Food and Agriculture Organization of the United Nations

Environmental and Social Management Plan (ESMP)
Rehabilitation of Dabaan 1 & Dabaan 2 and Their Auxiliary Structures
Hirshabelle State, Beledweyne District, Hiraan Region

Prepared by

FOOD and AGRICULTURE ORGANIZATION(FAO)

In coordination with

MINISTRY OF AGRICULTURE AND IRRIGATION, HIRSHABEELLE STATE

&

FEDERAL MINISTRY OF AGRICULTURE AND IRRIGATION (FMOAI)

Under

Somalia Food System Resilience Program (S-FSRP) Technical Assistance

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List of Abbreviations and Acronyms

Acronym	Definition
BoQ	Bill of Quantities
CHS	Community Health and Safety
C-ESMP	Contractor Environmental and Social Management Plan
CoC	Code of Conduct
EHS	Environmental, Health and Safety (World Bank Group Guidelines)
EPMA	Environmental Protection and Management Act (Somalia, 2024)
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standard (World Bank)
ESF	Environmental and Social Framework (World Bank)
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization of the United Nations
FGS	Federal Government of Somalia
GBV	Gender-Based Violence
GM	Grievance Mechanism
GRS	Grievance Redress Service (World Bank)
IDP	Internally Displaced Person (not used heavily in this ESMP but included for completeness)
ILO	International Labour Organization
LMP	Labor Management Procedures
MoAI-FGS	Ministry of Agriculture and Irrigation – Federal Government of Somalia
MoAI-HSS	Ministry of Agriculture and Irrigation – Hirshabeelle State
MoECC	Ministry of Environment and Climate Change (Federal)
MIS	Management Information System
NPCU	National Project Coordination Unit (MoAI-FGS)

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O&M	Operation and Maintenance
OHS	Occupational Health and Safety
PIU	Project Implementation Unit (State MoAI)
PPE	Personal Protective Equipment
SEA	Sexual Exploitation and Abuse
SEA/SH	Sexual Exploitation, Abuse, and Sexual Harassment
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SMP	Security Management Plan / Framework
S-FSRP	Somalia Food Systems Resilience Project
SOP	Standard Operating Procedure
TA	Technical Assistance
TMP	Traffic Management Plan
UNCCD	United Nations Convention to Combat Desertification
WBG	World Bank Group
WMP	Waste Management Plan
WUC	Water User Committee
OIG	Office of the Inspector General for FAO

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Executive Summary

This Environmental and Social Management Plan (ESMP) has been prepared for the rehabilitation of the clustered river embankment subprojects Dabaan 1 and Dabaan 2 located along the Shabelle River in Beledweyne District, Hiiraan Region, Hirshabelle State. The subprojects are financed by the World Bank under the Somalia Food Systems Resilience Project (S-FSRP) and implemented by the Federal Ministry of Agriculture and Irrigation (MoAI-FGS) through the National Project Coordination Unit (NPCU), in partnership with the Hirshabelle State Ministry of Agriculture and Irrigation Project Implementation Unit (MoAI-HSS PIU).

In this context, the Food and Agriculture Organization of the United Nations (FAO) provides Technical Assistance (TA) under a formal TA Agreement, which includes technical assessments, hydrological and topographic surveys, detailed engineering designs, preparation of environmental and social safeguards instruments, construction supervision, incident reporting, and support to the project's Management Information System (MIS) and reporting platforms.

The rehabilitation of these embankments directly contributes to the S-FSRP development objective of strengthening resilience of agricultural production systems and reducing vulnerability to climate related shocks, particularly recurrent riverine flooding.

Overview of the Clustered River Embankment Subprojects

This ESMP covers two priority river embankment sections Dabaan 1 (870 meters) and Dabaan 2 (690 meters), which are geographically contiguous, technically similar, and therefore assessed under a clustered ESMP approach. Both locations represent high risk flood prone segments of the Shabelle River that have experienced repeated embankment erosion, overtopping, and structural failure during seasonal peak flows.

As a result, floodwaters have caused recurrent damage to irrigation infrastructure, productive farmlands located along the riverbanks, and surrounding residential areas. Dabaan 1 directly affects approximately 150 households, while Dabaan 2 affects approximately 280 households and contributes to broader flood exposure within Beledweyne urban areas. Consequently, beyond household level impacts, these sites pose systemic risks to agricultural productivity, local food security, and municipal infrastructure.

A prioritization framework was applied using weighted criteria 50 percent based on beneficiary households and 50 percent based on impact on Beledweyne city, under which Dabaan 2 was ranked as Priority 1 due to its combined household exposure and urban risk implications.

The proposed interventions focus on proactive flood risk reduction and long-term structural stabilization. Specifically, the work includes construction of engineered gabion-based river embankments, reinforced with geotextile fabric and compacted backfilling to enhance structural integrity and erosion resistance. The embankments will be constructed to a standardized width of approximately 7.4 meters and a proposed height of 2.5 meters, extending to 870 meters at Dabaan 1 and 690 meters at Dabaan 2.

In addition, Dabaan 2 incorporates engineered drainage intake structures with gated mechanisms to allow controlled discharge of inland stormwater during rainfall events while preventing river backflow during flood peaks. Accordingly, these measures shift the intervention approach from reactive emergency response toward preventive resilience-oriented riverbank stabilization.

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Collectively, the subprojects are expected to reduce recurrent flood damage, protect agricultural production areas, safeguard residential settlements, and lower long term recovery costs associated with seasonal flooding.

Description of Individual Embankments

1. **Dabaan 1 River Embankment:** Located along the Shabelle River (Start: 4.772469, 45.185886; End: 4.765398, 45.188447), this 870-meter embankment section has experienced progressive erosion and localized breaching, resulting in floodwater intrusion into adjacent irrigation systems and riverbank settlements. The rehabilitation will include gabion wall installation, geotextile reinforcement, soil compaction, and construction of six intake chambers to maintain irrigation connectivity. The intervention is expected to directly protect approximately 150 households and associated farmlands.
2. **Dabaan 2 River Embankment**: Located along the Shabelle River (Start: 4.763838, 45.188835; End: 4.757800, 45.190432), this 690-meter embankment section has historically contributed to widespread flooding affecting approximately 280 households and extending impacts toward Beledweyne city. Rehabilitation will include gabion embankment construction, geotextile reinforcement, nine intake chambers, and two engineered drainage intake structures equipped with steel gate systems for regulated discharge. Given its combined rural and urban risk exposure, Dabaan 2 is prioritized for immediate intervention.

Environmental and Social Risk Classification (ESS1 Requirement)

Based on environmental and social screening conducted in accordance with the World Bank Environmental and Social Framework (ESF), the clustered rehabilitation of Dabaan 1 and Dabaan 2 is classified as Moderate Risk.

This classification reflects the site specific and largely reversible nature of anticipated impacts, the absence of physical displacement or large-scale land acquisition, and the limited geographic footprint confined to existing embankment alignments. Moreover, the identified risks can be effectively mitigated through implementation of this ESMP and the Contractor's Environmental and Social Management Plan (C-ESMP).

Summary of Key Risks and Mitigation Measures

Given the scale of earthworks and riverbank stabilization activities, several environmental and social risks have been identified.

Environmental risks include temporary soil erosion and sediment release to the Shabelle River; dust, noise and exhaust emissions; unsuitable spoil disposal; fuel or oil spills; and minor biological disturbance from limited clearance of riverbank shrubs and invasive Prosopis juliflora, displacement of common birds, reptiles, amphibians and small mammals, and short-term disturbance of near-bank aquatic habitat. No critical habitat or threatened species was identified. Controls include limiting clearance to the approved footprint, prohibiting hunting or harm to fauna, stopping work and notifying the supervising environmental specialist if sensitive species are encountered, installing sediment barriers, containing and disposing of Prosopis material at approved locations, restoring disturbed surfaces, using bunded fuel storage and spill kits, and maintaining daily environmental supervision.

Community health and safety risks include temporary access limitations, risks to residents and livestock near active works, transport related hazards, and potential worker community interaction risks, including Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH). Accordingly,

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mitigation measures include fencing and signage, traffic management protocols, Codes of Conduct for workers, SEA/SH awareness training, and confidential reporting channels.

Occupational health and safety risks include excavation hazards, heavy machinery operation, manual handling of gabion materials, heat stress, and dehydration. Mandatory Personal Protective Equipment (PPE), daily toolbox talks, trained first aid personnel, and structured supervision will be enforced throughout construction.

Stakeholder Engagement and Consultation

Stakeholder engagement was conducted on 2 October 2025 with MoAI-HSS, Beledweyne District authorities and the Hillaac community. The community meeting involved 33 participants: 5 elders, 10 women and 18 men, including farmers, irrigation users, youth and IDP representatives. Details, issues raised, agreed actions and attendance records are provided in the stakeholder-engagement annex.

Institutional stakeholders emphasized the urgency of addressing recurrent flood impacts affecting both rural settlements and urban areas, as well as the need for climate resilient embankment design. Meanwhile, community members highlighted recurring crop losses, damage to irrigation infrastructure, and erosion of productive lands. They further stressed the importance of local employment opportunities, transparent communication, and long-term maintenance arrangements.

Consultation inputs have been integrated through erosion and access controls, transparent local recruitment, disclosure in Somali and a risk-proportionate, accessible and inclusive project GM. The general GM accepts community and worker concerns through multiple channels. SEA/SH complaints use a separate confidential, survivor-centered pathway and are not mediated by community structures.

Summary of the Grievance Mechanism (GM)

A project level Grievance Mechanism (GM) is established to ensure accessible, transparent, and timely resolution of concerns raised by community members and project workers. Complaints may be submitted verbally or in writing through community focal points, contractors, the PIU, FAO field staff, hotlines, or complaint boxes. Grievances are acknowledged within 48 hours and addressed within 7 to 14 days, depending on complexity.

Importantly, confidential and survivor centered SEA/SH reporting channels are available and handled exclusively by trained focal points in accordance with ESF requirements, ensuring inclusivity and protection of vulnerable groups.

