribution systems	2
12.	New distribution systems	2
13.	Latrines and other individual sanitation systems	2
14.	Piped sewerage system and waste water treatment works	2
15.	Leak detection	
16.	Institutional and capacity-building components	

Annex III: Typical ESIA Scope of Work

1. The Consultant will develop an ESIA for the following sub-project within the OWNP II (include description of the sub-project).

2. In preparing the ESIA, the Consultant will conform with the following set of regulations and policies:
   - Ethiopian environmental regulations,
   - The World Bank's OP 4.01 and other applicable safeguard policies,

3. The OWNP II ESMF.

4. The Consultant's scope of work will include:

   1. **Initial consultation:**
      i. with the implementing agency (identify the implementing agency),
      ii. with the EPA at federal level,
      iii. with the REPA,
      iv. with the World Bank's country office.

   2. **Review of the regulatory and policy background:**
      i. Based on Ethiopian pieces of legislation and regulation identified in the ESMF, the Consultant will identify any relevant changes occurred since the time the ESMF was prepared, and identify the practical implications thereof in preparing the ESIA;
      ii. Based on World Bank policies identified as applicable in the ESMF, the Consultant will review any relevant changes and identify practical implications thereof;
      iii. The Consultant will summarize in the ESIA report the applicable regulatory and policy background with a focus on practical implications in terms of:
         a) ESIA process, including public consultation and disclosure,
         b) ESIA scope of work,
         c) Contents of the ESIA report,
         d) What the implications of the regulatory framework is for the sub-project: for example, what consents or permits will be required, what limit values will apply etc.

   3. **Public consultation:**

   The Consultant will implement the following phases of public consultation, in coordination with the implementing agency, which may be willing to participate in this public consultation process:

      i. Identification of interested parties (beneficiary neighboring communities, communities potentially affected by the sub-project, downstream water users, local authorities, regional authorities);
      ii. Initial step of consultation, before further environmental assessment work is undertaken: one initial meeting with each of the identified parties, presenting the sub-project and seeking input on the scope of work for further environmental assessment work and to seek to identify any concerns or issues that the local communities and stakeholders may have in relation to the sub-project;
      iii. Second step of consultation, after further environmental assessment work is complete: presentation of the results of the environmental assessment, including presentation of identified impacts and proposed mitigations, seeking input on these proposed environmental management measures and to demonstrate the measures that have been taken in the design to address the concerns raised by the local communities/stakeholders;

this second step will include dissemination to identified interested parties of a brief summary of the environmental assessment in local language (generally Amharic and/or Oromigna);

iv. Any public consultation meeting undertaken by the Consultant will be documented using the form appended to these Terms of Reference (see Appendix 6);

v. Main issues raised during consultation meetings will be summarized in the ESIA report, with a description of the manner in which these issues were addressed in the ESIA process.

4. **Baseline assessment:**

The baseline assessment will address:

i. Physical and bio-physical environment (climate, topography at the sub-project site(s), geology, hydrogeology, surface water, soils, erosion sensitivity, flora, fauna, including the identification of any protected or endangered species);

ii. Land use at the sub-project site(s) and in its (their) vicinity;

iii. Human environment: description of neighboring communities (population size, population structure and demography, socio-political organization, livelihoods, access to public services);

The baseline assessment will be summarized using the format presented in the "typical ESIA report structure" hereunder. Reports of field observations and bibliography used will be presented as appendices.

5. **Impact assessment:**

The methodology for impact assessment shall be briefly presented. Typically, impacts will be assessed along the following lines:

i. Extension in space,

ii. Duration in time,

iii. Probability of occurrence,

iv. Magnitude

The combination of these parameters will be summarized in an all-encompassing measure of "significance", which will be the basis for impact assessment and prioritization of mitigations. Where changes in the project design (such as the re-siting or re-routing of a sub-project facility) may allow to eliminate one or several identified impacts, these changes (and generally any project alternative) will be discussed.

6. **Mitigations and ESMP:**

Based on the typical ESMP presented in the OWNP II ESMF, the Consultant will develop a sub-project ESMP, which will include as a minimum for each identified impact:

i. A description of the mitigation measures,

ii. A description of monitoring measures,

iii. Implementation responsibilities,

iv. Cost,

v. Assessment of residual impact after implementation of the mitigation

As necessary, specific additional protection measures to those included in the Environmental Guidelines for Construction Contractors presented as an appendix to the ESMF will be proposed by the Consultant.

7. **Deliverables:**

The Consultant will produce:

i. A summary project description in local language for purposes of public consultation (see above),

ii. A draft 1 ESIA report for submission to the Client,
iii. After initial Client's comments have been included in a revised version, a second draft ESIA report, including a brief summary in local language for purposes of public consultation,
iv. After public consultation results have been included, a final draft ESIA will be circulated for Competent

v. Agency and World Bank comment.
vi. After satisfactory incorporation of comments, a final ESIA report for public disclosure according to arrangements presented in the ESMF.

TYPIAL STRUCTURE OF AN ESIA REPORT

1. Executive summary
2. Introduction
    1. Scope of the ESIA
    2. Team in charge of the EIA, with list of consultants involved and task of each
    3. Summary of requirements applying to the EIA:
    4. General Ethiopian legal requirements
    5. ESMF requirements
    6. RPF requirements
    7. Other World Bank requirements if applicable
    8. Time frame for implementation of the EIA
9. Description of the Proposed Development Sub-Project

-Brief sub-project description with a focus on those physical components of the sub-project that may entail environmental and/or social impacts.

