THE FEDERAL REPUBLIC OF SOMALIA

PUNTLAND STATE OF SOMALIA

Water for Agro-pastoral Productivity and Resilience Project (Biyoole Project)

Provision of Continuous Engineering Support to Somalia Agro-pastoral Productivity and Resilience Project in Puntland State

Environmental and Social Management Plan

Goda, Karkaar Region

Revision Date: 4 April 2022

Table of Content

List of Figures

List of Tables

ABBREVIATIONS AND ACRONYMS

ESMP	Environmental and Social Management Plan
FGS	Federal Government of Somalia
GRM	Grievance Redress Mechanism
MOEACC	Ministry of Environment, Agriculture and Climate Change
MOEMW	Ministry of Energy, Minerals and Water
MOPIED	Ministry of Planning, Investment and Economic Development
MP	Member of Parliament
NGO	Non-governmental Organization
PIU	Project Implementation Unit
VDC	Village Development Committee
HADMA	Humanitarian Affairs and Disaster Management Agency
COCs	Code of Conducts
SWL	Static Water Level
PDO	Project Development Objectivies
SEAs	Sectoral Environmental Assessments
GEF	Global Environment Facility
DOE	Directorate of environment
GCF	Green Climate Fund
ESHS	Environmental, Social, Health and Safety
PPE	Personal Protective Equipment
WALP	Water for Agro-Pastoralist Livelihoods Pilot Project.
WAPR	Water for Agro-pastoral Productivity and Resilience Project.
SEAs	Environment Impact Assessments
EIAs	Environmental Audits (EAs),
OPM	Office of the Prime Minister
MOF	Ministry of Finance
VAWG	Violence Against Women and Girls
GBV	Gender Based Violence
NPCU	National Project Coordination Unit

INTRODUCTION

The Somali Water for Agro-pastoral Productivity and Resilience Project (WAPR) or "Biyoole Project" aims to develop water and agricultural services among agro-pastoralist communities in dry-land areas of Somalia over the next five years. The project seeks to build on the experience of the Water for Agro-Pastoralist Livelihoods Pilot Project (WALP), which sought to improve pastoral and agro-pastoral communities' access to improved water sources and enhance governmental capacity to implement small-scale water interventions.

SUB PROJECT DESCRIPTION

Summary

The Biyoole Project is being implemented by the federal government of Somalia and three member states: Puntland, Galmudug and Southwest state. Among the implementing agencies are the Ministries of Planning, Finance, Environment, Agriculture, Livestock, and Water.

Biyoole project implementing agencies in Puntland have decided to develop a water project near the village of Goda. The Goda site (Latitude: 9.9705° - Longitude: 49.4209°) is located 60km northeast of the city of Qardho. Once completed, the project will benefit over 2840 people and several frakincense farms in the area.

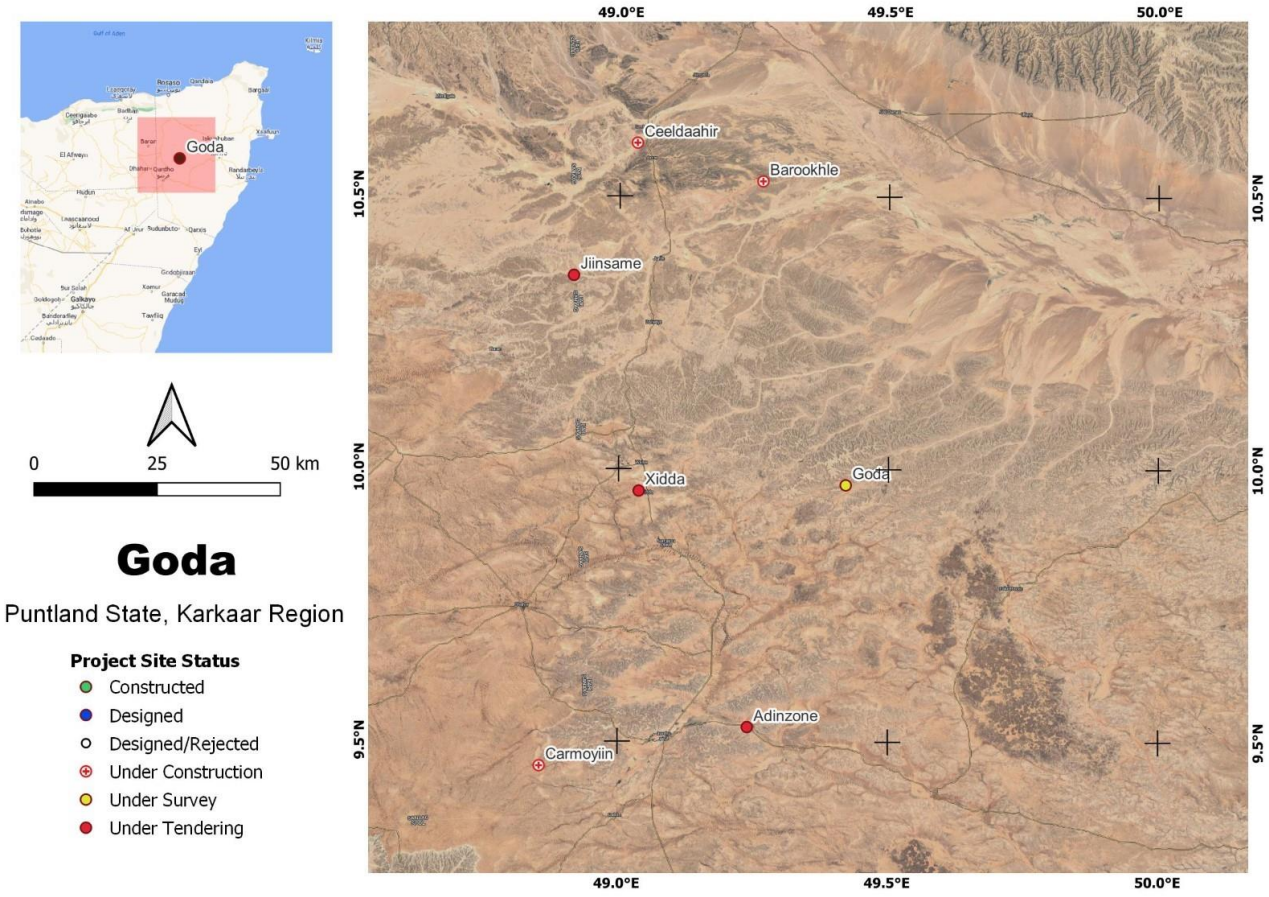

Figure 1: Location of Goda

This location was chosen due to a number of geological and socio-economic reasons. It is very close to an important commercial area with high water demand and, at the site, there is a good drainage system of a wadi in a small valley, making it a good location for a sand dam.

Project Design

The proposed design is a masonry arc gravity sand dam, which will extend for approximately 105 meters (maximum 2m outside the ground) and with a top elevation of 785.00m asl. The hydrogeology of the site is such that the dam will create a permanent aquifer year-round and will keep the water level of the shallow aquifer artificially high, supplying the people, livestock, and the agriculture activities near the site.