Institutional Roles and Responsibilities

MoAI-FGS/NPCU provides overall oversight, ESMP approval, compliance monitoring, and reporting. The Ministry of Environment and Climate Change (MoECC) provides the national environmental regulatory framework. FAO serves as Supervising Engineer and Technical Assistance provider, responsible for safeguards verification and day-to-day supervision. The Hirshabelle MoAI-HSS PIU leads field coordination and GM management at the state level. The contractor implements ESMP and C-ESMP, including occupational health and safety, pollution prevention, and community safety measures. Community structures support communication and post rehabilitation operation and maintenance.

ESMP Implementation, Monitoring, and Budget

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To ensure effective implementation of mitigation measures commensurate with the Moderate E&S Risk classification of the clustered river embankment subprojects (Dabaan 1 and Dabaan 2), a dedicated ESMP implementation budget has been allocated.

The clustered ESMP budget is USD 32,000, allocated at USD 16,000 for Dabaan 1 and USD 16,000 for Dabaan 2. It covers OHS, pollution prevention, community safety, stakeholder engagement, GM operation, SEA/SH controls, training and supervision.

The allocated budget will cover OHS measures, environmental protection controls, community health and safety provisions, implementation of the SEP, operation of the GM including confidential SEA/SH reporting channels, capacity building, and periodic monitoring and supervision activities in accordance with the ESF.

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1. Introduction

1.1 Background

The Somalia Food Systems Resilience Project (S-FSRP), financed by the World Bank and implemented by the Federal Ministry of Agriculture and Irrigation (MoAI-FGS), supports the long-term resilience of Somalia's agricultural production systems through investments in climate-resilient infrastructure, institutional strengthening, and risk reduction measures. A core priority of the project is the rehabilitation and protection of critical irrigation and flood management infrastructure that safeguards productive assets and vulnerable communities exposed to climate-related shocks.

In Hirshabelle State, particularly in Beledweyne District along the Shabelle River, recurrent riverine flooding has become a major driver of agricultural losses, infrastructure damage, and displacement. The area experienced severe flood events during recent El Niño seasons, characterized by above-average rainfall and prolonged high river discharge levels. These events resulted in embankment overtopping, structural breaches, widespread inundation of farmland, and damage to irrigation systems and residential areas. Floodwaters extended into parts of Beledweyne town, affecting livelihoods, disrupting markets, and increasing recovery costs for both households and local authorities.

In response to these recurring shocks, the FAO technical team, in collaboration with the Hirshabelle State PIU and MoAI-HSS, undertook joint field assessments on October 2, 2025, to identify priority embankment failure points along the Shabelle River. While emergency repairs were previously carried out in selected critical breach zones and open overflow sections, several vulnerable segments remain structurally weak and not fully stabilized. Among the identified priority areas are the Dabaan 1 and Dabaan 2 embankment sections, which continue to pose significant flood risk to adjacent settlements, irrigation systems, and agricultural lands.

Dabaan 1 and Dabaan 2 represent high-risk riverbank segments characterized by erosion, insufficient structural reinforcement, and uncontrolled inland overflow pathways during peak river levels. The sites directly affect approximately 150 and 280 households respectively, in addition to surrounding farmlands located along the riverbank. Moreover, flooding at Dabaan 2 contributes to broader urban exposure within Beledweyne, amplifying economic disruption and increasing vulnerability to seasonal shocks.

The proposed rehabilitation seeks to transition from reactive emergency repairs toward durable, engineered riverbank stabilization using gabion-based embankment systems, geotextile reinforcement, compacted backfilling, and controlled drainage structures where required. These measures are designed to strengthen structural integrity, reduce erosion, regulate inland runoff, and prevent river backflow during flood peaks. The intervention therefore aligns with the S-FSRP objective of enhancing climate resilience and protecting productive agricultural systems from recurrent flood damage.

To support implementation, the Federal Government entered into a formal Technical Assistance Agreement with FAO. Under this agreement, FAO provides technical assessments, hydrological and topographic surveys, detailed engineering designs, preparation of environmental and social instruments, construction supervision, incident reporting, and support to the project's MIS. FAO's role remains strictly technical assistance and supervision, while MoAI-FGS, through the NPCU, retains overall implementation responsibility. At the state level, the Hirshabelle Ministry of Agriculture and Irrigation leads coordination through its PIU. MoECC serves as the national environmental regulatory authority in accordance with applicable environmental legislation.

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The rehabilitation of Dabaan 1 and Dabaan 2 was prioritized following environmental and social screening conducted in accordance with the World Bank ESF and the S-FSRP Environmental and Social Management Framework. The clustered subprojects were classified as Moderate Risk, reflecting the site-specific, temporary, and manageable nature of anticipated impacts. Accordingly, a site-specific ESMP—rather than a full Environmental and Social Impact Assessment—is required to guide safe and compliant implementation in line with commitments under the Environmental and Social Commitment Plan.

Consistent with the ESF, including ESS4 and ESS10, and the S-FSRP SEA/SH Prevention and Response Action Plan, the project recognizes potential risks associated with labor influx and contractor-community interactions during construction. Although the subprojects are assessed as Moderate Risk, proactive SEA/SH prevention and response measures are integrated from the outset. These include mandatory Codes of Conduct, worker and community awareness sessions, confidential reporting channels within the GM, and referral pathways to appropriate service providers. Responsibilities for risk prevention, reporting, and monitoring are clearly defined among the contractors, FAO, MoAI-FGS/NPCU, and the Hirshabelle PIU.

1.2 Purpose of the ESMP

This Environmental and Social Management Plan provides the operational framework for identifying, preventing, mitigating, and monitoring environmental and social risks associated with the rehabilitation of the Dabaan 1 and Dabaan 2 river embankment subprojects in Beledweyne District. It aims to:

- Identify potential environmental and social risks and impacts arising from the embankment stabilization works in accordance with the ESF, national regulations, and S-FSRP screening procedures.
- Propose practical, site specific mitigation and monitoring measures that safeguard communities, workers, riverine ecosystems, agricultural lands, and the surrounding environment during construction and operation.
- Define clear institutional roles and coordination mechanisms among MoAI-FGS/NPCU, the Hirshabelle State PIU, FAO as TA provider, the contractor, district authorities, and local community structures.
- Ensure compliance with all relevant S-FSRP safeguard instruments, including the ESMP, SEP, LMP, GM Framework, Security Management Framework, and the SEA/SH Prevention and Response Action Plan.
- Serve as the reference document for the Contractor's C-ESMP, which will translate ESMP requirements into detailed worksite specific procedures covering OHS, labor standards, environmental protection, riverbank stabilization measures, community safety, access management, and emergency preparedness.

By doing so, the ESMP ensures that the rehabilitation works not only strengthen flood protection and safeguard agricultural livelihoods along the Shabelle River, but also uphold the principles of sustainability, climate resilience, inclusivity, and safeguards compliance throughout the project lifecycle.

1.3 Methodology

Preparation of this ESMP followed a structured, evidence based, and participatory methodology combining desk review, field assessments, hydrological and engineering analysis, and stakeholder engagement. A review of key documents, including the S-FSRP ESMP, national environmental

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regulations, the TA Agreement, environmental and social screening results, and relevant baseline environmental and social information for Beledweyne District, provided the regulatory and safeguards foundation for the assessment.

Fieldwork was conducted jointly by FAO engineers, Hirshabelle State PIU technical staff, district authorities, and community representatives. These assessments examined existing embankment conditions, erosion patterns, breach points, overflow pathways, structural weaknesses, riverbank stability, inland drainage constraints, and areas exposed to seasonal flooding. Hydrological considerations, including river discharge variability, flood recurrence patterns, El Niño related rainfall impacts, sediment transport, and erosion dynamics, were integrated into both technical design and safeguards planning.

Socioeconomic consultations were conducted with elders, women, youth, farmers, agro pastoral households, internally displaced persons, and local leaders to understand flood history, livelihood impacts, land use patterns, vulnerable groups, safety concerns, and expectations for the embankment rehabilitation works.

Collected data were analyzed in relation to the ESF, national Environmental and Social Impact Assessment Regulations (2024), and the S-FSRP ESMP to determine risk levels, ESS relevance, and appropriate mitigation measures. The ESMP also incorporates requirements from the SEP, LMP, GM Framework, Security Management Framework, SEA/SH Action Plan, and OHS guidance. Importantly, the ESMP is structured to support digital reporting through the S-FSRP MIS dashboard, enabling systematic tracking of environmental and social performance indicators during implementation.

Through this combination of technical analysis, regulatory alignment, and community participation, the ESMP provides a realistic, context appropriate, and operational safeguards framework for the successful rehabilitation of the Dabaan 1 and Dabaan 2 river embankment subprojects in Beledweyne District.

Environmental and Social Screening Tool and Process

The environmental and social screening for the Dabaan 1 and Dabaan 2 river embankment subprojects was conducted using the World Bank Environmental and Social Screening Tool as prescribed under the S-FSRP ESMP. The screening tool systematically evaluates proposed activities against predefined environmental and social criteria, including land use, river morphology, biodiversity, water resources, labor and working conditions, community health and safety, vulnerability of affected groups, security context, and SEA/SH risk exposure. The tool also identifies the relevance of applicable ESS and determines the appropriate safeguards instrument required.

The screening was carried out through a combination of site inspections, stakeholder consultations, technical assessments, and review of baseline environmental and social conditions. Completed screening checklists and risk classification matrices are provided in Annex 1.

Based on the screening outcomes, the clustered subprojects were classified as Moderate Risk, thereby triggering preparation of a site specific clustered ESMP rather than a full ESIA. The screening results directly informed the scope of impact assessment, selection of mitigation measures, monitoring requirements, and institutional arrangements outlined in this ESMP.

Brief Explanation of Risk Ranking Methodology

The ESMP uses a qualitative risk ranking methodology consistent with the World Bank Environmental and Social Framework (ESF). Risks are screened and ranked based on two core parameters:

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1. Likelihood (Probability of Occurrence)

Assessed based on site conditions, past experience, and expert judgment.

- Low – Unlikely to occur
- Moderate – Could occur under certain conditions
- High – Likely to occur without mitigation

2. Consequence (Severity of Impact)

Reflects how serious the environmental or social impact would be if the event occurred.