10. Technical components, including description of the methods used for construction and operation
11. Outline of the main alternatives
12. Sub-Project decommissioning at the end of the operation period
13. Implementation arrangements
14. Implementation schedule and cost
15. ESIA Methods
16. Terms of Reference of the EIA, and process through which they were arrived at
17. Description of the methods used for the EIA, including description of field investigations, mathematical models, social investigations, available literature
18. Description of standards and guidelines used
19. Statement on the extent of involvement
20. Identification of information gaps and uncertainties
21. Consultation
22. Identification of interested parties
23. Description of consultation with affected parties (timeframe, methods)
24. Main issues arising from consultation and how they were addressed in the ESIA process
25. Description of the baseline environmental, socio-economic and health conditions
26. Focus of the baseline assessment depending on the nature of the sub-project and on its likely impacts
27. Description of the physical environment (climate, topography, geology, hydrogeology, surface water, soils in the sub-project area)
28. Flora and fauna - brief description of the baseline situation at the project site, with a specific focus on endangered species if any, and assessment of the general biodiversity situation in the project area
29. Description of the human environment:

1. Identification of neighboring communities, description thereof demography, sociopolitical conditions,
2. Land use pattern, land tenure, and related social organization,
3. Livelihoods,
4. Water usages,
5. Noise,
6. Health situation
7. Project Impacts

Generally, prediction and assessment of each impact at all stages of the project cycle for each alternative, including, but not limited to;

1. Construction phase
2. Employment
3. Impact on land use
4. Impact on flora and fauna, with a specific focus on endangered species if any
5. Noise, Dust and Vibration
6. Impact on ground water quality
7. Impact on surface water quality (related with erosion at the vicinity of the work site for example)
8. Impact on surface water usage
9. Impact on ground water usage
10. Impact on soils (compaction by drilling equipment, removal of top soil)
11. Potential uses of the environment that will be affected
12. Operation phase
13. Impact on ground water levels, flow and quality
14. Impact on surface water (quantity - flow, quality)
15. Impact on surface water usage with a focus on potential conflicts between upstream and downstream users if relevant
16. Impact on ground water usage
17. Impact of changes in water regimes on flora and fauna, and bio-diversity in general, with a specific focus on wet zones if any
18. Potential uses of the environment that will be affected
19. Decommissioning phase
20. Summary table assessing the significance of each identified impact in terms of magnitude, extension, duration or frequency of occurrence and probability of occurrence
21. Consultation Process
    1. Description of the consultation process (who was consulted, how, when)
    2. Results: main issues raised and how they are addressed in the project design and in the EIA in general
22. Mitigation Measures
    1. Table showing for each identified impact at each of the main three phases of the project the proposed mitigation measures, with narrative justifying them
    2. Table showing the residual impacts once the mitigation measures are implemented
23. Monitoring & Evaluation

    Table showing for each identified impact the monitoring measures that will be taken, with indication of indicators used, frequency of measurement, frequency of reporting and any relevant details on the methods to be used for collecting and treating monitoring data
24. Environmental and Social Management Plan (ESMP)

    Table showing for each identified impact both the mitigation and the monitoring measures proposed in the EIA, with for each the implementation arrangements, including responsibilities for implementation, the timeframe, and the budgetary implications

Annex IV: Guideline for Environmental and Social Management Plan

When a subproject includes distinct mitigation measures (physical works or management activities), an ESMP needs to be included with the subproject application. An ESMP usually includes the following components:

1. Description of adverse effects: The anticipated effects are identified and summarized.

2. Description of mitigation measures: Each measure is described with reference to the effect(s) it is intended to deal with. As needed, detailed plans, designs, equipment descriptions, and operating procedures are described.

3. Description of monitoring program: Monitoring provides information on the occurrence of environmental effects. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental effects are monitored is discussed below.

4. Responsibilities: The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they report and are responsible. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.

5. Implementation schedule: The timing, frequency and duration of mitigation measures and monitoring are specified in an implementation schedule and linked to the overall subproject schedule.

6. Cost estimates and sources of funds: These are specified for the initial subproject investment and for the mitigation and monitoring activities as a subproject are implemented. Funds to implement the EMP may come from the subproject grant, from the community, or both Government agencies and NGOs may be able to assist with monitoring.

7. Monitoring methods: Methods for monitoring the implementation of mitigation measures or environmental effects should be as simple as possible, consistent with collecting useful information, so that community members can apply them themselves (see example below). For example, they could just be regular observations of subproject activities or sites during construction and then use. Are fences and gates being maintained and properly used around a new water point; does a stream look muddier than it should and, if so, where is the mud coming from and why; are pesticides being properly stored and used? Most observations of inappropriate behavior or adverse effects should lead to commonsense solutions. In some cases (e.g. unexplainable increases in illness or declines in fish numbers), there may be a need to require investigation by a technically qualified person.

ESMP Preparation Template Form

Potential environ-mental & social impacts	Proposed mitigation measures	Responsible for implementing the mitigation measures	Responsible for monitoring the implementation of mitigation measures	Time Horizon		Cost Estimate	
				Mitigation	Monitoring	Mitigation	Monitoring

Annex V: Environmental Guidelines for Construction Contractors

General: Applicability of These Environmental Guidelines and ESMP

These general environmental guidelines apply to any work to be undertaken under the ONE WaSH-CWA (P167794). For certain work sites entailing specific environmental and/or social issues, a specific Environmental and Social Impact Assessment, including an Environmental and Social Management Plan (ESMP), has been prepared to address the above-mentioned specific issues. In addition to these general Environmental Guidelines, the Contractor shall therefore comply with any specific ESMP for the works he is responsible for. The Contractor shall be informed by the Client about such an ESMP for certain work sites and prepare his work strategy and plan to fully take into account relevant provisions of that ESMP. If the Contractor fails to implement the approved ESMP after written instruction by the works supervisor to fulfill his obligation within the requested time, the Client reserves the right to arrange for execution of the missing action by a third party on account of the Contractor.

Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance requirements specified in an ESMP where such an ESMP applies.

These Environmental Guidelines, as well as any specific ESMP, apply to the Contractor. They also apply to any sub-contractors present on Program work sites at the request of the Contractor with permission from the Client.

General Environmental Protection Measures

In general, environmental protection measures to be taken at any work site shall include but not be limited to:

1. Minimize the effect of dust on the environment resulting from earth mixing sites, vibrating equipment, construction related traffic on temporary or existing access roads, etc. to ensure safety, health and the protection of workers and communities living in the vicinity of work sites and access roads.

2. Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) comply with Ethiopian standards and are generally kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.

3. Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels are maintained and/or re-established where they are disrupted due to works being carried out.

4. Prevent any construction-generated substance, including bitumen, oils, lubricants and waste water used or produced during the execution of works, from entering into rivers, streams, irrigation channels and other natural water bodies/reservoirs.

5. Avoid or minimize the occurrence of standing water in holes, trenches, borrow areas, etc...

6. Prevent and minimize the impacts of quarrying, earth borrowing, piling and building of temporary construction camps and access roads on the biophysical environment including protected areas and arable lands, local communities and their settlements. Restore/rehabilitate all sites to acceptable standards.