In addition to the construction of the dam, there will be a number of appurtenant structures, including the construction of a new well connected via a new pipeline to a water tank, with a kiosk and an animal through, and a watchman house. Please see the Construction Investment Report for more information.

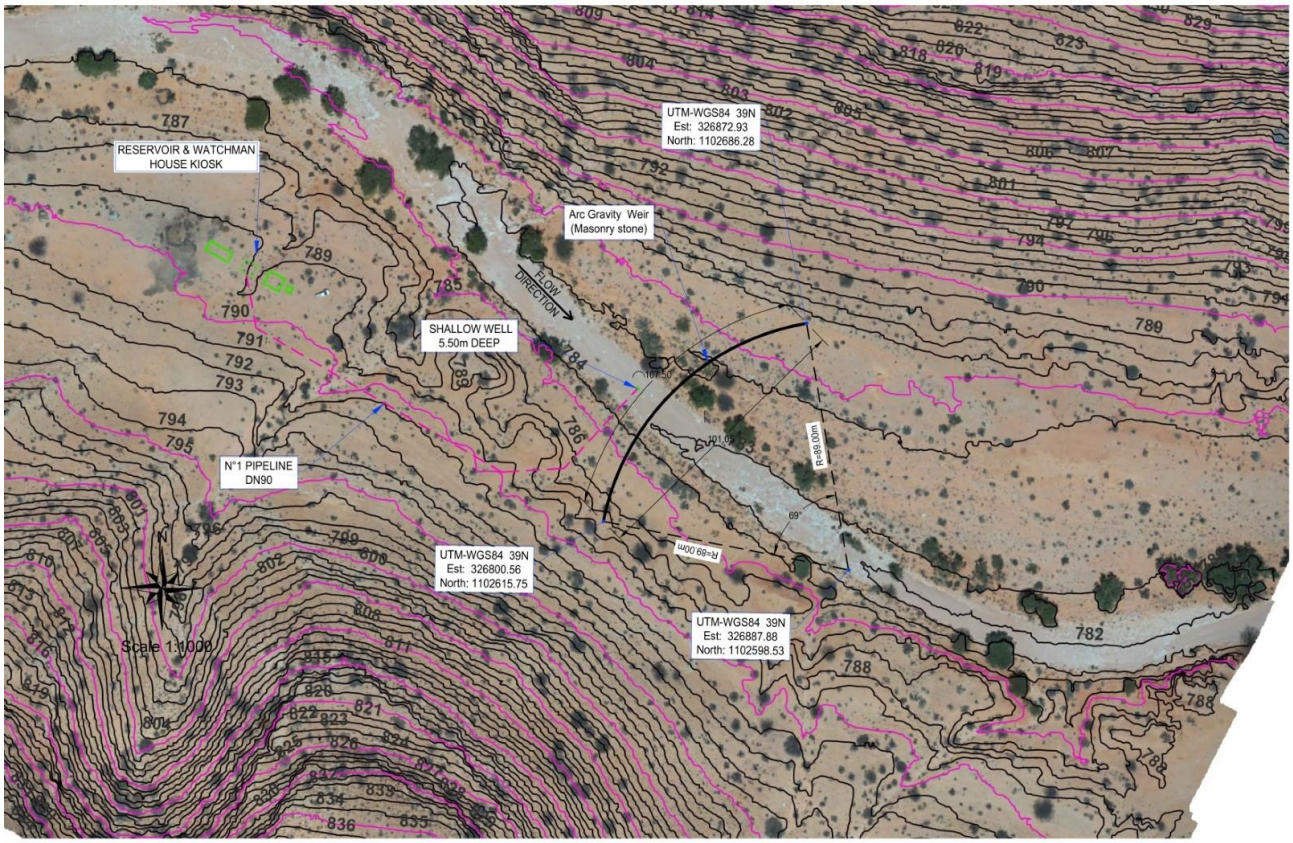

Figure 2: Plan view of the project

Part of the project activities during the construction phase will be the construction of a material storage yard, approximately 6mx10m, which will hold materials for the construction of the site as well as the site office.

Purpose of ESMP

This ESMP has been developed to identify, characterize and manage potential environmental and social risks and impacts that can arise during project activites at Goda. The ESMP also shows how Puntland will mobilize organizational capacity and resources to implement these measures. The ESMP will also guide the contractor and the site supervisor and operators on managing adverse environmental and social impacts and monitor implementation of mitigation measures during construction and operation phases.

LEGISLATIVE FRAMEWORK

Statutory mandate for environmental management at federal level lies with the Directorate of the Environment (DOE), from Office of the Prime Minister (OPM) at the federal government level (FGS). DOE takes the lead in the formulation of national environmental policies and laws, and is also tasked with conducting Sectoral Environmental Assessments (SEAs), Environment Impact Assessments (EIAs) and Environmental Audits (EAs). At the state level the Ministry of Environment, Agriculture and Climate Change (MOEACC) deals with management of environment and natural resources in Puntland. The ministry collaborates with the Humanitarian Affairs and Disaster Management Agency (HADMA) in the development of climate change, early warning and drought resilience strategies.

The National Environmental Policy (2015) of Puntland provides the overall guiding policies relating to the management of the environment and natural resources. The policy promotes the use of appropriate environmental assessment instruments such as Environmental Impact Assessments and Strategic Environmental Assessments.

The legislative and policy environment in Puntland is nascent. Puntland's Constitution envisages, in Article 96, the importance and protection of the environment. Among the key features include combating deforestation, soil erosion and pollution.

The existing policies, laws and regulations in Puntland that are relevant to environmental management include the following:

- Puntland Environmental Policy (2014);
- Environmental Management Act (2016);
- Puntland Rangeland Management Policy (2016-2025);
- Puntland Waste Management Policy (2016);
- EIA Act and Regulation (2016);
- Puntland Climate Change Strategy (2016); and
- Ministry of Environment and Climate Change Strategic Plan (2016-2020).

In addition to Puntland laws and policies, all national environmental regulations and policies within the jurisdiction of Federal Republic of Somalia is applicable to this ESMP.

World Bank Safeguard Policies

The World Bank has Safeguard Policies that seek to avoid, minimize, or mitigate the adverse effects of development projects it is financing. The compliance with these policies is required to assure that the Project is eligible for World Bank support. Please see the Table below for the list and their relevancy to the project.

Table 1: World Bank Safeguard Policies

Safeguard Policy	Applicability	Rationale
Development Cooperation and Conflict (OP 2.30)	Yes	Ongoing armed conflict, insecurity, lack of state protection, and recurring humanitarian crises in Somalia can adversely affect the project's objectives.
Environmental Assessment (OP 4.01)	Yes	The activities will lead to short-term, limited, reversible impacts.
Environmental Action Plans (OP 4.02)	Yes	Action Plans may be necessary to avoid or mitigate potential impacts.