- Low – Localized, reversible, minimal disruption
- Moderate – Manageable with standard mitigation but may affect communities or workers
- High – Significant, widespread, or long-term impact

3. Risk Rating = Likelihood × Consequence

The combined score categorizes each risk as:

- Low – Minor, routine mitigation required
- Moderate – Needs targeted management measures and monitoring
- Substantial/High – Requires enhanced mitigation, monitoring, and oversight (not applicable here since the project is Moderate)

4. Screening Outcome Informs Management Instruments

The final ranking guides:

- Which ESSs apply
- Whether ESMP or ESIA is required
- Level of monitoring and supervision
- Mitigation measures included in the ESMP

5. Participatory and Evidence-Based

Inputs come from:

- Field observations
- Engineering assessments
- Consultation with communities and authorities
- Review of baseline environmental and social conditions

6. Dynamic and Iterative

Risk ranking is updated throughout the project lifecycle as conditions change, new information emerges, or impacts evolve.

Through this combination of technical analysis, regulatory alignment, and community participation, the ESMP provides a realistic, context-appropriate, and operational safeguards framework for the successful rehabilitation of the Dabaan 1 and Dabaan 2 river embankment subprojects

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2. Sub-project Description

2.1 Overview

The two existing river embankment sections at Dabaan 1 and Dabaan 2 along the Shabelle River in Beledweyne District have experienced progressive deterioration due to repeated flood events, El Niño related high rainfall, riverbank erosion, overtopping, sediment deposition, and limited structural reinforcement. Over the past decade, increasingly intense Gu and Deyr rainfall seasons, combined with elevated river discharge levels, have significantly increased flood exposure across Beledweyne District. As a result, the affected embankment sections no longer provide adequate protection to adjacent settlements, irrigation systems, and agricultural lands during peak flood periods.

At present, Dabaan 1 extends approximately 870 meters and Dabaan 2 approximately 690 meters along structurally vulnerable segments of the riverbank. Both sites have experienced localized breaches, embankment weakening, and uncontrolled inland overflow during high river levels. Dabaan 1 directly affects approximately 150 households, while Dabaan 2 affects approximately 280 households and contributes to wider flood exposure within parts of Beledweyne town. Furthermore, both locations remain partially reinforced from previous emergency repairs; however, several open and structurally weak sections persist, resulting in continued flood risk to residential areas and productive farmland.

To reduce flood vulnerability and strengthen long term resilience, the subprojects will rehabilitate and stabilize the embankment sections using engineered gabion structures with compacted backfilling and geotextile reinforcement. The embankments will be constructed to a standardized width of approximately 7.4 meters and a proposed height of 2.5 meters, covering 870 meters at Dabaan 1 and 690 meters at Dabaan 2. The works will include excavation to receive gabion foundations, installation of 1.0 meter and 0.5-meter-thick gabion boxes, placement of graded stone fill, compaction of embankment material to improve structural stability, installation of geotextile fabric to prevent soil migration, and construction of intake chambers to maintain irrigation connectivity. At Dabaan 2, additional engineered drainage intake structures with gated mechanisms will be installed to regulate inland runoff while preventing river backflow during flood peaks. These integrated interventions are designed to improve structural integrity, reduce erosion, regulate stormwater discharge, and provide durable flood protection for surrounding communities and agricultural areas.

The land on which the two subprojects will be implemented is public land within the existing river embankment alignment, as confirmed in Annex 2. Therefore, no land acquisition, physical displacement, or economic displacement is anticipated. The rehabilitation works are confined to existing embankment footprints and associated auxiliary structures.

Land Status Confirmation. The proposed works are confined to the existing public Shabelle River embankment corridors and associated government-managed hydraulic-structure footprints in Beledweyne District. The Hirshabelle Ministry of Agriculture and Irrigation confirms that the works do not require private land acquisition, physical displacement or permanent economic displacement. The contractor shall remain within the approved setting-out limits. Any unforeseen land, asset, crop or livelihood impact shall be reported before disturbance, screened under ESS5 and resolved in accordance with the project ESMP; work in the affected area shall not proceed until the required measure is approved. Temporary access restrictions shall be managed through advance notice, sequencing and safe alternative access.

The consolidated risk profile comprises: riverbank erosion, instability, scour, overtopping and sedimentation; localized water-quality deterioration; dust, noise, emissions, fuel spills and waste;

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limited vegetation clearance, common-fauna disturbance and invasive-species spread; occupational injury from excavation, gabion handling, machinery, lifting, unstable slopes, heat, work near water and drowning; communicable-disease exposure; child and forced labor, unfair recruitment, delayed wages and worker-GM failure; unauthorized access by children, residents and livestock; traffic and road-safety hazards; temporary interruption of irrigation, paths and farm access; worker-community conflict, SEA/SH and security-personnel misconduct; exclusion of women, IDPs, persons with disabilities and minority groups; chance finds; and inadequate E&S supervision, monitoring, reporting and corrective-action closure.

1. Environmental Risks

- Flooding and Hydrological Changes: Excavation and embankment stabilization works may temporarily alter localized drainage patterns or increase sediment transport during construction.
- Soil Erosion and Sediment Runoff: Earthworks along the riverbank may destabilize soil, particularly during rainfall events, leading to erosion or sedimentation if not properly controlled.
- Riverbank Disturbance: Construction activities may temporarily affect river morphology and adjacent riparian areas.
- Dust and Air Emissions: Operation of machinery during excavation and stone placement may generate dust affecting nearby households and farmland.
- Waste Management: Improper disposal of excavated material or construction waste may degrade surrounding land or obstruct natural drainage pathways.

2. Social Risks

- Temporary Access Disruptions: Community members and farmers may experience temporary restrictions on farmland access or irrigation points during construction.
- Community Health and Safety: Open excavations, heavy machinery, transport of gabion materials, and movement of construction vehicles pose safety risks to residents and livestock.
- Flood Exposure During Construction: Incomplete embankment sections during rehabilitation may temporarily increase vulnerability if unexpected rainfall occurs.
- Labor Influx and SEA/SH Risks: Engagement of contracted workers may increase risks related to gender-based violence, exploitation, or social tensions if not properly managed.
- Conflict Over Water Flow: Modifications to drainage pathways may raise concerns among upstream or downstream users if not clearly communicated.

3. Technical and Operational Risks

- Design and Construction Quality Risks: Inadequate foundation preparation, improper gabion installation, or insufficient compaction could compromise structural performance.
- Drainage Structure Performance: Poor installation of intake gates or inadequate maintenance may reduce effectiveness of controlled runoff systems.
- and M Capacity Gaps: Limited technical capacity for routine inspection and maintenance may affect long term embankment performance.
- Structural Failure Under Extreme Flood Events: Flood magnitudes exceeding design assumptions may challenge structural resilience.

4. Security and Fragility Risks

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- Theft or Vandalism of Materials: Construction materials, equipment, or installed gate components may be vulnerable to theft in fragile settings.
- Supply Chain and Transport Constraints: Delivery of gabion materials, stone fill, and construction equipment may face logistical challenges due to road conditions or seasonal access limitations.

2.2 Location of the Sub-project

The two river embankment subprojects are located within Beledweyne District, Hiiraan Region, Hirshabelle State, Somalia, along the Shabelle River. The coordinates below, together with their corresponding geo mapped photographs, confirm the precise location of each embankment section and delineate the start and end points of the rehabilitation alignments. The geo referenced photos were captured during field assessments and form part of the safeguard's documentation for verification and monitoring purposes.

Table 1:Embankment Location Coordinates

Embankment Name	Start Point Latitude	Start Point Longitude	End Point Latitude	End Point Longitude	Photos
Dabaan 1	4.772469	45.185886	4.765398	45.188447	
Dabaan 2	4.763838	45.188835	4.757800	45.190432	

The coordinates of auxiliary structures, including intake chambers, drainage intake structures, gabion alignments, and associated stabilization works, are provided in the engineering drawings and sectional layouts included in this ESMP (see Annex 3: Drawings and Sections Layout). These detailed layouts ensure traceability of all infrastructure components within the approved public land boundaries along the Shabelle River embankment corridor.

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2.3 Scope of Works

The clustered intervention comprises Dabaan 1, 870 m long, 7.4 m wide and 2.5 m high with six canal intake chambers, and Dabaan 2, 690 m long, 7.4 m wide and 2.5 m high with nine canal intake chambers and two drainage inlet structures. Both reaches include setting-out, clearance, excavation, compacted fill, hardcore toe protection, gabion baskets, geotextile, tie-ins, access controls, reinstatement and signboards. No solar PV, pumps, pump houses, elevated tanks or standalone pipelines are included.

The two river embankment rehabilitation subprojects involve the stabilization and strengthening of existing flood protection structures along the Shabelle River at Dabaan 1 and Dabaan 2, with the objective of reducing recurrent flood damage, protecting agricultural lands and residential areas, and enhancing long term climate resilience in Beledweyne District.

The scope of works comprises integrated civil, hydraulic, and structural activities designed to improve embankment stability, regulate inland runoff, reduce erosion, and enhance protection against seasonal flood events and El Niño related high discharge conditions. The principal activities include:

- Site preparation and earthworks, including site clearance, surveying and setting out, excavation to receive gabion foundations, embankment reshaping, compaction of fill material to specified density requirements, slope formation, and reinstatement works along the 870-meter alignment at Dabaan 1 and the 690-meter alignment at Dabaan 2.
- Construction of engineered gabion retaining structures, including installation of 1.0 meter and 0.5-meter-thick gabion boxes with graded stone filling, placement in accordance with approved engineering drawings, tying and anchoring of gabion units, and progressive layering to achieve structural stability and erosion resistance.
- Installation of geotextile fabric behind gabion structures to prevent soil migration, improve filtration, and enhance long term structural integrity, including surface preparation, overlapping, anchoring, and protective backfilling.
- Provision and compaction of well graded hardcore foundation layers beneath gabion installations to ensure stable load distribution and minimize settlement risks.
- Construction of intake chambers along the embankment alignment to maintain irrigation connectivity and controlled water abstraction, including excavation, reinforced concrete foundations, masonry walls, plastering, slab casting, and installation of HDPE pipes and associated fittings.
- Construction of engineered drainage intake structures at Dabaan 2, including reinforced concrete base slabs, wing walls, protection walls, gate rails, steel gate plates, threaded spindle systems, and associated mechanical components designed to regulate inland runoff and prevent river backflow during peak flood conditions.
- Installation of erosion control and riverbank protection measures, including slope stabilization, stone pitching where required, and compaction of embankment shoulders to reduce scouring and overtopping risks.
- Post construction site restoration and reinstatement activities, including removal of temporary works, disposal of surplus materials at designated locations, and stabilization of disturbed areas.
- Installation of project signboards displaying project identification details, implementing agencies, and donor information to ensure transparency and community awareness.