7. Upon discovery of graves, cemeteries, cultural sites of any kind, including ancient heritage, relics or anything that might or believed to be of archeological or historical importance during the execution of works, immediately report such findings to the Client so that the Ministry in charge of Culture may be expeditiously contacted for fulfillment of the measures aimed at protecting such historical or archaeological resources.

8. Prohibit construction workers from engaging in the exploitation of natural resources such as hunting, fishing, and collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities. Prohibit explicitly the transport of any bush meat in Contractor's vehicles.

9. Prohibit the transport of firearms in Program-related vehicles.

10. Prohibit the transport of third parties in Program-related vehicles.

11. Implement soil erosion control measures in order to avoid surface run off and prevent siltation, etc.

12. Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camps.

13. Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long-distance transportation.

14. Ensure public safety and meet Ethiopian traffic safety requirements for the operation of work to avoid accidents.

15. Ensure that any trench, pit, excavation, hole or other hazardous feature is appropriately demarcated and signposted to prevent third-party intrusion and any safety hazard to third parties.

16. Comply with Ethiopian speed limits, and for any traffic related with construction at the project sites, comply with the following speed limits unless Ethiopian speed limits are lower:

1. Inhabited areas: 50 km/h
2. Open road: 90 km/h.
3. Ensure that, where unskilled daily-hired workforce is necessary, such workers are hired from neighboring communities.

4. Generally, comply with any requirements of Ethiopian law and regulations.

Besides the regular inspection of the sites by the supervisor appointed by the Client for adherence to the Contract conditions and specifications, the Client may appoint an environmental inspector to oversee the compliance with these environmental conditions and any proposed mitigation measures. State or Regional Environmental Authorities may carry out similar inspection duties. In all cases, as directed by the

Client's supervisor, the Contractor shall comply with directives from such inspectors.

Drilling

The Contractor will make sure that any drilling fluid, drilling mud, mud additives, and any other chemicals used for drilling at any water supply sanitation and hygiene project construction site complies with Ethiopian health and safety requirements. In general, only bio-degradable materials will be used. The Contractor may be required to provide the detailed description of the materials he/she intends to use for review and approval by the Client. Where chemicals are used, general prescriptions of the World Bank's safeguard policy OP 4.09 "Pest Management" shall be complied with.

Drilling fluids will be recycled or disposed of in compliance with Ethiopian regulations in an authorized disposal site. If drilling fluids cannot be disposed of in a practical manner, and if land is available near the drilling site that is free of any usage rights, the Contractor may be authorized to dispose of drilling fluids near the drilling site. In this occurrence, the Contractor will be required to provide to the Client due evidence of their total absence of potential environmental impacts, such as leachate tests certified by an agreed laboratory. In this case, drilling fluids will be dried at site, mixed with earth and spread at site.

Any site affected by drilling work will be restored to its initial condition. This applies to drilling pads, access roads, staging areas, etc... Topsoil will be stripped ahead of any earthmoving, stored near the construction site, and replaced in its original location after the re-contouring of the area affected by the works.

Where successive aquifers are intersected by the drilling works and upon order by the work supervisor, the Contractor may be required to take measures to isolate aquifers from contamination by each other.

The Contractor will take all measures to avoid bacteriological or chemical contamination of the intersected aquifers by the drilling equipment. Similarly, the Contractor will take all measures to avoid bacteriological or chemical contamination of the intersected aquifers from the surface by providing an adequately sealed well-head.

When greasing drilling equipment, the Contractor will avoid any soil contamination.

In the event of a limited hydrocarbon spill, the Contractor will recover spilled hydrocarbons and contaminated soils in sealed drums and dispose of them in an authorized waste management facility.

Unless duly requested by the Contractor and authorized by the supervisor, no servicing of drilling equipment or vehicles is permitted at the drilling site.

Pipelines

No trench shall be left open for more than 7 days, unless duly authorized by the supervisor upon Contractor's request. Trenches and other excavation works shall be demarcated and/or signposted to avoid third party intrusion.

General conditions related with topsoil stripping, storage and restoration apply.

The Contractor will take measures to dispose of water used for pressure tests in a manner that does not affect neighboring settlements.

Waste Management

All drums, containers, bags, etc. containing oil/fuel/surfacing materials and other hazardous chemicals shall be stored at construction sites on a sealed and/or bonded area in order to contain potential spillage. All waste containers, litter and any other waste generated during the construction shall be collected and disposed off at designated disposal sites in line with applicable Ethiopian government waste management regulations.

All drainage and effluent from storage areas, workshops, housing quarters and generally from camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.

Used oil from maintenance shall be collected, properly stored in sealed containers, and either disposed of appropriately at designated sites or be re-cycled.

Entry of runoff into construction sites, staging areas, camp sites, shall be restricted by constructing diversion channels or holding structures such as berms, drains, dams, etc. to reduce the potential of soil erosion and water pollution.

Construction waste shall not be left in stockpiles along the road but removed and reused or disposed of on a daily basis.

Where temporary dump sites for clean excavated material are necessary, they shall be located in areas, approved by the Client's supervisor, where they will not result in supplemental erosion. Any compensation related with the use of such sites shall be settled prior to their use.

Areas for temporary storage of hazardous materials such as contaminated liquid and solid materials shall be approved by the supervisor and appropriate local and/or relevant national or local authorities before the commencement of work. Disposal of such waste shall be in existing, approved sites.

Quarries and Borrow Areas

The Contractor shall obtain appropriate licenses/permits from relevant authorities to operate quarries or borrow areas. The location of quarries and borrow areas shall be subject to review and approval by relevant local and national authorities.

New extraction sites:

1. Shall not be located less than 1km from settlement areas, archaeological areas, and cultural sites - including churches and cemeteries, wetlands or any other valued ecosystem component, or on high or steep ground.

2. Shall not be located in water bodies, or adjacent to them, as well as to springs, wells, well fields.

3. Shall not be located in or near forest reserves, natural habitats or national parks.

4. Shall be designed and operated in the perspective of an easy and effective rehabilitation. Areas with minimal vegetation cover such as flat and bare ground, or areas covered with grass only or covered with shrubs less than 1.5m in height, are preferred.