Natural Habitats (OP 4.04)	Yes	Project may affect natural habitats.
Water Resources Management (OP 4.07)	Yes	The project deals with water resources
Safety of Dams (OP 4.37)	Yes	The project involves the construction of a dam.
Monitoring and Evaluation (OP 13.60)	Yes	The project will require monitoring and evaluation.

World Bank EHS Guidelines

The project will apply the relevant requirements of the Environmental Health and Safety (EHS) Guidelines. The EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). They define acceptable pollution prevention and abatement measures and emission levels in World Bank financed projects. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. This ESMP has incorporated the relevant mitigation measures proposed in the World Bank Group's General EHS Guidelines.

Institutional Framework

Project interventions in Puntland are led by state-level ministries, while tracking and reporting of project progress will happen at the federal level.

There is a **Federal Inter-Ministerial Steering Committee**, chaired on a rotational basis by the Ministries of Water and Energy Resources; Ministry of Agriculture and Irrigation; Ministry of Livestock, Forestry, and Range; and the Environment Directorate in the Office of the Prime Minister (OPM). It is comprised of the Ministry of finance (MOF); Ministry of Planning Investment and Economic Development (MOPIED); Ministry of Livestock, Forestry, and Range; Ministry of Agriculture and Irrigation; Ministry of Water and Energy Resources; and the OPM. The Steering Committee meets quarterly to review the project's progress and identify policy or regulatory issues, particularly cross-sectoral issues that will surface during project implementation.

Within MOPIED, there is a **National Project Implementation Unit** (PIU) with a project coordinator, supported by an M&E specialist, data analyst and procurement specialist. The role of the PCU is to maximize the flow of communication among the federal ministries and FMS to help MOPIED oversee the M&E aspect of the project through its M&E Department. The National Project Coordinator is responsible for maintaining a unified Results Framework for the project. Each **FMS**, including Puntland, maintains a PIU with representation from each participating line ministry for cross-sectoral collaboration in planning and implementation activities. The PIU is staffed by a project management specialist and relevant fiduciary and safeguards specialists, in addition to the sectoral specialists, to ensure high quality work throughout implementation.

At the **community level**, the project works through representative community institutions to provide leadership of the implementation process, including organizing the district /village for participation in the project, identifying and agreeing on investment priorities, and organizing the community to deliver those investments in collaboration with the government and other service providers. This system of community institutions for problem identification, planning, and execution is called a community management system in this project. **Village Development Committee** (VDC)/District Development Committees (DDCs) have been formed and the project will work with them. Leadership of the DDCs is elected from the village/districts members and includes representatives from the different stakeholder groups within the village.

Each **FMS** oversees the community mobilization process, for engaging communities throughout the project to help them identify their priority water interventions (costs and benefits of different technologies), how they will manage their water infrastructure, and how the community will use the water to increase their food security and income opportunities. Given capacity and human resource constraints at the state level, the project provides funds to contract implementation support of the mobilization activity. Community mobilization activities use a consultative approach to ensure that project interventions are conflict sensitive and well aligned with project safeguards.

State-level ministries contract consultant engineers to (a) identify areas with potential for water development; (b) inform the mobilization discussions led by the government with communities; and (c) provide detailed designs and supervision of the construction of water infrastructure. Technical staff from state-level ministries work with and provide oversight to implementation service providers to ensure the technical quality of training and other activities.

Contractors and subcontractors are engaged by state level ministries to undertake works including the construction of sand/surface dams, sand dams and boreholes. Contractors are required to fulfil the commitments as set out in this ESMP and also to ensure that its sub-contractors fulfil the ESMP.

BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

Rainfall

For the site, historical records are available from the station of Qardo for a total of 12 years. According to such records, average rainfall precipitation is 216.5mm/year. The rainfall peak occurs in May whereas minor, but more frequent, rainy events occur during the period of September to October. The very dry period extends from January to March, and in July-August. For more information on rainfall, please see the Construction Investment Report.

Flora and Fauna

There is medium level of vegetation cover in the project area, as shown in the Figure below, with a number of shrubs and trees on the banks of the wadi. There are no known threatened or endangered plant species in the area. Protecting the relatively fragile vegetative cover and existing trees in the area is a priority. All mitigation measures designed to protect plants and trees outlined in the ESMP must be followed.

Figure 3: View of the upstream section of the wadi bed, from the selected site; the yellow circle highlights erosive relics of the upper alluvial terrace on the flank.

No threatened or endangered animals have been seen at the site. All measures outlined in the ESMP to protect wildlife, including banning all workers from hunting or harassing wildlife, must be followed.

Social Baseline

Goda site is in the Karkaar region, 60km northeast of the city of Qardho. Local livelihoods are mostly based on livestock and agriculture; it is an important area for the production of Arabic gum and frankincense. At present, the only water structures in the village are community berkads with a capacity of about $30m^3$. The closest borehole is about 100km far away, and during the last flood the biggest berkad was destroyed. As a result, the community now spends about $18\$/m^3$ for water.

POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

General Approach

The objective of the impact assessment process is to ensure that all impacts, direct and indirect, are fully examined and addressed. The general aim of the process is to describe the existing environmental conditions in which the project will be operated, identify potential impacts of the project operations on the receiving environment and, if possible, provide a basis for alterations to remove or reduce the identified potential impacts.

Impacts of the Project

This section focuses on the impacts from construction and operation at Goda, both positive and negative. The main components of the project include site preparation and construction and operational phases. Demobilization is also addressed later in this Report. For more information on the impacts of this project, please see the Environmental and Social Management Framework.

Positive Impacts

- Increased access to water: First and foremost, the most significant positive impact will be an increase in access to water. International experience has shown that an increase in access to water resources leads to a number of direct and indirect benefits, as inumerated below.

Table 2 Benefits of Increased Access to Water

Area	Benefits
Health, burden of disease	• Averted cases of diarrheal disease; • Reduced malnutrition, enteropathy, and malnutrition-related conditions (stunting); • Less dehydration from lack of access to water; • Less disaster-related health impacts.
Health, economic savings	• Costs related to diseases, such as health care, productivity losses, and premature mortality, reduced.
Increased resilience to climate change	• Reduce the extreme variations to access of water which causes pastoralists either migrate long distances or purchase at higher costs.
Improved food security	• The availability of water will ensure that livestock continuously stays nearby and stay in good condition. This brings constant flow of milk for nutritional purposes and better terms of trade since the animals are in good body condition.
Agricultural development	• The extra time and water available to community members will mean that they can invest more in their farming activities, leading to increased yields, healthier livestock and the possibility of growing new kinds of crops.
Convenience time savings	• Saved travel and waiting time for water collection and/or treatment.