Collectively, these works will strengthen structural integrity along critical embankment sections, reduce the likelihood of breach and overtopping during seasonal floods, protect approximately 150

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households at Dabaan 1 and 280 households at Dabaan 2, safeguard adjacent agricultural lands and irrigation systems, and enhance resilience to extreme rainfall variability and river discharge fluctuations in Beledweyne District.

2.4 Duration and Workforce

The two river embankment rehabilitation subprojects at Dabaan 1 and Dabaan 2 are expected to be completed within four to six months, depending on river discharge conditions, rainfall variability, seasonal accessibility, material delivery timelines, and site logistics along the Shabelle River corridor. Given the scale of excavation works, gabion installation, compaction activities, construction of intake chambers, and installation of drainage intake structures at Dabaan 2, implementation may be phased to ensure structural quality, worker safety, and compliance with environmental and social safeguards.

Construction activities will require an estimated workforce of approximately 60 to 75 personnel distributed across the two sites, including about 20 to 25 skilled workers such as site engineers, machine operators, masons, steel fabricators, carpenters, and drainage structure technicians, together with approximately 40 to 50 unskilled laborers recruited by gender to support excavation, stone placement, embankment compaction, backfilling, masonry works, and general site activities. Daily construction activities will typically run from 8:00 a.m. to 5:00 p.m., six days per week, allowing adequate time for supervision, environmental monitoring, and adherence to OHS protocols.

To strengthen community ownership and support livelihood opportunities in flood affected areas, the contractor will prioritize hiring workers from Dabaan, Beledweyne town, and surrounding communities. Women, youth, and vulnerable households will be considered for suitable non-technical roles in accordance with contractual bid clauses and the project's inclusion principles. Through implementation, the contractor will comply with the LMP, maintain a functional Worker GM, and ensure safe, fair, and non-discriminatory working conditions consistent with national labor legislation and ESS2 requirements.

2.5 Machinery and Materials

- Machinery: Excavators, bulldozers, tipper trucks, wheel loaders, backhoe loaders, graders, compactors, vibratory rollers, concrete mixers, plate compactors, lifting equipment for gabion placement, steel cutting and fabrication tools for drainage gate installation, and associated site equipment required for embankment stabilization works.
- Materials: Gabion boxes (1.0 meter and 0.5-meter thickness), graded stone fill, geotextile fabric, cement, aggregates, hardcore, reinforcement steel, rubble stones, concrete materials for intake chambers and drainage structures, HDPE pipes and fittings, steel gate plates, threaded spindles, protective coatings, and project signboard materials. All materials will be sourced from licensed and approved suppliers to ensure structural quality and durability.
- Fuel and Lubricants: Procured from authorized vendors and stored in properly bunded, secure areas with spill containment measures in compliance with OHS and environmental management requirements. Refueling and maintenance activities will be conducted in designated areas to minimize contamination risks along the riverbank.
- Water Use: Water required for construction activities, including concrete mixing, curing, compaction, and dust suppression, will be sourced from approved local boreholes or municipal supplies. Water abstraction from the Shabelle River during peak flood conditions will be managed to avoid interference with community irrigation and domestic use.
- Waste Handling: Excavated soil suitable for reuse will be utilized for embankment shaping and backfilling. Surplus non-hazardous construction waste will be transported to designated disposal sites approved by district authorities. Hazardous waste such as used oils, oily rags,

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filters, and chemical residues will be managed under a site-specific Waste Management Plan and disposed of through licensed waste contractors in accordance with ESF requirements.

2.6 Project Alternatives

The analysis of project alternatives examined several technical and design options to identify the most appropriate, environmentally sound, and socially supported solution for rehabilitating the Dabaan 1 and Dabaan 2 river embankment subprojects in Beledweyne District. The options reviewed included maintaining the existing weakened embankments without structural reinforcement, undertaking partial soil backfilling of breached sections only, constructing full compacted earth embankments without structural facing, installing reinforced concrete retaining walls, and adopting gabion-based riverbank stabilization with soil embankment support at the rear. Each option was assessed in terms of its ability to withstand seasonal flood peaks, resist erosion, regulate inland runoff, minimize long term maintenance costs, and provide durable protection to adjacent settlements and agricultural lands.

Technical, institutional and community consultations were held on 2 October 2025. The recorded Hillaac community meeting involved 33 persons: 5 elders, 10 women and 18 men. Participants confirmed recurrent flood damage, irrigation-access needs, worksite safety concerns, local employment expectations and the need for clear GM channels. The consultation summary, participant breakdown, issues and agreed actions are presented in the stakeholder-engagement annex.

Based on technical evaluation and community feedback, strong preference was expressed for the use of gabion box structures with compacted soil embankment support at the rear, rather than full soil embankment construction. This hybrid design approach is widely practiced in Beledweyne and has been implemented by FAO and other development partners in previous flood protection interventions along the Shabelle River. The gabion facing provides structural stability and erosion resistance under high flow conditions, while the compacted soil backfill enhances embankment mass and slope stability. Communities indicated that this method has demonstrated better performance during recent flood events compared to unreinforced soil embankments.

Reinforced concrete retaining walls were considered; however, this option was assessed as cost intensive, less adaptable to localized settlement or differential movement, and more complex to repair under field conditions. Similarly, reliance on soil embankment alone was determined to be technically inadequate for high velocity riverbank sections and more vulnerable to scouring and breach formation.

Accordingly, the selected design includes installation of engineered gabion retaining structures along the river facing side, supported by compacted soil embankment at the rear, incorporation of geotextile filtration layers, and construction of controlled drainage intake structures at Dabaan 2. This integrated approach enhances structural integrity, reduces erosion risk, improves resilience to extreme rainfall variability, and aligns with established best practice for flood defense structures in Beledweyne. The selected alternative therefore reflects the technically sound, locally accepted, and jointly agreed solution to strengthen riverbank protection and reduce recurrent flood impacts across the two subproject sites.

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Table 2:With Project and Without Project Scenario

Aspect	With Project Scenario	Without Project Scenario
Flood Protection Capacity	Structural stabilization of 870 m at Dabaan 1 and 690 m at Dabaan 2 using engineered gabion embankments with compacted soil backfill and geotextile reinforcement.	Continued structural weakness, localized breaches, and high probability of embankment overtopping during seasonal floods.
Household Protection	Direct protection of approximately 150 households at Dabaan 1 and 280 households at Dabaan 2, including adjacent agricultural lands.	Recurrent flooding of residential areas and farmlands, resulting in repeated losses and displacement risks.
Urban Flood Exposure	Reduced flood propagation toward Beledweyne town through reinforced embankment sections and controlled drainage structures.	Continued overflow pathways contribute to urban flooding and infrastructure disruption within Beledweyne.
Riverbank Erosion	Installation of gabion facing improves erosion resistance and slope stability under high discharge conditions.	Ongoing riverbank erosion, scouring, and progressive degradation of earthen embankments.
Drainage Regulation	Engineered intake and gated drainage structures at Dabaan 2 allow controlled inland runoff while preventing river backflow.	Unregulated overflow and backflow during peak discharge, increasing inland flood damage.
Livelihood Protection	Improved protection of irrigated farmland, reduced crop loss, and strengthened agricultural productivity.	Continued crop damage, sediment deposition on farmland, and increased vulnerability of agro pastoral livelihoods.
Climate Resilience	Enhanced resilience to extreme rainfall variability and El Niño related flood events through durable structural reinforcement.	Increasing exposure to high intensity flood events and greater economic losses under changing climate conditions.
Infrastructure Sustainability	Gabion based stabilization with compacted soil support provides durable, field adaptable, and locally proven flood defense solution.	Repeated emergency soil repairs with limited durability and escalating maintenance costs.

This format is aligned with World Bank ESS1 good practice and visually demonstrates the benefits versus risks for decision-making.

2.7 Access and Logistics

Access to the two subproject areas will primarily rely on existing feeder roads that connect Hillaac Village to Beledweyne town within Beledweyne District. The two embankment sections are located

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within accessible areas of Hillaac Village, and overall site access and logistics are not expected to present significant constraints. Although certain sections of feeder roads may become muddy during peak rainy seasons, they remain generally passable and are not anticipated to substantially delay the transport of materials, machinery, or workforce.

From the main feeder roads, access to the riverbank embankment alignments is through existing rural tracks and informal access routes currently used by community members and farmers. Construction activities will involve the movement of excavators, bulldozers, tipper trucks, compactors, stone delivery vehicles, concrete materials, steel components, and gabion materials along these routes.

The contractor will coordinate closely with community elders, farmland owners, and local leaders to facilitate safe and orderly access to the riverbank, minimize disruption to agricultural activities, and ensure continued access to irrigation and farmland areas during construction. Temporary material storage areas for gabion boxes, stone fill, cement, reinforcement steel, and drainage gate components will be identified in consultation with the community to ensure safety, security, and avoidance of interference with livelihood activities.

To safeguard community health and safety, appropriate signage, warning notices, and physical barriers will be installed in areas where excavation, embankment stabilization, or heavy machinery operations are ongoing. Where construction zones intersect with existing footpaths or farmland access routes, alternative access paths will be maintained. These access and logistics arrangements will comply with OHS requirements and the provisions of ESS4 on Community Health and Safety.