5. Shall have clearly demarcated and marked boundaries to minimize vegetation clearing and safety hazards for third parties.

Vegetation clearing shall be restricted to the area required for safe operation of construction work. Vegetation clearing shall not be done more than two months in advance of operations.

Stockpile areas shall be located in areas where trees or other natural obstacles can act as buffers to prevent dust pollution, and generally at a distance from human settlements. Wind shall be taken into consideration when siting stockpile areas. Perimeter drains shall be built around stockpile areas.

The Contractor shall deposit any excess material in accordance with the principles of these guidelines, and any applicable ESMP, in areas approved by local authorities and/or the supervisor.

Rehabilitation of Work and Camp Sites

Topsoil shall be stripped, removed and stored for subsequent rehabilitation. Soils shall not be stripped when they are wet. Topsoil shall not be stored in large or high heaps. Low mounds of no more than 1 to 2m high are recommended.

Generally, rehabilitation of work and camp sites shall follow the following principles:

1. To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.
2. Remove toxic materials and dispose of them in designated sites. Backfill excavated areas with soils or overburden that is free of foreign material that could pollute groundwater and soil.
3. Ensure reshaped land is formed so as to be stable, adequately drained and suitable for the desired long-term land use and allow natural regeneration of vegetation.
4. Minimize erosion by wind and water both during and after the process of reinstatement.
5. Compacted surfaces shall be deep ripped to relieve compaction unless subsurface conditions dictate otherwise.

Management of Water Needed for Construction Purposes

The Contractor shall at all costs avoid conflicting with water needs of local communities. To this effect, any temporary water abstraction for construction needs from either ground or surface water shall be submitted to the following community consultation process:

1. Identification of water uses that may be affected by the planned water abstraction,
2. Consultation with all identified groups of users about the planned water abstraction,
3. In the event that a potential conflict is identified, report to the supervising authority.

This consultation process shall be documented by the Contractor (minutes of meeting) for review and eventual authorization of the water withdrawal by the Client's supervisor.

Abstraction of both surface and underground water shall only be done with the consultation of the local community as mentioned and after obtaining a permit from the relevant authority.

Abstraction of water from wetlands is prohibited.

Temporary damming of streams and rivers is submitted to approval by the supervisor. It shall be done in such a way as to avoid disrupting water supplies to communities downstream, and to maintain the ecological balance of the river system.

No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow

into natural water drainage courses. Similarly, wash water from washing out of equipment shall not be discharged into water courses or road drains. Washing bays shall be sited accordingly. Unless site conditions are not favorable, it will generally be infiltrated through soak pits or similar.

Site spoils and temporary stockpiles shall be located away from the drainage system, and surface run off shall be directed away from stockpiles to prevent erosion.

Traffic Management and Community Safety

Location of temporary access roads shall be done in consultation with the local community and based on the screening results, especially in important or sensitive environments. Temporary access roads shall not traverse wetland areas or other ecologically sensitive areas. The construction of any access roads shall be submitted to a prior consultation process with potentially affected communities that will have to be documented (minutes of meetings) for supervisor's review and approval.

Upon the completion of civil works, all temporary access roads shall be ripped and rehabilitated.

Measures shall be taken to suppress dust emissions generated by Program traffic.

Maximum speed limits for any traffic related with construction at all WaSH project sites shall be the following, unless Ethiopian speed limits are locally lower:

1. Inhabited areas: 50 km/h
2. Open road: 90 km/h.

Salvaging and Disposal of Obsolete Components Found by Rehabilitation Works

Obsolete materials and construction elements such as electro-mechanical equipment, pipes, accessories and demolished structures shall be salvaged and disposed of in a manner approved by the supervisor. The Contractor has to agree with the supervisor which elements are to be surrendered to the Client's premises, which will be recycled or reused, and which will be disposed of at approved landfill sites.

Any asbestos cement material that might be uncovered when performing rehabilitation works will be considered as hazardous material and disposed of in a designated facility.

Compensation of Damage to Property

Compensation of land acquired permanently for Program purposes will be handled under Client responsibility based on the provisions of the RPF. However, in the event that the Contractor, deliberately or accidentally, damages property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner/user a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.

In any case where compensation for inconveniences, damage of crops etc. are claimed by the owner, the Client has to be informed by the Contractor through the supervisor.

Contractor's Health, Safety and Environment Management Plan (HSE-Mp)

Within 6 weeks of signing the Contract, the Contractor shall prepare an HSE-MP to ensure the adequate management of the health, safety, environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an ESMP for the works. The Contractor's EHS-MP will serve two main purposes:

The Contractor's HSE-MP shall provide at least:

3. A description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an ESMP;
4. A description of specific mitigation measures that will be implemented in order to minimize adverse impacts;
5. A description of all planned monitoring activities and the reporting thereof; and
6. The internal organizational, management and reporting mechanisms put in place for such.

The Contractor's HSE-MP will be reviewed and approved by the Client before start of the works. This review should demonstrate if the Contractor's HSE-MP covers all of the identified impacts and has defined appropriate measures to counteract any potential impacts.

HSE Reporting

The Contractor shall prepare bi-monthly progress reports to the Client on compliance with these general conditions, the sub-program ESMP if any, and his own HSE-MP. The Contractor's reports will include information on:

7. HSE management actions/measures taken, including approvals sought from local or national authorities;
8. Problems encountered in relation to HSE aspects (incidents, including delays, cost consequences, etc. as a result thereof);
9. Non-compliance with contract requirements on the part of the Contractor;
10. Changes of assumptions, conditions, measures, designs and actual works in relation to HSE aspects; and
11. Observations, concerns raised and/or decisions taken with regard to HSE management during site meetings.

The reporting of any significant HSE incidents shall be done as soon as practicable. Such incident reporting shall therefore be done individually. The Contractor should keep his own records on health, safety and welfare of persons, and damage to property. It is advisable to include such records, as well as copies of incident reports, as appendixes to the bi-monthly reports. Details of HSE performance will be reported to the Client.

Training of Contractor's Personnel

The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the relevant aspects of these general conditions, any program ESMP, and his own HSE-MP, and are able to fulfill their expected roles and functions. Specific training will be provided to those employees that have particular responsibilities associated with the implementation of the HSE-MP. Training activities will be documented for potential review by the Client.