Area	Benefits
Educational benefits	• Improved educational levels because of higher school enrollment and attendance rates; • Higher attendance and educational attainment because of improved health.
Social benefits	• Leisure and nonuse values of water resources and reduced effort of averted water hauling and gender impacts.
Water access benefits	• Pretreated water at lower costs for averted treatment costs for households

- Employment opportunities: The project utilizes simple technology that is inexpensive and construction materials that are locally available. As such, there will be job opportunities for both skilled and unskilled laborers who may be involved in supervision, transportation, earth works and guarding the project site.
- Increased cash flow: The construction phase will bring money injection as the project will purchase construction materials, food and fuel from the nearby communities.
- Enhanced community organisation: The establishment of the village and water user committees will result in enhancement of community organisation and leadership skills that can be transferred to other development activities. It will also enhance ownership as the committees have been engaged since inception.
- Capacity building and knowledge transfer: the dam project consists of capacity building aspects that will benefit all the project implementers and beneficiaries. For instance, the state level ministries and PIU staff capacity to combine engineering, environmental and social and livelihood aspects will be enhanced. The community will similarly be able to obtain training in good governance,water managent traning, smartagriculture traning practice and acquire knowledge on how a sand dam is constructed, rehabilitated and maintained.
- Women Empowerment: VDC group members gain public speaking and leadership experience of the Biyoole project and develop a greater sense of identity within the group.
- Skills transfer to locals: When the local people are employed during dam construction, they will acquire skills in construction which they can use in other projects. By employing as many local people as possible there will be skills transfer thus building human capacity in the area.

Negative Impacts

Overall, there are relatively few significant negative impacts of the project. There will be no change in the local landscape or topography. No trees will be cut down; a very limited number of small shrubs on the site may be cleared. No structures will be demolished and there are no cultural areas nearby. The project area is communal land and no private land will be taken for the project. There are no known threatened or endangered species that utilize or reside at the project site.

There will be some impacts during construction, such as dust and vehicle emissions. Only one impact were identified as potentially moderate: the potential for inward migration of people, which may strain local resources and infrastructure or cause conflict with the local community over issues such a illegal encroachment of communal lands or overgrazing in the area. More information on these impacts is given below.

Inward Migration

A potential negative impact of the project is inward migration. Being in a rural pastoral area, it is anticipated that sand dam will attract the inward migration of nomadic pastoralists, particularly during times of drought and water stress.

According to the consultations with the VDC and other community members, there are no conflicts about water and land in this area. In order to ensure that the project does not induce conflict, water sharing agreements will be orchestrated between with Ministry of Water, neighboring communities and elders, and managed by the Village Development Committee. The VDC will be responsible for overseeing the agreements and handling disputes.

STAKEHOLDER ENGAGEMENT AND GRIEVANCE MECHANISM

The Project Implementing Unit (PIU) has ensured that the local communities are informed at an early stage about the planned Project, timelines, expected impacts, and communication channels. The PIU also sought feedback from the communities about the Project.

Consultation and Information Disclosure

Overall, three consultation meetings were held with various stakeholders groups between 25-27 April 2022. The first meeting was held with the 9-member Village Development Committee (which has 2 members that are women), who will serve as the body responsible for the operation and maintenance of the project infrastructure. Then, there was a meeting with a group of women to understand their concerns and explain the project. Finally, there was a meeting with a group of pastoralists and frankincense farmers to better understand livelihoods in the area and how the project may benefit them. Detailed public consultation information is provided in the Community Engagement Report.

Grievance Redress Mechanism

As part of its community liaison process, the PIU will implement a Grievance Redress Mechanism (GRM) to ensure that all stakeholder comments, suggestions, and objections are captured and considered. It will allow the affected community and the workers to express their concerns and any complaints directly to the PIU. Contact details and information on the procedure, including the grievance forms, have been distributed to the local communities. It is envisaged that, in general, grievances will be responded to within 20 working days after receipt. All comments and complaints will be investigated by the PIU, and appropriate action taken as necessary. Records of all complaints and actions will be maintained on-site.

Abdunnasir Aaden Cartan is the project's GRM focal point for the Goda community. Communities, workers, contractors', and individuals who believe they are adversely affected by the Biyoole Project may submit or raise complaints. Mr. Cartan's phone number is: +252907229518. Please see the Community Engagement Report for more information on the GRM process.

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The purpose of each ESMP is to ensure that social and environmental impacts, risks and liabilities identified during the environmental assessment process are effectively managed during construction and operation. The ESMP specifies the mitigation and management measures to which the project is committed and shows how the project will mobilize organizational capacity and resources to implement these measures. The ESMP also shows how mitigation and management measures will be scheduled.

An ESMP is a monitoring tool to be used by the site engineer and other participating stakeholders to assess implementation of mitigation measures by the contractor during construction. The project implementer and the communities can consequently use the plan to monitor and mitigate impacts emerging in the operational phase. The full ESMP is provided in Annex 1 and 2.

The project will include the following Environmental, Social, Health and Safety (ESHS) Conditions in the bidding documents to ensure the mitigation measures in this ESMP are effectively implemented:

- The Contractor's workers should include an ESHS specialist who is responsible for implementation of mitigation measures on Environment Social Health and Safety risks (ESHS) and compliance with the ESMP. Specifications will be included in the bidding documents for the bidder to designate one of his staff to be Contractor's Key Personnel and focal person at the site for Environmental, Social, Health and Safety (ESHS).
- The bidding document should include mitigation measures to address potential ESHS risks and impacts. The contractor shall be made responsible for implementation of the mitigation measures through the necessary conditions in the contract. The project will include the ESMP table in the General Specifications of the Bidding Documents, and the reference to these tables will be provided in the Conditions of the Contract as follows:
    - The Contractor shall implement the mitigation and monitoring measures given in ESMP to address ESHS risks associated with the construction works. The Consultant shall refer to the ESMP of the Project, which is available on the Project website, for further guidance.
    - The Contractor should also update this ESMP to account for any changes and/or inclusion of site-specific data, before commencing work.
    - The Contractor shall comply with the World Bank Group's General Environmental Health and Safety Guidelines
    - The proposed measures to address ESHS risks are mainly related to workplace safety. Hence the cost of implementing the ESHS requirements shall be covered by Bidder's rates for the relevant works, and no separate payment will be made.
    - All workers hired by the Contractor should sign a Code of Conduct to ensure compliance with ESHS obligations of the Contract. The Contractor should also establish a worker GM satisfactory to the project owner and World Bank.

Roles and responsibilities of relevant Project staff in environmental and social management of the Project are given in table below.