2.8 Project Beneficiaries

The two river embankment subprojects will directly benefit households residing in Hillaac Village and surrounding areas within Beledweyne District. Dabaan 1 is expected to directly protect approximately 150 households, while Dabaan 2 is expected to protect approximately 280 households, in addition to safeguarding adjacent agricultural lands and irrigation systems along the Shabelle River.

Recurrent flooding in recent years, including El Niño related high discharge events, has resulted in repeated damage to homes, farmlands, and irrigation infrastructure. Floodwater has caused crop losses, sediment deposition on cultivated land, and temporary displacement of affected households. The weakened embankment sections have further increased vulnerability of both rural settlements and portions of Beledweyne town to seasonal flood risks.

With the rehabilitation and structural reinforcement of the 870-meter embankment at Dabaan 1 and the 690-meter embankment at Dabaan 2, the subprojects will significantly reduce the likelihood of breaching and overtopping during peak flood periods. The improved structural integrity, erosion resistance, and controlled drainage arrangements will enhance protection of residential areas, reduce agricultural losses, and strengthen livelihood stability for flood exposed households.

In addition to enhanced flood protection, the project will generate short term employment opportunities during construction and contribute to long term resilience through strengthened embankment performance and improved risk reduction capacity. By reinforcing critical flood defense infrastructure, the subprojects are expected to support agricultural productivity, reduce recurrent recovery costs, and improve overall climate resilience in Beledweyne District.

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3. Environmental and Social Baseline

3.1 Environmental Baseline

The Dabaan baseline covers the two existing embankment reaches in the Howlwadaag Hillaac flood-protection corridor. Dabaan 1 is 870 m long, 7.4 m wide and 2.5 m high and includes six canal intake chambers. Dabaan 2 is 690 m long, 7.4 m wide and 2.5 m high and includes nine canal intake chambers and two drainage inlet structures. The baseline addresses the riverbank, adjacent settlements and farmland, irrigation and drainage interfaces, access routes, vegetation, common fauna and vulnerable receptors. No solar system, pump, pump house, elevated tank or standalone pipeline is included.

Living Environment (Flora and Fauna):

Dabaan 1 and Dabaan 2 lie within a modified riverine-agricultural corridor containing cultivated land, fallow plots, scattered shrubs, grasses and localized riverbank vegetation. Prosopis juliflora occurs in disturbed areas. Common fauna may include birds, reptiles, amphibians, rodents and livestock; no protected area, critical habitat or threatened species was identified within the work footprints. Clearance shall remain within approved limits, and invasive vegetation shall be contained and disposed of without spreading seed or cut material.

Wildlife presence within the project area is limited due to long-term human settlement, agricultural expansion, seasonal flooding, and proximity to Beletweyne town. Fauna commonly observed include small reptiles, rodents, amphibians, and bird species adapted to human-dominated environments. No protected species, critical habitats, or sensitive ecosystems are known or expected along the canal alignment. Nevertheless, the contractor will remain vigilant during construction, and any unexpected sightings of fauna of concern will be reported to local authorities, with works suspended if necessary.

Physical Environment (Climate, Air, Noise, Soils, Topography):

- Climate and Ambient Conditions: The sub-project area lies within the Middle Shabelle floodplain under a hot semi-arid to sub-humid climate. Mean daily temperatures typically range between 26°C and 38°C, with peak daytime temperatures exceeding 40°C during the Jilaal season (January–March). Annual rainfall is bimodal, with Gu (April–June) and Deyr (October–November) seasons contributing approximately 400–550 mm/year, subject to high interannual variability. Extreme rainfall associated with El Niño events (2019–2020; 2021) has caused major flooding, bank overtopping, and sediment deposition in the Beledweyne–Dabaan corridor.
- Air Quality and Dust: Ambient air quality is generally good due to the rural setting and absence of industrial sources. During the dry season, background particulate matter is elevated due to unpaved roads and agricultural activities. Construction-related dust is expected to be localized and temporary, with typical rural PM10 concentrations in similar settings ranging between 50–150 µg/m³ during active earthworks, reducing rapidly with distance and mitigation measures.
- Noise Environment: Baseline noise levels are low, dominated by agricultural machinery and vehicular movement, estimated at 40–55 dB(A) during daytime. Construction equipment may temporarily raise noise levels to 65–80 dB(A) within immediate work zones. These levels are consistent with rural construction environments and manageable through scheduling and equipment maintenance.
- Soils and Topography: Soils along the riverbank alignment are predominantly alluvial clay-loams and silty loams, characterized by:
    - High fertility and suitability for irrigated agriculture
    - Moderate to high salinity risk under poor drainage
    - High erodibility when exposed during flooding or excavation

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Soil compaction, waterlogging, and surface erosion are common degradation processes. No known soil contamination sources exist in the project area. Terrain is flat to gently sloping (<2%), facilitating gravity-based distribution but increasing flood susceptibility.

Hydrology and Water Resources:

The Dabaan area farmlands abstract water from the Shabelle River, a highly seasonal river system with strong upstream regulation and downstream variability.

- Hydrological Characteristics:
    - Peak river flows typically occur during Gu and Deyr seasons
    - Flood recurrence in Beledweyne is estimated at 2–5-year intervals
    - Historical flood events (2019–2021) inundated large areas of Dabaan farmland

- Water Abstraction and Use: Current River water abstraction along the Dabaan 1 and Dabaan 2 sections is informal, inefficient, and constrained by embankment deterioration and uncontrolled access points. Competing uses include upstream irrigation schemes and small-scale informal pumping by local farmers. The project does not involve groundwater abstraction. The proposed rehabilitation is designed to improve structural integrity and regulate flood flows rather than increase abstraction volumes, thereby enhancing efficiency and reducing uncontrolled losses and potential user conflicts. During community consultations, concerns were raised regarding the proposed embankment height and potential difficulties in accessing river water for irrigation purposes. In response, and following technical review, the design incorporates intake chambers along the embankment alignment to facilitate controlled and safe water access while maintaining flood protection objectives.

Biodiversity and Ecosystems (ESS6)

- No critical habitat, protected area or ecologically sensitive zone was identified within the Dabaan embankment and hydraulic-structure footprints.
- Fauna: Faunal presence is limited to species tolerant of human disturbance, including:
    - Small mammals (rodents)
    - Reptiles (lizards, snakes)
    - Amphibians
    - Common bird species (weavers, doves, egrets)

No migratory corridors or threatened species are known. Biodiversity sensitivity is therefore assessed as Low, consistent with the project's Moderate Risk classification.

Waste Management Context (ESS3)

Formal waste management services in Dabaan Village are absent. Waste disposal relies on:

- Informal dumping
- Open burning
- Small community disposal areas

No licensed hazardous waste facilities exist locally. Construction waste (soil, vegetation, concrete debris, scrap metal) will be managed through project-approved disposal sites, while oils and lubricants will be handled under the C-ESMP using controlled storage and off-site disposal.

Climate Change and Hazard Interaction

Climate projections for central Somalia indicate:

- Rising temperatures (+1.5–2.0°C by mid-century)
- Increased rainfall variability
- Higher flood intensity during extreme events

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The interaction between flood protection, drainage and irrigation access is a key design and E&S consideration. Dabaan 1 includes six controlled canal intake chambers; Dabaan 2 includes nine intake chambers and two drainage inlet structures. No pressurized pipeline, solar pumping system or elevated water structure is included.

3.2 Social Baseline

Socio-Economic Context:

Hillaac Village, where the Dabaan 1 and Dabaan 2 subprojects will be implemented, is located within Beledweyne District, the administrative and economic center of Hiiraan Region. Beledweyne functions as a strategic hub for irrigated agriculture, livestock trade, humanitarian operations, and cross-border commerce with Ethiopia. The district hosts diverse livelihood systems including irrigated agriculture, livestock rearing, petty trade, wage labor, and remittance-supported income activities.

Rural populations in and around Hillaac are predominantly riverine farming households whose livelihoods are closely linked to the Shabelle River. The area also hosts internally displaced households primarily displaced by recurrent flooding, drought cycles in other regions, and past insecurity. IDP households often settle on communal or public land and face constraints related to stable income generation, access to farmland, and service access. Their meaningful inclusion in consultations and employment opportunities remains important for equitable benefit sharing.

Livelihoods:

Livelihoods in Hillaac and surrounding areas are strongly dependent on irrigated agriculture supported by the Shabelle River. Crops commonly cultivated include maize, sorghum, sesame, vegetables, and fodder crops. Livestock rearing including cattle, goats, and sheep provides supplementary income, milk production, and asset security.

Recurrent flooding, particularly during El Niño related high discharge periods, has significantly affected crop production, damaged irrigation infrastructure, eroded farmland, and increased household vulnerability. Embankment breaches at Dabaan 1 and Dabaan 2 have contributed to repeated flood losses. The rehabilitation of these embankments is therefore expected to stabilize agricultural production, reduce crop loss, protect irrigation systems, and strengthen livelihood resilience.

Women contribute substantially to household livelihoods through farming support activities, livestock management, food processing, and small-scale trading. Youth and IDP households often engage in casual labor or informal trade within Beledweyne town. The project is expected to improve economic stability by reducing flood-related disruptions and providing temporary employment during construction.

Administration and Governance:

The project area falls under the authority of the Beledweyne District Administration and MoAI-HSS, which oversee agricultural development, irrigation management, and land-use coordination. Local governance structures include village elders, religious leaders, irrigation committees, and customary dispute resolution bodies.

Clan based structures continue to influence land allocation, river access, and conflict mediation. Coordination with these structures has been maintained throughout project preparation and will continue during construction and operation in line with the SEP.

Gender Considerations and GBV Risks:

Hiiraan Region reflects strong gender norms influencing land access, agricultural decision-making, and financial control. Women actively participate in farming, livestock care, water collection, and

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household management but often have limited formal authority over land or infrastructure decisions.

District level risks of GBV and SEA/SH are recognized, particularly in contexts involving labor influx and power imbalances. Although reported incidents in Hillaac are limited, construction activities may heighten risk if unmanaged. The project will adhere to the SEA/SH Action Plan and require contractor compliance with Codes of Conduct, worker sensitization, confidential GM channels, and survivor-centered referral pathways.