Amongst other issues, training will include an awareness session for all employees on HIV-AIDS addressing the following topics:

12. What is HIV/AIDS?
13. How is HIV/AIDS contracted?
14. HIV/AIDS prevention.

Labor influx issues

Experiences from one WaSH on going project and field work findings showed that jobs created by this project have been taken by the locals and no physical infrastructure construction had resulted labor influx in towns and woredas and hence, associated risks of labor influx including gender-based violence of this project is low. However, to preclude any Gender based violence(GBV) and Sextual Exploitation (SEA) risk during construction period, the project will ensure that a zero-tolerance policy on sexual harassment and abuse of female workers and community members is strictly enforced by contractors. Moreover, the project will ensure that the contractor prepares a code of conduct for works and fully implemented it during construction.

Annex VI: Quarterly and Annual Environmental Compliance Reporting Template

Quarterly and Annual Environmental Compliance Reporting Template to be completed at Federal, Regional and Town/Woreda levels

Monitoring of implementation of the ESMF, ESMP and ESIA is an important aspect of ensuring that the commitment to environmental sustainability of the project / program is being met. The regular monitoring of implementation of the ESMF and ESMP will be overseen at federal and/or regional level. The environmental specialists from the Ministry may receive the relevant information from regional water bureaus.

1. **General**

Ministry/City: [Type the correct name here]

Reporting Quarter/Year: [type here]

Date of the report: [Type here]

2. **Report summary (narrative)**:

Here narrative of the overall environmental safeguards implementation during the reporting period is summarized. Activities carried out in implementing the ESMF (including aspects monitored), issues identified, proposed solutions and follow up activities are summarized here. Figures will be discussed in the reporting table below. Please also consider other issues, like for e.g.:

1. Types of training provided or training demands;
2. If an environmental permit was not granted by EPA, explain why;
3. If no objection is obtained for ESIA studies from the World Bank, and whether these documents are disclosed on time both through the implementing agencies website and the World Bank info shop (please refer Disclosure requirements);
4. Documentation practices for environmental instruments (ESS reports, ESMP, ESIA, etc.); and, Specific challenges encountered in the course of project implementation processes.

1. **Environmental Compliance Reporting Format (To be Completed at Federal and Regional Levels)**

Ministry: ---------- Region: ----------
Project Type; OWNP II: ----------
---------- Date: ----------

S/N	City	Total Nº of sub projects[1]	Screened & approved (in Nº)	Environmental Category			ESIA Prepared & approved (in Nº)	Prepared & approved (in Nº)	Implementation of EMP/ (please use separate sheet if necessary)	Remark
				A	B	C		ESMP		
1										
2										
	Total									

List of Outstanding Issues and Responsible Body for Implementation

S/N	Name of City	Name of subproject site	Type of subproject	Outstanding Issues	Recommended actions	Responsible body for implementation	ime chedule
1							
2							
3							
4							
5							

Completed by: [Name ----------, Email: ----------, Phone: ----------]
Position: [type here – positions of all contributors]
Date: [type here]

2. **Environmental Compliance Reporting Format (To be completed at City Level)**

Name of Region: ---------- City: ----------
Program/Project Type; OWNP II: ---------- Date: ----------

S/N	Name of subproject site	Types of subprojects/activities	Screened & approved (Yes/No)	Environmental Category	ESIA Prepared & approved (Yes/No)	Prepared & approved (Yes/No) ESMP	ESMP implemented (Yes/No)	Remark
1								
2								
3								
4								
5								
Total								

List of Outstanding Issues and Responsible Body for Implementation

S/N	Name of the City	Name of subproject site	Type of subproject	Outstanding Issues	Recommended actions	Responsible body for implementation	ime chedule
1							
2							
3							
4							
5							

Completed by: [Name ----------, Email: ----------, Phone: ----------]

Mitigation measures for Environmental and Social impacts (continued from Annex VII)

Water quality:

Protection of ground water and surface water;

Determine applicability of water quality standards: if national drinking water quality policy is not available, use WHO drinking water quality standards;

Ensure testing and treatment for parasites, hazardous chemicals, bacteria, viruses;

Frequency and responsibility for water quality testing;

Frequency and responsibility for treatment of water sources;

1. Responsibility for monitoring and water quality control at the household level (beneficiaries, water user associations)
2. Responsibility for monitoring and water quality control at the Wereda level/project level (official authorities);
3. Technical adequacy, quality and safety of bulk storage facilities;
4. Technical adequacy, safety and protection of pumping facilities.

Source protection:

1. Look at the natural and human activities that take place around the well or spring box;

If a surface water source is used, there needs to be an understanding how these activities affect the water quality at the point of withdrawal;

2. Take steps to minimize the negative impacts of these activities, i.e. standing water that could become a breeding site for vector (malaria);
3. Consider Methods such as pollution prevention or conservation and land use management to prevent source contamination;
4. Plant shrubs, grasses and other types of indigenous plants to serve as a natural filter
5. Consider source protection activities such as waste reduction and recycling;
6. Distance of a water supply system intake from potential sources of contamination should be: (i) 50 m from latrines, cattle pens, refuse pits; (ii) 100 m from soak pits, trenches and sub-surface sewage disposal; (iii) 150 from cesspools, sanitary land fill areas, and graves;
7. Use of water has to take place downstream and at a distance from the water source;
8. Effective design and construction of abstraction facilities.

Sanitation:

1. Choice of appropriate facilities (latrines, septic tanks, pour-flush toilets) in cooperation with communities;
2. Ensure good design and construction of facilities; including for appropriate design for disable persons
3. Consider a separate latrine for female and male students and for teachers as well
4. Consider sanitation facility as a package (water supply, toilet, washing facilities, ..)

5. Consider availability of open space at the end of the latrines' design life;
6. Consider long-term capacity of latrines to dispose of all household liquid wastes;
7. Consider safe ground infiltration rates;
8. Consider reliability of latrine emptying service;
9. Consider the availability of fresh water and toilets in schools;
10. Consider the availability of fresh water and toilets at public facilities such as markets, community centers, health centers, centers of worship;
11. Consider potential wastewater issues and incorporates appropriate wastewater disposal systems to prevent mosquito breeding and bad odors;
12. Consider appropriate waste water collection/removal MS Thods (i.e. the use of trucks, carts);
13. Identification of waste disposal sites (existing or new ones);
14. Appropriate waste water management Method (i.e. use of wetlands, ponds, treatment facilities, out falls);
15. Monitoring responsibility and control over waste water quality disposal standards;
16. Keeping drainage channels free of weeds to avoid cracking of the channel walls;
17. Keeping drainage channels free of debris and wastewater from households, particularly detergents, and local industries.