Table 3: Roles and Responsibilities

Staff	Responsibilities
Environmental and Social Specialist within PIU	• Drafting the Environmental, Social, Health and Safety requirements in the bidding and contract documents in accordance with the ESMP and integrating the ESMP into the contract documents. • Review and approval of the various documents prepared by the contractor. • Supervise the contractor's work to ensure compliance with the environmental, social, health and safety requirements of the bidding documents and ESMP. Provide recommendations for implementation of corrective actions for any non-compliances and suggest improvements for contractor's performance. • Investigate and report all incidents related to environmental, social and health aspects. Carry out root cause analysis for all major incidents, and recommended actions to be taken to rectify the failure that led to these incidents. • Provide regular training programs to the contractor's labour on environmental, social, health and safety aspects associated with the construction activities. • Carry out regular consultations with the stakeholders. • Prepare quarterly progress reports on the implementation of the ESMP for transmission to the World Bank throughout the project implementation period.
Puntland Water Development Agency (PWDA) (E&S duies for this sub-project will be largely attached to the PIU)	• In general, PWDA is responsible for the supervision, enforcement, monitoring of implementation of this ESMP and other associated instruments • Ensure contractor(s) and their subcontractors comply with all relevant national laws and policies as well as WB Environmental and Social policies applicable WB Environmental health and Safety Guidelines, and project specific environmental and social instruments (ESMF, ESMP) • Review regular reports on environmental and social performance including those submitted by the contractor(s) • Provide overall leadership during public consultation meetings with stakeholders to gain their support and cooperation. • Ensure an effective GRM is set up and implemented for project workers and communities. GRM existence and process is made known to project workers as well as host communities. Specific channels for reporting cases of sexual exploitation and abuse of community members, sexual harassment of project workers and other forms of GBV affecting both populations should be identified, procedures for internal reporting, response and information sharing should be developed. • Identify all project related environmental, social, and worker and community health and safety risks and take appropriate measures to address and mitigate those risks (avoid, minimize, mitigate, compensate). • Develop a GBV Action Plan that includes identification of project risks and key mitigation measures, a mapping of GBV service providers and identification and contracting of those providers to provide survivor-centered care, reporting and response procedures to manage case should they arise. Also develop an Accountability and Response Framework to address cases and a training and sensitization plan for both project workers and community members. The contractor/consultant's response to these requirements will be required to be reflected in their contracts. • Provide capacity building support to its own staff as well as, where possible, contractors on effective implementation of environmental and social project components and mitigation measures for sand dams.

Staff	Responsibilities
Site Engineers of PMC/ Engineer and other hired third-party monitors	• Supervise the construction works, ensuring compliance with the OHS requirements of the Contractor. • Support the Environmental and Social Specialist of the PIU in the collection of the field data. • Monitor the Contractor's ESHS Specialist and ensure implementation of environmental and social safeguards for their workers. • Provide day to day construction supervision for civil works as well as monitoring adherence to the safeguard's instruments related to environmental, occupational health and safety, including security and GBV prevention. • Oversee the performance on labor and working conditions on daily basis on behalf of the PIU, including identification of potential existing significant OHS or environmental risks due to the project that are not adequately mitigated. • Support the PIU until civil works are completed. • Have a social and environmental specialist in the team with GBV specific skills to supervise issues related to GBV (e.g., supervise signing of Codes of Conduct (COCs), verify working GRM for GBV is in place, refer cases where needed) and work with GBV Services Providers as entry points into service provision to raise awareness of the GRM. • Submit monthly reports related to project ESHS performance.
Contractor	• Implement or fulfil this ESMP and other project plans as applicable for all project construction activities. Site-specific information needs to be confirmed/ surveyed and included in an updated ESMP, and get approved by PIU before commencement of work. • Comply with all relevant national laws and policies as well as WB policies, E&S guidelines and related requirements, including WBG EHSGs, GIIP and WHO COVID guidance; • Prepare reports on monthly basis on how environmental, social and health and safety performance, including mitigation measures and monitoring being implemented, and submit these reports to PIU and the Engineering and Supervision Consultants Team. • Immediately Report to PIU on labor, OHS accident, or significant environmental event (e.g., spill, release, emergency), any chance finds during project implementation. • Supervise sub-contractors to adhere to safeguards instruments (ESMP) • Maintain records of recruitment and employment of contracted workers with age verification to prevent child employment. • Provide induction and regular training for contracted workers on environmental, social and OHS issues. • Require the primary suppliers to identify and address risk of child labor, forced labor and serious occupational health and safety issues. • Ensure all contractors and subcontractors to sign a Code of Conduct before commencing of works. Issues such as sexual exploitation and abuse (SEA), sexual harassment (SH) and gender-based violence (GBV) are to be included and addressed in the Code of Conduct. • The Contractor will be required to comply with the requirements of the ESMP, • The Contractor will have an EHS person on its team to ensure operationalization of the ESMP and carrying out day to day supervision of these plans and reporting. Role of EHS person will be; • Ensure first aid facilities and appropriate personal protective equipment (PPE) for workers at the sites given the specific worker OHS risks. • Provide OHS induction and orientation to workers before start of the subproject activities, ongoing training, and specific training to workers exposed to specific risks.

Staff	Responsibilities
	• Warn the workers of any imminent or deteriorating risk situation that could result in an accident, and instruct when it is safe to proceed • Ensure restrain from undertaking any other tasks that may distract the workers focus on the work, mainly, work on or near live overhead conductors, work on transmission and communication towers. • Stop the work, if needed to ensure safety of workers or community. • Maintain records of incidents and accidents on the project site, and participate in related incident/accident investigations. • Inform the PIU of any significant incidents with 24 hours of them occurring. • Ensure special safety during elevated work platform work on or near live conductors. • Perform inspections of work areas to assess adherence with applicable ESHS plans and take actions to address any identified non-compliances or significant unmitigated ESHS impacts or risks • Ensure proper collection and disposal of solid, liquid and hazardous wastes within the construction site. • Ensure proper infrastructure facilities, water supply and sanitation facilities for all workers. • Conduct and document daily tool box meetings • Create awareness and enforce of the code of conduct. • Prepare monthly reports on project ESHS performance
Village Development Committee (VDC)	• VDC is responsible for leading community participation, project sustainability, use and maintenance for example Provide necessary support such as land, technical experts in the community. • Support the project implementing agencies for the compliance of ESMP by submit or report any grievance complaints resulted from the project activities by the contractor through established GRM mechanism (Telephone and email etc) • Solve and manage social tension and conflicts during the implementation and operation period
Local government	• The local government (council or municipality) is responsible for the land tenure policy and enforcement. • Support the implementing agencies and community for the land ownership clearance to ensure that land title and certification are correctly recorded and issued.

Reporting on ESMP Compliance

PIU and its Contractor will prepare periodic monitoring reports on the status of implementation of ESMP and will be submitted to World Bank for their review and feedback. Details of these reports and their content are given in the Table below.

Table 4: ESMP Monitoring and Compliance Reports

#	Title of the Report	Contents of the Report	Frequency of Report Preparation	Report to be prepared by

1	ESHS Monitoring Report	Compliance status of the Project with the environmental and social mitigation and monitoring measures. The report should cover: • environmental incidents; • health and safety incidents, • health and safety supervision: • Usage of PPEs by workers • worker accommodations for foreign workers; • highlights of inspection • Training conducted and workers participated • Workers grievances • Community grievances • Chance find (if any)	Monthly	Contractor/PIU
2	ESMP Monitoring Report	Compliance status of overall Project with ESMP requirements	Quarterly	PIU/Contracr
3	Incident Reports	Incident investigation reports for all major incidents covering details of the incident, root cause analysis, and actions taken to address the future recurrence of this event	Initial investigation report within 24 hours. Detailed Investigation Report within ten days	Contractor/PIU

Demobilization and Restoration of the Site

The end of project activities involves demobilization of the contractor's services and equipment used in performing the work. It also involves rehabilitation and/or restoration of the work areas through various exercises as outlined in the Table below.