Local Community Composition:

The population of Hillaac and surrounding areas is predominantly composed of local Hiiraan clans, complemented by IDPs originating from flood- and drought-affected areas of central and southern Somalia. Clan structures influence leadership, land access, and resource management.

Social cohesion is generally stable; however, competition over irrigation water and disputes arising from flood damage between upstream and downstream users have historically contributed to tensions. Strengthening embankment stability is expected to reduce resource-based conflict linked to flood losses.

Vulnerable and Minority Groups:

Vulnerable groups include minority clan households, IDPs, women-headed households, persons with disabilities, elderly residents, and land-poor farmers. These groups may have limited access to consultations, employment opportunities, and recovery resources following flood events.

The project will ensure inclusive participation, targeted outreach, and equitable access to employment in line with ESS10.

Access to Electricity, Health Facilities and Education:

Hillaac Village has limited access to basic social infrastructure. While Beledweyne town provides access to schools, health facilities, and markets, many rural households must travel to access these services. During major flood events, road access is often disrupted, delaying medical care and market participation.

Electricity is limited, with households relying on small solar systems or generators. Flood events further disrupt power access and communication networks. Stabilizing embankments is expected to reduce seasonal isolation and improve continuity of access to essential services.

Economic Indicators:

Household income levels are generally low, with many families living near or below the poverty threshold. Agricultural production remains the primary income source but is highly vulnerable to flood damage. Households supplement income through small trade, wage labor, remittances, and livestock sales.

Beledweyne serves as the main market hub; however, transport costs, flood-related road damage, and seasonal disruptions limit full market participation. Reducing flood risk is expected to lower economic shocks and recovery costs.

Social Infrastructure:

Hillaac is connected to Beledweyne town through feeder roads, which remain generally accessible though occasionally degraded during heavy rainfall. Internal rural tracks may become difficult during flood periods. Public transport services are informal but available.

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Mobile phone coverage is generally available, while internet access remains limited. Communication is primarily facilitated through mobile networks and community structures.

Cultural and Religious Practices:

Social organization is shaped by clan structures, Islamic traditions, and customary norms influencing land use, river access, and conflict resolution. Religious leaders and elders play central roles in mediation and community mobilization.

Men typically dominate public decision-making regarding land and water management, while women maintain significant responsibility for household welfare and food security.

Conflict and Social Cohesion:

Hiiraan Region has historically experienced resource-based tensions, particularly related to irrigation water distribution and flood impacts. Informal dispute resolution mechanisms led by elders and religious leaders remain active and effective.

Strengthening embankment integrity is expected to reduce recurrent flood damage and associated disputes over crop loss and land degradation.

Migration and Mobility:

Seasonal mobility remains common. Flood events often trigger temporary displacement, while dry-season migration for labor also occurs. These movements affect household composition and labor availability. Women, children, and elderly members often remain in villages while working-age men seek employment elsewhere.

Food Security and Nutrition:

Food security is highly sensitive to flood cycles and rainfall variability. Flooding can destroy standing crops, disrupt markets, and reduce food availability. Households rely on coping mechanisms including borrowing, selling livestock, reducing consumption, and humanitarian assistance during severe flood seasons.

Reducing flood exposure through embankment stabilization is expected to improve agricultural stability and reduce vulnerability to food insecurity.

Access to Finance:

Formal financial services are limited. Households rely on mobile money, informal credit, remittances, and clan-based support systems. Vulnerable groups face additional barriers to accessing finance, including lack of collateral and financial literacy.

Community Organizations and Social Network:

Community organization is structured around elders, irrigation committees, women's groups, and informal farmer associations. These groups play key roles in mobilizing labor, resolving disputes, and coordinating with external actors. Humanitarian agencies periodically support flood response and recovery efforts in the area.

Disaster Risk and Resilience:

Hillaac Village and surrounding areas are highly exposed to climate-related hazards, particularly riverine flooding associated with seasonal rainfall variability and El Niño events. Flooding remains the primary hazard, resulting in embankment breaches, crop loss, and displacement.

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Formal disaster preparedness systems are limited, with early warning information typically disseminated through government channels and community networks. Community resilience relies heavily on social cohesion, customary coping strategies, and external humanitarian support.

The rehabilitation of Dabaan 1 and Dabaan 2 embankments is therefore aligned with strengthening flood resilience, protecting agricultural assets, reducing recovery costs, and supporting long-term climate adaptation in line with S-FSRP objectives.

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4. Legal and Regulatory Framework

The relevant national environmental and social legislation, as well as the WB Environmental and Social Framework (ESF) under which the (S-FSRP) is financed will guide the implementation of this Environmental and Social Management Plan (ESMP) for the Subproject. Together, these frameworks ensure that project activities are carried out in a manner that safeguards the environment, promotes social inclusion, and upholds the principles of sustainability and accountability.

4.1 National Legal and Institutional Framework

The provisional Constitution of Somalia:

Article 10 – Human Dignity: Human dignity is the basis for all human rights. It is inviolable and must be protected by all. The State power must not be exercised in a manner that violates human dignity.

Article 11 – Equality: All citizens, regardless of sex, religion, social or economic status, political opinion, clan, disability, occupation, birth or dialect shall have equal rights and duties before the law. The State must not discriminate against any person on the basis of age, race, color, tribe, ethnicity, culture, dialect, gender, birth, disability, religion, political opinion, occupation, or wealth. Thus, all laws, or political and administrative actions that are designed to achieve full equality for individuals or groups who are disadvantaged, or have suffered from discrimination in the past, shall be deemed to be not discriminatory.

Article 24 – Labor Relations: Every person has the right to fair labor relations. All workers, particularly women, have a special right of protection from sexual abuse, segregation and discrimination in the workplace and, every labor law and practice shall comply with gender equality in the workplace.

Article 32 – Right of Access to Information: Every person has the right of access to information held by the state, and the right of access to any information that is held by another person which is required for the exercise or protection of any other just right.

Article 27 (1 & 5) – Economic and social rights- right to clean portable water. Women, aged, disabled, and minorities who have suffered discrimination to be supported to realize their full potential.

Article 43 Land: land is recognized as primary resource and the basis of the people's livelihood; b) land shall be held, used and managed in an equitable, efficient, productive and sustainable manner; c) the FGS shall develop a national land policy, which shall be subject to constant review, d) no permit may be granted regarding the permanent use of any portion of the land, sea or air of the territory of the Federal Republic of Somalia, e) the FGS, in consultation with the FMS and other stakeholders, shall regulate land policy, and land control and use measures.

Article 45 (—Environment‖) states that the government shall give priority to the protection, conservation, and preservation of the environment against anything that may cause harm to natural biodiversity and the ecosystem. Furthermore, all people have a duty to safeguards and enhance the environment and participate in the development, execution, management, conservation and protection of the natural resources and the environment. The FGS and the governments of the FMS affected by environmental damage shall take urgent measures to clean up hazardous waste dumped on the land or in the waters of the FGS; take necessary measures to reverse desertification, deforestation and environmental degradation, and to conserve the environment and prevent

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activities that damage the natural resources and the environment of the nation, among other measures.

4.2. Relevant National legislation

Environmental Protection and Management Act (April 2024), National Health Professionals Council Act (LR. 31/2020) and Law No. 9 of 26 January 1989; Draft National Environmental and Social Impact Assessment Regulations

Environmental Protection and Management Act, 2024: The act guarantees the right to a clean, safe and healthy environment, provides requirements for waste management including hazardous wastes. The act requires the application of the polluter pay and precautionary principle in environment management. The construction project is required to adhere to all the relevant requirements prescribed by the act.

Environmental and Social Impact Assessment and Audit Regulations (ESIA) 2024: Part III, regulations 13, 16 and 17, guides public participation, collection and incorporation of views from the public.

the Somali Labour Code (Law No. 36 of 2024), the Public Health legislation, Somalia National Gender Policy (2016) includes strategies to eradicate harmful traditional practices such as female genital mutilation/cutting (FGM/C) and child marriage and to improve services for the management of GBV/SEAH cases.

Institutionally, environmental and social management responsibilities are shared among several entities. The Federal Ministry of Agriculture and Irrigation (MoAI) provides overall project oversight, while FAO Somalia supervises day-to-day implementation and safeguards compliance, and the State MoAI facilitates local coordination, security, and grievance management. In parallel, the Federal Ministry of Environment and Climate Change (MoECC) serves as the national authority for environmental and social regulation in accordance with the Environmental Protection and Management Act (2024). Collectively, these institutions ensure compliance with Somalia's environmental and social laws throughout the project cycle.

4.3 The World Bank Environmental and Social Framework (ESF)

As the Subprojects are risk-rated as having a "Moderate" environmental and social risk, a full Environmental Impact Assessment (EIA) is not required. This site-specific Environmental and Social Management Plan (ESMP) will serve as the primary instrument for identifying, assessing, and managing all potential risks and impacts.

In the absence of specific Somali national standards for air quality, water quality, or noise, or where such standards are less stringent, the project will adhere to internationally recognized benchmarks, including the WB ESF, World Bank Group's General EHS Guidelines and, where applicable, World Health Organization (WHO) standards. These standards will guide all management and monitoring activities throughout the project lifecycle.

World Bank Environmental and Social Framework (ESF): The following Environmental and Social Standards (ESSs) are relevant to this project.

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Table 3: Summary of Potential Environmental and Social Risks

ESS	Specific Relevancy (Risks Only)
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	- Addresses the risk of riverbank erosion, embankment instability, and structural failure during excavation and installation of gabion structures. - Addresses the risk of hydrological alterations such as localized backflow, overtopping, or inadequate drainage intake control. - Addresses the risk of temporary restriction of river access for irrigation abstraction during construction works. - Addresses the risk of improper gabion installation, inadequate compaction, or failure of geotextile filtration layers leading to structural weakness. - Addresses the risk of cumulative impacts arising from recurrent flood events combined with climate variability. - Addresses the risk of water access tensions among upstream and downstream irrigation users during construction phase disruptions. - Addresses the risk of uncontrolled runoff concentration or poor slope stabilization leading to downstream erosion. - Addresses the risk of weak ESMP and C-ESMP implementation across clustered embankment sections. - Addresses the risk of poor coordination between the Contractor, FAO, NPCU, and State PIU leading to unmanaged environmental and social impacts. - Addresses the risk of inadequate monitoring of embankment performance and drainage functionality following rehabilitation. - Addresses the risk of exclusion of vulnerable households, IDPs, women, and minority groups from consultations and employment opportunities. - Addresses the risk of failing to establish and operationalize a functional GM and confidential SEA/SH reporting mechanism. -
ESS2: Labor and Working Conditions	- Addresses the risk of child labor or forced labor due to informal recruitment practices in rural settings. - Addresses the risk of unfair or non-transparent recruitment, including exclusion of women, youth, and vulnerable households from employment opportunities. - Addresses the risk of delayed wage payments and labor-related grievances. - Addresses the risk of workers operating without written contracts or clear employment terms.