Hygiene education programs to address:

1. Health and hygiene measures for the protection of water supplies;
2. Selection and design of sanitation facilities;
3. Proper sitting of facilities with respect to water supplies;
4. Design of sanitation facilities with respect to operation and maintenance;
5. Operation and maintenance of the water supply systems;

Water reuse:

1. As appropriate, consider technologies and management strategies designed to reuse waste water in rural agriculture which in turn can reduce environmental pollution;

2. Adopt standards for waste water reuse;

3. As appropriate, consult EPA guidelines for reclaimed water treatment processes and water quality limits for both, non-potable water and indirect potable reuse applications.

Environmental and social monitoring indicators:

1. Microbiological indicators such as E. coli, the single most important indicator of fecal contamination of water by humans or animals. It can be tested in the field (using field test kits with portable incubators) or in the laboratory[2];

2. Physical-chemical indicators such as fluoride, nitrate/nitrite, pH, turbidity, chlorine residual;

3. If necessary, identify sources of secondary information that allows for the monitoring of health impacts (i.e. decline in the number of cases of diarrhea; increase in the number of latrines used);

4. Consult the publication "Environmental Performance Indicators" for guidance in the development of environmental monitoring indicators.

Proposed Effluent Discharge Requirements

The WWTP will be designed and operated to achieve discharges that fall within the maximum values set out in the table below. These values comply with National requirements or the WBG EHS Guidelines, whichever is the more stringent. The following Table Proposed Effluent Discharge Requirements

Parameter	**Maximum Value**	**Unit**
pH	6-9	pH
BOD	30	mg/l
COD	125	mg/l
Oil and Grease	10	mg/l
Total Suspended Solids	50	mg/l
Ammonium	10	mg/l
Phosphorus	2	mg/l
Sulfate	1	mg/l
Coliforms	400	Most probable number per 100 ml
Temperature increase	3	°C

Source: World Bank

2 U.S. Agency for International Development, "Water and Food Aid in Environmentally Sustainable Development", An Environmental Study of Potable Water and Sanitation Activities within the Title II Program in Ethiopia, March 14, 2000

Annex VII: The main findings of the stakeholders' consultation process

Regarding the water shade management and environmental protection activities there are good experiences in the consulted woredas (especially Amhara and Oromia) but it is not adequate. Therefore, there is a need of enhancing and strengthening for the future since its contribution for both surface and ground water quality improvement and sustainability as well. Therefore, they suggest better capacity buildings, trainings, awareness creation, community mobilization, plus continuous support and monitoring from MoWIE, and the World Bank on the subjects of environmental protection, integrated water shade management climate resilient water safety plan implementation in the near future.

Affordability and accessibility of WaSH Provision: Across all five regions, poor and vulnerable people, especially women, suggested considering subsidy mechanisms for the poorest and vulnerable social groups, including disabled people, to enable them to benefit from the improvements in access to safe, adequate and sustainable water supply and sanitation services under OWNP II. Women's groups in SNNPR suggested that sanitation subsidies for poor and vulnerable households should be available under OWNP II as it would be the most realistic way to improve the sanitation in these households. In Afar and Gambella region, adult men and women suggested that more should be done to train women and young men in servicing and maintaining water points and communal toilets, including those in health posts and schools. This would have two advantages. First, it would provide the beneficiaries with the money to access WaSH services. Second, it could contribute to sustaining improved WaSH facilities.

Transparency and Accountability: All participants emphasized the need for improving information flows between the Woreda and the WaSHCOs; and between the WaSHCOs and community members as this has been considered as vital for improving and sustaining coverage of WaSH services. For the woreda WaSH Technical Team and the Regional WaSH Technical team in Afar and in SNNPR, improving information flows between the national level and regional WaSH services was also felt to be important. In Gambella Region Lare Woreda, women elders and disabled people highlighted that information about sanitation and hygiene should be readily for people who could not read, often the poor and most vulnerable in communities. They wanted clear and easy to understand information about how to complain and how to hold service providers accountable if they are not responsive to their concerns.

In all regions, men and women thought that improving feedback between the WaSHCO and the wider community and between the WaSHCO and the woreda WaSH Technical team was fundamental to strengthening accountability. In Gambella, men and women thought training and awareness raising for community members about their WaSH entitlements and ways in which to raise concerns or complaints would encourage WaSHCOs and Woreda WaSH Technical Team to take action in response to their concern.

Quality and Sustaining WaSH Services: For all participants, ensuring the quality of the water was essential, but methods used needed to be low cost and simple and monitoring of water quality needed to be strengthened. When water quality declined, they argued, people stop using improved water sources which affects both affordability and the capacity of the woreda to maintain the water points. In Abobo, for example, where there was the highest satisfaction with current WaSH services, the WaSHCO and male participants called for the treatment of water quality problem using "wuha agar" tablets. This would help maintain usage and contribute to better health of the residents. WaSHCOs, as well as community

members in all three regions thought that OWN-P needs to consider sustainable sanitation technology options as these were more likely to ensure that open defecation was eradicated.
WaSHCOs in Gambella and SNNPR suggested strengthening the monitoring system for WaSH services both for institutions and households. For all community FDG participants, sustainability of WaSH services was seen as a quality issue. Several WaSHCOs suggested that strengthening the capacities of community WaSH management systems was critical and that including attention to gender and social equity issues was an important part of capacity strengthening. The methods used needs to be simple such as checklists. Making operation and maintenances systems more realistic, under OWN-P, would make a significant contribution to the sustainability of WaSH services (both household and institutions.