A demobilization and restoration plan provides a description of the progressive measures that will occur during the operation of the project, with specific reference to infrastructure and associated auxiliary fittings that would no longer be required after the construction phase. A demobilizing and restoration plan is based on the following:

- A review of the types of activities carried out on the site, including material extraction, machinery, buildings erected, waste handling and recovery operations.
- Identification of potential hazards, including an evaluation of the raw materials and waste products typically stored on-site, site hydrogeology, ecological effects and many more.
- Identification of control measures for dam/sand dam safety to prevent incidents.
- Identification of all items of plant and other materials, including buildings that may be decommissioned, rendered safe or removed from site for disposal or recovery in the event of demobilization and closure.
- Identification of all possible on-site locations where cleaning, decontamination or remediation works may be required to prevent environmental pollution.

Successful demobilization and restoration will only be complete when all buildings, equipment, materials, wastes or any other materials, which could result in environmental pollution, are removed from the site and recycled, recovered or disposed of in accordance with all WBG EHS guidelines. The Plan includes, but may not be limited to, the following activities:

Table 5: Demobilization Plan

Proposed Demobilization Activities	Proposed Responsibility
Disturbed work areas - Rehabilitation of areas disturbed during construction activities. Disturbed areas shall be restored as close as reasonably possible to pre-construction state and the soils shall be restored to a condition consistent with other resource uses. Borrow pit rehabilitation - These will have to be partially filled with acceptable material to form a safe landform and covered with topsoil. Drainage should be ensured to avoid accidents and public health risks. The areas of disturbance and steep slopes must be stabilized.	PWDA to ensure that the item is included in the contractor's documents for demobilization and rehabilitation works.
Other disturbed site areas - disturbed areas, slopes shall be replanted with native plant seed mixes suited to the area. Topsoil that has been stripped and stored as part of the construction activities is to be levelled out as part of stabilization and rehabilitation activities. Correctly preserved topsoil provides viable sources of seeds stock, biological life and nutrient conditions that lead to vegetation establishment.	PWDA and MOEACC to ensure that the item is included in the contractor's documents. Contractor to be assisted by the Department of Forestry in restoring the sites.
Over ground access areas - Restoration of any over ground access areas through replanting of native plant seed mixes suited to the area. Natural regeneration is advantageous over assisted vegetation as these are locally adapted vegetation. Where natural regeneration is ineffective assisted revegetation can be practiced.	PWDA and MOEACC Representative to ensure that the item is included in the contractor's documents and the Contractor restores the sites.

Proposed Demobilization Activities	Proposed Responsibility
Access roads and paths - Repair of any existing roads used in accessing the dam site for decommissioning activities.	PWDA to ensure that the item is included in the contractor's documents and the contractor reinstates the roads. The local committees to be trained on how to close off unnecessary paths
Built up or permanent structures -This will include removal of all housing and office units retaining those that need to be handed over to the community /dam committee, for use. After accomplishing the dam construction works and before handing over, the campsite should be rehabilitated in an environmentally sound and acceptable manner.	PWDA in liaison with the local community to ensure that the item is included in the contractor's documents and that the Contractor closes off the sites
Hydrocarbons contaminated materials - It may be possible to return some materials to the suppliers, e.g., diesel and disinfectants for resale or reuse. The remaining materials may have to be disposed of as waste, some of which may be deemed hazardous waste due to their composition e.g., oils. Such materials will be disposed of off-site in accordance with appropriate waste management regulatory requirements and facility waste management procedures. Soil contaminated with Hydrocarbons shall be excavated up to the contamination plume and bio-remediated in a land farm. Where the contamination plume is shallow, in-situ bio-remediation will be conducted using nutrients and enzymes. Such sections shall be backfilled with fresh soils.	Contractor supervised by PIU environmental and social representative
Pit latrines - All pit latrines that were provided shall be dismantled and the pits buried after applying lime	Contractor supervised by PIU environmental and social representative
Landscape rehabilitation - The contractor shall ensure that rubble including vehicle and machinery parts and derelict components are removed from the site and transported for disposal. At a local authority certified dam site. All the heaps of soil shall be levelled and areas that were used as workstations will be re-vegetated.	Contractor supervised by PIU environmental and social representative
Heaps of overburden material - All heaps of overburden material should be used to back-fill the borrow pits and the sections properly levelled to suit the natural landscape.	PWDA to ensure that the item is included in the contractor's documents and that the Contractor restores the sites.
Safety and health - Dam safety talks/ sensitization (village meetings, meetings with school representatives and interviews) and dam safety training for the local community including the dam committee.	PWDA and PIU's social/communication specialist
Impact monitoring - Performance monitoring and mitigation for adaptive management in order to quantify and evaluate accumulative environmental impacts after demobilization.	PIU environmental and social representative

All demobilization work is to be completed within a stipulated period after construction activities are completed or when a site is no longer in use. Costs of demobilization and restoration should be foreseen during the project planning stages. Depending on the contract terms, a provisional sum should be set aside for such works and the developer shall decide on who implements all or some of the tasks mentioned in the Table.

Table 6: Summary of ESMP Training Content

Trainings	The Implementing Agencies will provide induction training to all its employees and Contractor personnel working on the Project before early works start. This Induction Training shall be conducted for all new workers and those who joined the construction site later during construction activities. The goal of the training is for Project Implementing Agencies employees and Contractor personnel (including sub-contractors) to understand: 1. The mitigation measures included in this ESMP and how it will be implemented on-site, including responsibilities; 2. The sensitivities of the area (if any) in which the Project will be constructed and operated; 3. Occupational Health and Safety (OHS) rules at the construction site (e.g. personal protective equipment, rules of conduct, first aid); 4. The Project's Grievance Redress Mechanism and worker's rights; 5. How to deal with inquiries/ questions/ grievances by the public/ local stakeholders; 6. Interaction rules with the people living close to the construction site and how to deal with unauthorized visitors to the site; 7. How to deal with unforeseen incidents/ emergency situations; 8. The roles and responsibilities within the Project Implementing Agencies, the Contractors, sub-Contractors, and workers with respect to environmental and social issues; 9. How to manage conflicts and social tensions during the construction phase. 10. How to record issues related GBV and women participation.

Conclusion

The sand dam at Goda promises significant positive benefits to nearby residents with mostly negligible negative impacts. The project will provide water to over 2840 people and several farms in the area. The anticipated level of negative environmental and social impacts of the project are low. Only one impact was identified as moderate: the potential for inward migration sparking conflict or competition over resources. This and other potential impacts will be avoided or, when avoidance is not possible, mitigated by the various measures outlined in this document.