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	- Addresses the risk of injuries from heavy machinery, deep excavations, embankment slope collapse, and gabion installation works. - Addresses the risk of exposure to excessive heat, dehydration, and heat stress during peak construction periods. - Addresses the risk of inadequate provision or inconsistent use of PPE. - Addresses the risk of unsafe lifting and handling of heavy gabion boxes, stones, and reinforcement materials. - Addresses the risk of unsafe internal site access routes and poor material storage organization. - Addresses the risk of weak implementation of the LMP and absence of a confidential Worker GM. - Addresses the risk of inadequate OHS incident reporting, root cause analysis, and record keeping. -
ESS3: Resource Efficiency and Pollution Prevention and Management	- Addresses the risk of dust emissions from excavation, vehicle movement, and dry soil surfaces. - Addresses the risk of noise and vibration affecting nearby households and farm users, even if impacts are minor in a rural agropastoral setting. - Addresses the risk of air emissions (smoke, diesel fumes) from poorly maintained machinery, even if overall impacts are limited. - Addresses the risk of fuel and oil spills contaminating soil and canal water. - Addresses the risk of increased turbidity and sediment loads in irrigation canals and drainage channels. - Addresses the risk of accumulation of construction debris and vegetation waste near riverbank and drainage work areas. - Addresses the risk of inadequate waste segregation, including hazardous versus non-hazardous materials. - Addresses the risk of waste disposal in unauthorized locations and community exposure to unsafe waste piles. - Addresses the risk of erosion and sedimentation affecting river embankment systems.
ESS4: Community Health, Safety, and Security	- Addresses the risk of community exposure to construction hazards including heavy machinery, excavation zones, and embankment works. - Addresses the risk of unsafe access along riverbanks during partial construction or incomplete stabilization. - Addresses the risk to children and livestock moving near excavation pits and unfinished embankment slopes. - Addresses the risk of accidental drowning in the river near active construction zones. - Addresses the risk of disruption to irrigation access points during construction.

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	- Addresses the risk of increased traffic along feeder roads leading to accidents involving pedestrians and livestock. - Addresses the risk of tension between communities over restricted river access during construction. - Addresses the risk of misconduct or intimidation if security personnel are deployed for asset protection. - Addresses the risk of labor influx generating social tension or unmanaged worker–community interactions. -
ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	- ESS5 is not triggered because both embankment sections are located entirely on existing government-owned land along the river corridor. - Addresses temporary risks such as short-term restriction of access to farmland edges, irrigation abstraction points, and footpaths during construction. - Addresses the risk of farmers experiencing temporary difficulty accessing river water for irrigation. - Addresses the risk of perceived inequity if embankment height is misunderstood as limiting water abstraction. - Addresses the risk of disputes over embankment alignment if work areas are not clearly demarcated. - Addresses the risk of informal encroachment or misunderstanding regarding riverbank boundaries. -
ESS6: Biodiversity Conservation	- Addresses the risk of minor vegetation clearance along the riverbank beyond what is strictly necessary. - Addresses the risk of temporary disturbance to riparian habitats and small fauna during construction. - Addresses the risk of localized habitat alteration due to excavation and spoil placement. - Addresses the risk of sediment discharge affecting aquatic habitats during peak works. - Confirms that no protected areas, critical habitats, or known sensitive species have been identified within or near the project sites. - Acknowledges that impacts are expected to be localized, site specific, and reversible with proper mitigation.
ESS8: Cultural Heritage	- Addresses the risk of chance finds of cultural or historical materials during excavation (e.g., pottery, graves, artifacts). - Addresses the risk of damaging culturally important trees, markers, or unrecorded burial sites. - Addresses the risk of community conflict if cultural heritage is discovered and not reported or managed appropriately.
ESS10: Stakeholder Engagement and Information Disclosure	- Addresses the risk of excluding women, youth, minority groups, and vulnerable households from consultations and project decision-making. - Addresses the risk of poor communication leading to confusion about project objectives, benefits, and construction schedules.

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	- Addresses the risk of insufficient information disclosure on temporary water disruptions, access restrictions, and safety risks. - Addresses the risk of low awareness or poor access to GM, resulting in unresolved grievances. - Addresses the risk of weak coordination and miscommunication between MoAI-FGS, Hirshabelle MoAI, district authorities, FAO, and community leaders.
SEA/SH – Sexual Exploitation, Abuse, and Harassment (Cross-cutting: ESS1, ESS2, ESS4, ESS10)	- Addresses the risk of SEA/SH incidents involving workers and community members, particularly women and girls. - Addresses the risk of increased vulnerability to SEA/SH due to worker–community interaction around the project area. - Addresses the risk of underreporting of SEA/SH due to stigma, fear of retaliation, or lack of confidential reporting channels. - Addresses the risk of misconduct by security personnel or project workers that could lead to exploitation, abuse, or harassment.

World Bank Group EHS Guidelines: The project will adhere to the WBG's General Environmental, Health, and Safety (EHS) Guidelines (EHSGs). The Subproject's commitment to adhering to the World Bank Group's General Environmental, Health, and Safety (EHS) Guidelines is a cornerstone of its risk management strategy. These guidelines are technical reference documents that define Good International Industry Practice (GIIP) for managing EHS issues in a sustainable manner.

For this civil works project, they are critically important as they provide a practical and authoritative framework for implementing effective mitigation measures related to Occupational Health and Safety (e.g., use of PPE, site safety protocols), Community Health and Safety (e.g., site security, traffic management), and Environmental Pollution Control (e.g., managing dust, noise, and waste) during construction and operation. Their application ensures the Subproject is implemented to a high standard of safety and environmental stewardship In cases where Somali regulations and World Bank policies differ, the World Bank Standards will prevail and will be applied. This ESMP, along with the associated plans, S-FSRP Frameworks, and Manuals (ESMP, RPF, IPMP, LMP, WMP, GM, SEP, etc.), is legally binding on the contractor. The Contractor is required to prepare their C-ESMP upon signing the work contract and before commencing work. This preparation is based on the proposed management framework of this document (ESMP), the World Bank Environmental and Social Framework (ESF), and the Good International Industry Practice (GIIP) included in the EHSGs.

Detailed gap analysis has been developed with the project approved ESMP, refer to the following link: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099101123104521377/p1778160d5cf1003093810fb7fa9629a42?utm_source=chatgpt.comhttps://documents.worldbank.org/en/publication/documents-reports/documentdetail/099101123104521377/p1778160d5cf1003093810fb7fa9629a42?utm_source=chatgpt.com

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5. Environmental and Social Risks and Impacts – Overview

E&S screening determined that the Dabaan 1 and Dabaan 2 river embankment subprojects are classified as Moderate Risk activities (see Annex 1a & 1b) under the WB ESF and the S-FSRP ESMP. The project is expected to generate substantial long-term environmental and socio-economic benefits for Hillaac Village and surrounding riverine communities in Beledweyne District. Rehabilitation and structural reinforcement of the embankments will reduce recurrent flood impacts, protect residential settlements and irrigated farmland, strengthen agricultural stability, and enhance climate resilience in line with S-FSRP objectives.

However, as with all civil works involving excavation, riverbank stabilization, gabion installation, soil compaction, geotextile placement, drainage intake construction, and operation of heavy machinery, a range of short-term E&S risks may arise during construction. These include soil disturbance, temporary riverbank instability, dust and noise emissions, temporary restriction of river access for irrigation abstraction, CHS risks associated with excavation and machinery operations, and labor-related risks under ESS2. This section provides an overview of anticipated positive and negative impacts and links them to the applicable ESSs, together with the management measures to be implemented through this ESMP and the Contractor's C-ESMP.

5.1 Positive Impacts

The Dabaan 1 and Dabaan 2 River Embankment Rehabilitation Subprojects will significantly strengthen flood protection, safeguard agricultural livelihoods, and improve community resilience in Hillaac Village and surrounding areas of Beledweyne District. Key positive outcomes include:

- Improved flood protection and reduced embankment failure risk: Installation of engineered gabion structures along 870 meters at Dabaan 1 and 690 meters at Dabaan 2, supported by compacted soil backfill and geotextile reinforcement, will substantially enhance riverbank stability. The reinforced embankments are expected to reduce the likelihood of breach and overtopping during peak discharge periods, including El Niño related flood events.
- Protection of households and agricultural lands: The rehabilitation will directly protect approximately 150 households at Dabaan 1 and 280 households at Dabaan 2, in addition to safeguarding adjacent irrigated farmland and irrigation systems along the Shabelle River. Reduced flood exposure will minimize crop loss, soil erosion, and displacement risks.
- Improved drainage regulation and controlled river access: Construction of intake chambers and gated drainage structures, particularly at Dabaan 2, will facilitate controlled inland runoff discharge while preventing river backflow. These structures will also maintain safe and regulated river water access for irrigation abstraction, addressing community concerns regarding embankment height and accessibility.
- Employment creation and income generation: Construction activities will generate short-term employment opportunities for skilled and unskilled laborers, with priority given to local community members, including youth, women, IDPs, and vulnerable households, in line with the LMP. This will provide temporary income support and stimulate local economic activity during implementation.
- Reduced recurrent recovery costs and strengthened resilience: By reducing flood-related damage to homes, crops, and irrigation infrastructure, the subprojects will lower emergency repair costs, decrease reliance on humanitarian assistance during flood seasons, and strengthen long-term resilience to climate variability.