Equitable Inclusion in Planning and Decision-making: Strengthening consultation and participatory planning processes in WaSH services was highlighted by women, disabled people and the poorest within communities across all three regions. Across the regions, Girls and adult women felt more needed to be done to ensure that women could actively participate in planning and decision-making at all stages of the OWN-P. In all regions, the WWT, WaSHCOs, men groups, poor/elder women groups and men with disabilities suggested that there should a clear mechanism for ensuring the voices of different social groups and user communities within woredas, such as disabled people, widows, poor men and women, people living in remote locations, were fully represented in the planning, implementation and post-implementation processes of OWN-P. They felt if all groups were more involved in planning and decision-making, not only would their knowledge about sanitation and hygiene improve but so would their sustained access to WaSH services.

Adapting to Context and Need: In Gambela, both the woreda coordination office and communities consulted felt that OWNP was a major opportunity to adapt WaSH provision to the specific needs of pastoralists. There was a demand for mobile WaSH services. Widows and underserved women groups in Gambella and WaSHCOs in SNNP suggested that OWN-P should give first priority to underserved communities residing in the remote and inaccessible areas and the poor and vulnerable living in those communities. Adolescent girls in Gambella Town suggested that OWN-P (WaSH II) needs to consider how to extend affordable WaSH services to the homeless and slum dwellers. They suggested building communal latrines that were accessible to all. All disabled people consulted said that OWN-P needs to introduce standardized designs for water supply and sanitation which ensured WaSH services were accessible to people with mobility issues. This suggestion was also made by older people including widows in Gambella.

Finally, the respective stakeholders attending the meeting have come up with the following main recommendations:

1. PAPs shall be entitled to all the reasonable compensation, including the provision of replacement land, jobs, and other resettlement assistances.
2. Since the program expected to avail more employment opportunities to the local communities, the program owner shall ensure that the local communities is the primary beneficiary of such opportunities by conducting all the required follow-ups to that effect.
3. Such types of consultations are appreciated and should be done repeatedly with the community at large throughout the life cycle of the program.

Annex VIII: List of Consulted People

S.N	Name	Sex	Region	Woredas	Organization	Position	Telephone
1	Moses Hoshe	M	Gambella	Lare	W/Health Bureau	Expert	0917482053
2.	San Chole Chagiy	M	Gambella	Lare	W/Health Bureau	Head	0917483511
3.	Pole Udechie	M	Gambella	Lare	W/Education Bureau	Expert	0917526831
4.	Cong Deng	M	Gambella	Lare	W/Education Bureau	Head	0917482270
5.	Udolla Umade	M	Gambella	Lare	W/Water Bureau	Head	0910856690
6.	Debell Dupe	M	Gambella	Lare	W/Water Bureau	Expert	0917900831
7.	Tuoache Zew	M	Gambella	Lare	W/Water Bureau	Expert	0917856181
8.	Bole Tote	M	Gambella	Lare	w/water Bureau	Director	0911797324
9	Tesema Tumiso	M	Gambella	Lare	R/ water Bureau	Procurement specialist	0923347828
10	Kun Gatluak	M	Gambella	Lare	R/ water Bureau	Technical Specialist	0917834501
11	Yob Both	M	Gambella	Lare	REB	-	0918970377
12	Mesfin Abate	M	Afar	Chifra town	W/Bureau	Expert	0913929553
13	Getachew Abrha	M	Afar	Chifra town	Pastoralist Bureau	Expert	0913486661
14	Alemtshay Tesfaye	F	Afar	Chifra town	Education Bureau	Expert	0913018039
15	Tadios Tesfaye	M	Afar	Chifra town	Health Bureau	Expert	0966967581
16	Nuredin	M	Afar	Chifra town	Finance Bureau	Expert	0914600471
17	Muhammed Duba	M	Afar	Chifra town	Finance Bureau	Head	0913647438
18	Hussen Mohammed	M	Afar	RWTC	Water Bureau	Rural T. Specialist	
19	Jemal Seid	M	Afar	RWTC	Water Bureau	Environmentalist	
20	Sedik Mohammed	M	Afar	RWTC	Water Bureau	WASH PMU Coardinantor	
21	Suleman Mohammed	M	Afar	RWTC	Water Bureau	Contract Administration	
22	Abdumenan Arebo	M	Afar	RWTC	Water Bureau	Electro Mechanical	
23	Esqie Tseganeh	M	Afar	RWTC	Water Bureau	Rural T. Specialist	
24	Tesfaye Belay	M	Afar	RWTC	Water Bureau	WASH Officer	
25	Shibisu Misb	M	SNNPR	Dila Zuria	Administration Bureau	Head	0912152611
26	Elias Beraso	M	SNNPR	Dila Zuria	Education Bureau	Head	0913488284

27	Andualem Mamo	M	SNNPR	Dila Zuria	Health Bureau	Head	0911082590
29	Daniel Gobna	M	SNNPR	Dila Zuria	Water Bureau	Head	0913517903
30	Zerihun Kebede	M	SNNPR	Wenago		coordinator	0916413369
31	Birhanu Worasso	M	SNNPR	Wenago	WHO	DPHP	0925588149
32	Zewide Figa	M	SNNPR	Wenago	W/F/office	-	0916402609
33	Tamiru Berisso	M	SNNPR	Wenago	W/M/E/ office	-	0926877034
34	Tsegaye Jebo	M	SNNPR	Wenago	W/M/E/ office	T. Specialist	0932696756
35	Ayenew Tadessse	M	SNNPR	Wenago		Head	0916329678
36	Zewdu Zegeye	M	Amhara	RWTC	RHB	WASH Coordinator	0918774372
37	Maru Alem	M	Amhara	RWTC	RWCO	Coordinator	0918919151
38	Wasihun Gelaw	M	Amhara	RWTC	Red.B	Focal person	0918011738
39	Degalem Lakew	M	Amhara	RWTC	WEIDB	Sociologist	0918640864
40	Gebre Berara	M	Amhara	RWTC	REB	-	0918022403
41	Asrat Kassie	M	Amhara	RWTC	WIEB	Director	0918710529
42	Kes Mengistu	M	Amhara	Liben	From Community	-	0918139493
43	Kes Tilahun	M	Amhara	Liben	From Community	-	0985964257
44	Sheferaw Minale	M	Amhara	Liben	From Community	-	
45	Tezera Teklu	M	Amhara	Liben	From Community	-	0939666235
46	Kes Yhonal Yimer	M	Amhara	Liben	From Community	-	0918287001
47	Fenta Akalu	M	Amhara	Liben	From Community	-	0918128562
48	Emita Bekalu	F	Amhara	Liben	From Community	-	
49	Yeniya Derbe	F	Amhara	Liben	From Community	-	
50	Mamye Zera	F	Amhara	Liben	From Community	-	0943579284
51	Habtamu Muhamed	M	Amhara	Kunzila	From Community	-	
52	Wendale Getahun	M	Amhara	Kunzila	From Community	-	
53	Werku Gashe	M	Amhara	Kunzila	From Community	-	
54	Babey Tebabal	M	Amhara	Kunzila	From Community	-	