The community is in favor of the project and is committed to helping in its sustainable management. Both the community and the local implementing authorities stand to gain significant capacity in the construction and operation of small-scale water infrastructures. Overall, the successful implementation of the sub-project at Goda will improve pastoral and agro-pastoral communities' access to improved water sources as well as help further the overall Biyoole project development objective to develop water and agricultural services in dry-land areas of Somalia.

Annex 1: Environmental and Social Management Plan: Construction Phase

All mitigation measures with cost implications will be included in the project cost or in the Bill of Quanitities (BOQ) for the project.

Table 7: Environmental Management Plan: Construction Phase

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
Air Emissions					
Exhaust Gases	• Ensure vehicle and machinery are not left running when not in use. • Perform a preventative maintenance programme on all vehicles and machinery, with records kept.	Vehicle maintenance records, visual inspection	Site inspection	Contractor, Site engineer, M&E	Daily, throughout construction
Dust	• Use of dust control methods, such as water suppression or increased moisture content for open materials storage piles. • Provide appropriate PPEs to workers. • Cover materials and products that can be wind transported (especially those potentially contaminanted). • The surrounding environment (sidewalks, roads, farm streets) shall be kept free of soil and debris to minimize dust and road damage.	PPE is available; dust suppression materials are present	Site inspection, GRM on any community complaints on air quality	Contractor, Site engineer, M&E	Daily, throughout construction
Waste					
Impairment of local air quality and increased health risks due to open burning of wastes	• Prohibit any burning of waste by employees and contractors; • Ensure proper waste bins are on site and are sufficient in number for the amount of trash; • Regularly remove and transport excavated soil and other solid wastes to the designated dumpsite.	Waste collection areas existent, waste inventories established on the site, and segregation of waste practiced.	Site inspection, review of waste inventories	Contractor, Site engineer, M&E	Throughout construction

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
	• Provide waste bins for solid waste disposal at strategic points for ease of disposing waste as the work progresses. • Construction workers should be sensitized on the importance of disposing waste to the designated points.				
Contamination of soil, air, surface water and impact on public health when hazardous waste is improperly disposed of; littering	• Construction and demolition wastes, debris and animal dung will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. • Waste will be collected and disposed by licensed collectors. • The records of waste disposal will be maintained as proof for proper management. • Whenever feasible Contractor will reuse and recycle appropriate and viable materials.	Waste collection areas existent, waste inventories established on the site, and segregation of waste practiced.	Site inspection, review of waste inventories	Contractor, Site engineer, M&E	Throughout construction
Noise, Vibration and Light					
Construction and project vehicles can be loud	• Project vehicles will be reduced as far as possible and access through local communities will be avoided when not necessary and particularly during sensitive times. • Proper servicing of vehicles to avoid excessive noise generation. • Follow the project site No Idling rule.	Vehicle maintenance records	Site inspection	Contractor, Site engineer, M&E	Daily during construction and Site Preparation

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
Machinery may be loud and cause vibration	• Proper lubrication and servicing of equipment to avoid excessive noise generation. • Ensure that machinery and power equipment are in use only when required. • During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from the excavating and constructing areas as much as possible.	Noise generating machines are covered or enclosed and located appropriately.	Site inspection	Contractor, Site engineer, M&E	Daily during construction
Lights will be needed for some portion of the work carried out at night time, during parts of the year when the sun sets earlier	• Avoid vehicle movements at night. • Lights will only be kept on during working hours or, in some limited cases, for security; • Lights will be covered or directed towards project machinery or buildings, as needed, and not towards the night sky or residential neighborhoods; • Use LED lights as much as possible (which reduces luminescence without reducing visibility).	The correct type of lights used and in low impact positioning.	Site inspection, GRM on any community complaints on light nuisance	Contractor, Site engineer, M&E	Throughout construction
Biodiversity					

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
Loss of wildlife habitat	• Access to working areas will first use existing roads, paths and cleared areas before creating new accesses. • Dozing will be minimized and avoid, whenever possible, areas with intense vegetation and trees. • All staff will be strictly prohibited from hunting, foraging, logging or other damaging activities. • Contractor will survey the project area and an inventory shall be made of large trees in the vicinity of the catchment excavation and construction area, large trees shall be marked and cordoned off with caution tape. • Contractor will survey the project area for the existing habitat/species before commencement of work. • There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas.	Tree inventory and survey report, fences in places, when needed.	Site inspection	Contractor, Site engineer, M&E	Survey before construction, protection measures throughout construction
Spread of invasive species	• The contractor, all subcontractors and workers must be familiar with Prosopis Juliflora; • Contractor must survey the area (both the project site and roadsite) and identify if Prosopis Juliflora is there prior to project commencement; • If found, mark and treat the site with herbicides two weeks prior to project start. Excavate the "seed bank" and bury deep in a designated spoil zone; • Clean equipment prior to moving onto and off from each construction site – to prevent the import and export of plant materials & seeds.	Site survey report	Site inspection	Contractor	Beginning of project
Construction activities may disturb wildlife or force them to alter their normal behavior	• All of the measures to reduce noise, dust, light and waste impacts.	All of the means used for noise, dust, light and waste	Site inspection	Contractor, Site engineer, M&E	Throughout construction

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
Soil					
Contamination from equipment, leakages or spills	• All chemicals and hazardous materials will be stored appropriately; • Fuel oil will be stored in a designated area in bunded tanks sited on an impermeable substratel; • All spills or leakages of oil, diesel oil, lubricants or chemicals will be immediately cleaned up; absorbents and other cleaning equipment will be available on site.	Containment and spill controls in place, Safe storage of hazardous materials, Spill remediation equipment in place.	Site inspection	Contractor, Site engineer, M&E	All spills cleaned up within 24 hours
Deterioration in topsoil quality, which can hamper land use; erosion	• Ensure appropriate storing of topsoil. • After construction topsoil will be used as backfill for restoration of the area. • Reinstatement of project area after construction activities are completed. • If construction takes place on inclined surfaces/slopes, ensure preventive erosion control measures are applied (e.g., plan to retain trees).	Topsoil stored and re-used	Site inspection	Contractor, Site engineer, M&E	After construction
Water Resources					

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
Contaminants associated with construction activities can pollute water resources (chemical and other spills, sewage from construction personnel, sedimentation, etc)	• There will be procedures in place for prevention of and rapid response to accidental spills of fuels, lubricants and other toxic or noxious substances, and for their recovery and appropriate safe disposal. • The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and/or silt fences to prevent sediment from moving off site and causing excessive turbidity in canalization and nearby streams and rivers. • There will be no unregulated extraction of groundwater, nor uncontrolled discharge of process waters, cement slurries, or any other contaminated waters into the ground or adjacent streams or rivers.	HSE staff training records, spill prevention materials in place, erosion controls in place	Site inspection, water monitoring	Contractor, Site engineer, M&E	Monthly, throughout construction
Water use: particularly during dry months of the year, the project's water use may strain local resources	• Adopt a "water wise" approach to all project activities, and promote efficient water utilization and consumption in order to prevent wastage of water. • Store water in advance to prevent water disruptions during operations.	Water efficiency procedures in place	Site inspection	Contractor, Site engineer, M&E	Throughout construction
Accidents					
Project vehicles may hit a wild or domestic animal	• Only licensed drivers will be hired. • Speed limits for all vehicles will be implemented and enforced.	Driver training records, speed limit and other signage for safe driving in place.	Site inspection	Contractor, Site engineer, M&E	Throughout construction

Table 8: OHS Management Plan: Construction Phase

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timing
Air Emissions					
Prolonged breathing of dust can lead to respiratory problems	• Ensure the use of Personal Protective Equipment (PPE) for workers.	PPE is available and used throughout project	Site inspection	Contractor, Site engineer	During construction
Accidents					
Slips, trips and falls	• Provide OHS Training to the construction workforce (including sub-contractors, temporary workers and drivers). • Ensure the use of PPE for workers. • Ensure dangerous areas are marked. • Appropriate medical supplies will be on site. • The contractor shall assign one of his staff as occupational health and safety officer • The contractor should ensure any injuries, incidents or accidents are recorded and records kept for monitoring health and safety. This will be the responsibility of the appointed safety officer	Contractor incident register Designated HSE person Proper signage of dangerous places. Medical supplies are on site and being used.	Site inspection	Contractor, Site engineer Designated HSE officer	Construction phase
Machinery may harm workers	• Regular training of all personnel on proper procedures for machinery and OHS protocols; • Only skilled labor should be hired to do specific types of jobs. • Appropriate PPE (such as boots, ear protection and hard hats) to be worn by staff at all times on the work site; • The contractor should purchase and provide a first aid kit for construction site or make local arrangements with local health facilities for treatment purposes where need arises during construction period. • Machines will be regularly maintained and checked to ensure smooth and proper functioning.	Record of trainings, PPE is available, medical supplies are on site and being used.	Site inspection	Contractor, Site engineer	Construction phase

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timing
Vehicles may get into an accident	• The site will be clearly visible and workers will be warned of all potential hazards by signposting and barriers/fencing. • Traffic management system and staff training, especially for site access and near-site heavy traffic for livestock routes. • Placing the construction equipment and material away from roads, streets and access paths for vehicles, humans, livestock, etc. • Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement. • If required, active traffic management by trained and visible staff at the site for safe passage for the public. • Ensuring safe and continuous access to all adjacent water, farm and fodder / pasture facilities, any shops and residences during construction. • Speed limits for all vehicles will be implemented and enforced.	Record of driver trainings, speed limit and other signs are in place, including suitable project signage at boundaries.	Site inspection	Contractor, Site engineer	Construction phase
Labor Exploitation					
Laborers may be mistreated or exploited. Female workers may be mistreated.	• Ensure that workers have access to and are aware about the Grievance Mechanism. • Ensure minimum legal labour standards as per Somali federal government regulations (child/forced labour, no discrimination, working hours, minimum wages) are met. • Provide hygienic, adequate facilities for workers, ensuring toilets and changing rooms are separated to male and female employees.	Record of trainings, labor standards documents	Project oversight, contractor management, site inspection	Implementing agencies	Construction phase

Table 9: Community Management Plan: Construction Phase

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
Physical Hazards					
There are health and safety risks associated with uncontrolled public access to project sites, such as falls into the borrow pits	• Access deterrents such as fences and warning signs will be installed. • The contractor has a responsibility to provide security at the construction site • Until decommissioning activities are completed, all facilities and equipment will remain fenced or guarded to avoid unintended interaction with local communities. • The release of the areas to local communities will be granted only after all hazards have been removed.	Fences are in place, proper signs are in place, audits of community complaints and accident reports.	Site inspection	Contractor, Site Engineer	Throughout construction
Labor Influx and Inward Migration					
An influx of workers to a small village could have a range of negative impacts, from increased sewage and waste to an increase in sexual exploitation or violence.	• Ensure all contractors implement codes of conduct concerning employment and workforce behaviour (including but not limited to safety rules, zero tolerance for substance abuse, environmental sensitivity of the area, dangers of sexually transmissible diseases and Covid-19 HIV/AIDS, gender equality and sexual harassment, respect for the beliefs and customs of the populations and community relations in general). • Deal with any allegations of GBV and concerns immediately and confidentiality.	Contractor CoC, GRM records	Contractor management	Site Engineer, M&E, Community Liaison	During construction
Health					
COVID-19 and other disesases	• Follow all rules issued by the local government. • Implement basic sanitation measures, like frequent hand washing. • If there are large gatherings that must be inside, implement face mask wearing policy.	Soap, sanitation gel, places to wash are present; face masks worn if people are inside in large numbers.	Site inspection	Contractor, Site Engineer, M&E, Community Liaison	Construction phase
Cultural Heritage					

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timeframe
There are no cultural sites in the project area. However, a procedure should still be in place in case an item or area of cultural significance is found during construction activities.	• Implement a chance find procedure, in line with local and national legislation, for items and sites of cultural importance and ensure all staff are trained on this procedure. • Any work will be halted temporarily if such an item is spotted. The Implementing Agency (Puntland Water Development Agency) will be informed so that they can identify the appropriate government agency that can handle the object. • Picking and keeping archaeological artefacts will be forbidden. • Ensure that workers are aware of cultural value presence on site and about the ban of removing any piece and the consequences of stealing pieces of potential historic or cultural value. • Any archaeological artefacts found will be recorded on a map using GPS and left in situ. Maps and coordinates will be made available to drivers and crew. • Identified resources will be marked with temporary barriers such as a bright color plastic or mesh wire fence with highly visible flagging or tape. • Keep a training record of subcontractor's workers that have received appropriate training on forbidden practices regarding archaeology.	Training log, Chance Find Procedure	Site inspection	Contractor, Site Engineer, M&E, Community Liaison	Construction phase

Annex 2: Environmental and Social Management Plan: Operation Phase

POTENTIAL IMPACT	MITIGATION MEASURES	COMPLIANCE VERIFICATION			
		Means of Verification	Monitoring	Responsible Party	Timing
Community Health and Safety					
Conflict due to inward migration	• Water sharing agreements made and supervised by the VDC.	Water sharing agreements in place; active VDC management; records of any farmer complaints via the GRM	Project oversight	Implementing agency; VDC	Operation
There is no known invasive species at site. But the contractor should still be aware of how to control invasive species.	• Conservation awareness campaigns among community members. • Never mow through invasive plants – it will only serve to "spread" viable plant fragments and seeds. • Contractor should not use prosopis for hedging or setout of site.	Visual inspection during routine site visits; records of any complains via the GRM	Project oversight	Implementing agency; VDC	Operation