55	Asnake Atinkut	M	Amhara	Kunzila	From Community	-	
56	Getachew Abie	M	Amhara	Kunzila	From Community	-	
57	Gebrie Chekole	M	Amhara	Kunzila	From Community	-	
58	Kes Enkobahir	M	Amhara	Kunzila	From Community	-	0918062515
59	Worku Amisew	M	Amhara	Kunzila	From Community	-	0918269443
60	Mola Tamrat	M	Amhara	Kunzila	From Community	-	0932244146
61	Abaise Terefe	M	Amhara	Kunzila	From Community	-	0918446755
62	Tadilo	M	Amhara	Kunzila	From Community	-	0932274582
63	Tikuye Aibe	M	Amhara	Kunzila	From Community	-	0932274582
64	Aschalew Tarekegn	M	Amhara	Kunzila	From Community	-	0918730494
65	Mulu Nabewe	F	Amhara	Kunzila	From Community	-	0947016437
66	Zelalem Tasew	M	Amhara	Kunzila	From Community	-	0913851182
67	Abbowe Miza	M	Amhara	Kunzila	From Community	-	0941483479
68	Kasahun Ahimed	M	Amhara	Kunzila	From Community	-	0918730453
69	Degu Areya	M	Amhara	Kunzila	From Community	-	0985987298
70	Atnikut Sanwele	M	Amhara	Kunzila	From Community	-	0975542570
71	Dege Telye	F	Amhara	Kunzila	From Community	-	
72	Abase Dessie	M	Amhara	Kunzila	From Community	-	0918639942
73	Jember Amare	M	Amhara	Kunzila	From Community	-	
74	Abera Ababo	M	Oromia	Welmera	From Community	-	0927178064
75	Deme Leta	M	Oromia	Welmera	From Community	-	
76	Wegi Megiso	M	Oromia	Welmera	From Community	-	
77	Mesfin Kebebe	M	Oromia	Welmera	From Community	-	

78	Tesfaye Idehe	M	Oromia	Welmera	From Community	-	
79	Buke Tufa	F	Oromia	Welmera	From Community	-	
80	Bekelu Bekele	F	Oromia	Welmera	From Community	-	
81	Beshede Gedefa	F	Oromia	Welmera	From Community	-	
82	Gelaw Bekele	M	Oromia	Welmera	From Community	-	
83	Girma Haile	M	Oromia	Welmera	From Community	-	
84	Dirriba Megersa	M	Oromia	Welmera	From Community	-	
85	Gadisa Golmo	M	Oromia	Welmera	From Community	-	
86	Eshetu Habada	M	Oromia	Welmera	From Community	-	
87	Gutema Diki	M	Oromia	Welmera	From Community	-	
88	Blchu Des	M	Oromia	Welmera	From Community	-	
89	Tamiru Idae	M	Oromia	Welmera	From Community	-	
90	Gedefa Dibaba	M	Oromia	Welmera	Agriculture	Head	0923627766
91	Minitamir Deresa	F	Oromia	Welmera	Womens affair	Head	0924352183
92	Dejene Debele	M	Oromia	Welmera	Water & Energy	Head	0913720693
93	Tadese Lamese	M	Oromia	Welmera	Water & Energy	Expert	0921223900
94	Mekonen Mekuria	M	Oromia	Welmera	Health Bureau	V/head	0904380224
95	Israel Dinalde	M	Oromia	Welmera	Environment Bureau	Head	0924904368
96	Hirphosa Tufa	M	Oromia	Seden Sedo	From Community	-	0935029725
97	Tesfaye Lema	M	Oromia	Seden Sedo	From Community	-	0930612867
98	Molla Bori	M	Oromia	Seden Sedo	From Community	-	0912316989
99	Mulgeta chaka	M	Oromia	Seden Sedo	From Community	-	
100	Gudeta Desisa	M	Oromia	Seden Sedo	From Community	-	0962220084
101	Beriye Amdine	M	Oromia	Seden Sedo	From Community	-	

102	Lamesa Beyene	M	Oromia	Seden Sedo	From Community	-	
103	Tafese Gulma	M	Oromia	Seden Sedo	From Community	-	
104	Abegaz Morga	M	Oromia	Seden Sedo	From Community	-	0961644386
105	Wendimu Siwaye	M	Oromia	Seden Sedo	From Community	-	0970454110
106	Merga Bekalu	M	Oromia	Seden Sedo	From Community	-	
107	Gezahegn Gubena	M	Oromia	Seden Sedo	From Community	-	
108	Shewaye	M	Oromia	Seden Sedo	From Community	-	
109	Dunbodu Fikadu	F	Oromia	Seden Sedo	From Community	-	
110	Kosoch Wendimu	F	Oromia	Seden Sedo	From Community	-	
111	Tkolim Iyo	M	Oromia	Seden Sedo	From Community	-	0913686311
112	Like Gonchur	F	Oromia	Seden Sedo	From Community	-	
113	Teshale Midekisa	M	Oromia	Seden sedo	Agriculture	V/head	0945915368
114	Huruma Denboba	M	Oromia	Seden sedo	Administration	head	0924839305
115	Kumala Amante	M	Oromia	Seden sedo	FECO	Head	0923485535
116	Debiso Kediro	M	Oromia	Seden sedo	Education	Head	0921873564
117	Ahimed Dula	M	Oromia	Seden sedo	Water M & E	Head	0941205794
118	Girma Bekele	M	Oromia	Seden sedo	Water M & E	V/head	0923126418
119	Adugna Gemedu	M	Oromia	Seden sedo	WHO	V/head	0910958199
120	Tahale Mideksa	M	Oromia	Seden sedo	Agriculture	Head	0945915368

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