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Collectively, these benefits will contribute to stabilized agricultural production, improved household income security, reduced displacement risks, and enhanced flood resilience for riverine communities in Beledweyne District.

5.2 Potential Negative Impacts

The consolidated risk profile comprises: riverbank erosion, instability, scour, overtopping and sedimentation; localized water-quality deterioration; dust, noise, emissions, fuel spills and waste; limited vegetation clearance, common-fauna disturbance and invasive-species spread; occupational injury from excavation, gabion handling, machinery, lifting, unstable slopes, heat, work near water and drowning; communicable-disease exposure; child and forced labor, unfair recruitment, delayed wages and worker-GM failure; unauthorized access by children, residents and livestock; traffic and road-safety hazards; temporary interruption of irrigation, paths and farm access; worker-community conflict, SEA/SH and security-personnel misconduct; exclusion of women, IDPs, persons with disabilities and minority groups; chance finds; and inadequate E&S supervision, monitoring, reporting and corrective-action closure.

Although overwhelmingly beneficial, the subprojects may generate localized and temporary negative environmental and social impacts, primarily during the construction phase. These impacts are site specific, predictable, reversible, and can be effectively managed through the mitigation measures outlined in this ESMP and the contractor's C-ESMP.

Potential Environmental Risks include:

- Soil disturbance, slope instability, and localized erosion associated with excavation along the riverbank, gabion foundation trenching, soil compaction, installation of geotextile layers, construction of intake chambers, and temporary stockpiling of excavated material.
- Risk of sediment discharge into the Shabelle River during excavation and slope stabilization works, potentially increasing turbidity and suspended solids if not properly controlled.
- Risk of runoff related contamination, including accidental discharge of cement washout, concrete slurry, fuel residues, oils, or lubricants into surrounding soils or the river during construction.
- Generation and improper disposal of construction wastewater, including equipment washing water and wastewater from temporary worker sanitation facilities if not properly managed.
- Temporary air quality impacts such as dust emissions from excavation, stone placement, backfilling, compaction, and vehicle movement along feeder roads and river access routes.
- Noise and vibration impacts from heavy machinery, stone filling operations, welding of steel gate components, and material transport affecting nearby households and farmland users.
- Vegetation disturbance, including clearing of shrubs and grasses along the riverbank beyond what is strictly necessary, potentially affecting localized grazing patterns.
- Risk of localized obstruction of natural drainage pathways due to improper spoil placement or temporary work, potentially increasing flood risk during rainfall events.
- Fuel storage, fire, and spill hazards related to improper storage of diesel and lubricants or absence of spill containment measures at worksites.
- Climate related risks, including embankment instability during intense rainfall events, river level fluctuations during construction, and heat stress risks for workers.
- Biodiversity related risks, including temporary disturbance to riparian vegetation and small fauna inhabiting the riverbank corridor.

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Potential Social, Community Health, and Safety Risks include:

- Temporary disruption of community access to irrigation abstraction points and farmland edges during embankment construction.
- Risks to children, pedestrians, and livestock where open excavations and active construction zones intersect with daily movement routes along the riverbank.
- Risk of accidental drowning or injury near the river during active construction.
- Community health and safety risks associated with increased movement of heavy machinery and material transport vehicles along feeder roads and rural access tracks.
- Temporary access barriers for elderly persons and persons with disabilities during construction related restrictions.
- Potential social tension related to labor engagement, including perceptions of unfair recruitment between local and non-local workers.
- Risk of misunderstanding or concern regarding embankment height and its effect on water accessibility if not clearly communicated.

Labor and Occupational Health and Safety Risks (ESS2) include:

- Manual handling injuries from lifting and placing gabion boxes, stone fill, reinforcement steel, and drainage gate components.
- Risks associated with deep excavation works along unstable riverbanks and heavy machinery operation near slopes.
- Heat stress, dehydration, and fatigue due to high ambient temperatures during peak construction periods.
- Inadequate worker welfare facilities including sanitation, rest areas, and potable water if not properly managed.
- Chemical exposure risks from fuels, lubricants, paints, and construction materials.
- Risk of falls, slips, and trips along uneven terrain and embankment slopes.

Land, Livelihood, and Cultural Risks include:

- Temporary restriction of access to farmland edges and irrigation abstraction points during construction.
- Short term disruption of irrigation scheduling and water abstraction patterns.
- Risk of disturbance to unmarked graves, culturally significant features, or historically sensitive areas during excavation works.

Stakeholder Engagement and Grievance Related Risks (ESS10) include:

- Limited participation of women, youth, IDPs, and minority households if consultation outreach is not inclusive.
- Literacy and language barriers affect effective use of written grievance channels.
- Risk of rumors or misinformation regarding project benefits, embankment alignment, employment opportunities, or water access arrangements.
- Risk of underreporting of grievances, including SEA/SH related concerns, if confidential reporting channels are not clearly communicated.

All identified risks will be addressed through the contractor's C-ESMP, LMP, WMP, OHS measures, SEA/SH Action Plan, SMF, and the project GM, in accordance with WB ESF.

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Overall, based on the environmental and social screening conducted on October 2, 2025, and supported by field assessments and community consultations, the Dabaan 1 and Dabaan 2 river embankment subprojects are classified as Moderate Risk activities (see Annex 1a & 1b). The potential adverse impacts are temporary, localized, and fully reversible with effective implementation of ESMP and contractor C-ESMP.

Furthermore, the long-term benefits of the project include strengthened flood protection, reduced crop loss, protection of residential settlements, improved agricultural stability, and enhanced climate resilience significantly outweigh the temporary construction phase impacts. The project is therefore expected to contribute positively to sustainable livelihoods and flood risk reduction in Hillaac Village and the broader Beledweyne District.

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6. Environmental and Social Management Plan

The ESMP below carries forward every risk identified in Sections 2 and 5. ESS1 addresses the implementers' capacity and systems to assess, manage, supervise, monitor and report E&S performance. Worker and OHS risks are managed under ESS2; pollution and resource risks under ESS3; community safety, traffic, drowning, disease and security under ESS4; temporary access under ESS5; biodiversity under ESS6; chance finds under ESS8; and inclusion, disclosure and grievances under ESS10.

The Environmental and Social Management Plan outlines the specific mitigation measures required to address the environmental and social risks associated with the rehabilitation and structural reinforcement of the Dabaan 1 and Dabaan 2 river embankment sections located in Hillaac Village, Beledweyne District. These measures are aligned with the WB ESSs and the S-FSRP ESMP.

The ESMP provides clear institutional responsibilities, practical mitigation approaches, monitoring arrangements, and implementation timelines to ensure that all anticipated impacts related to riverbank excavation, gabion installation, geotextile placement, soil compaction, construction of intake and drainage structures, slope stabilization, and associated civil works are avoided, minimized, or properly managed throughout the construction and early operational phases.

Given that the two subprojects are technically similar in design, scope, and structural configuration, this ESMP applies a clustered safeguards approach, ensuring consistent environmental and social risk management across both embankment sections while maintaining flexibility to address site-specific conditions, including drainage requirements and river access considerations.

The mitigation measures address risks related to riverbank erosion, slope instability, sediment discharge into the Shabelle River, occupational health and safety hazards, community safety risks associated with heavy machinery and excavation, labor management, SEA/SH prevention, temporary irrigation access restrictions, and stakeholder engagement requirements.

Table 4 below summarizes the key environmental and social risks and the corresponding mitigation measures for each applicable ESS, together with responsible parties and monitoring requirements to ensure effective implementation during the subproject lifecycle.

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Table 4:Environmental & Social Mitigation Plan

Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
ESS1 – Assessment and Management of Environmental and Social Risks and Impacts						
Institutional and implementation-capacity risks: inadequate staffing or unclear authority within the NPCU, Hirshabelle PIU, supervising engineer or contractor; delayed preparation and approval of the C-ESMP and subsidiary plans; weak screening of site changes; insufficient supervision of critical earthworks, gabions, geotextile and hydraulic structures; incomplete incident, grievance and monitoring records; delayed escalation of non-compliance; and inadequate coordination with district authorities and communities.	Maintain qualified environmental, social and OHS personnel in the contractor and supervising team; approve the C-ESMP, OHS Plan, Waste Management Plan, Traffic Management Plan, Security Management Plan and emergency procedures before mobilization; use risk-based method statements and permit-to-work controls; conduct daily contractor inspections, weekly supervising-engineer verification and monthly PIU compliance reviews; issue and close corrective-action notices within agreed deadlines; notify and investigate incidents under the project incident protocol; maintain auditable labor, grievance, training, inspection and waste records; and include E&S performance in monthly reports to the NPCU.	Approved C-ESMP and subsidiary plans; staffing records; method statements; inspection and corrective-action registers; incident protocol; monthly E&S reports.	Contractor; Supervising Engineer; Hirshabelle PIU E&S staff; NPCU oversight; FAO technical support.	Pre-construction, construction and handover	Before mobilization; daily contractor checks; weekly verification; monthly PIU review; periodic NPCU oversight.	Included in contract price; Included in FAO supervision & management budget

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
ESS2 – Labor and Working Conditions						
A. Labor Risks: Risk of child labor or forced labor; Unfair recruitment practices and exclusion of women, youth, and vulnerable groups; Delayed payment of wages leading to disputes; Lack of written contracts and unclear employment terms. B. Occupational Health & Safety (OHS) Risks: Injuries from machinery, open excavations, unstable banks; Exposure to excessive noise and vibration; Heat stress, dehydration, and unsafe working hours; Lack of PPE and inconsistent use;	A. Labor Standards: Implement the project's LMP in full; Verify worker ages (18+ only); Establish and publicize a confidential worker GM; Promote inclusion of women, youth and minority groups; Communicate payment schedules clearly to avoid disputes. B. Occupational Health & Safety: Provide full PPE (helmets, gloves, boots, reflective vests, ear protection); Conduct daily toolbox talks and weekly OHS sessions; Provide clean drinking water, shaded rest areas, and sanitation facilities;	Labor Management Procedures (LMP); Code of Conduct (CoC); Worker GM tools; PPE sets; OHS toolbox talk templates; Accident/incident logs; Payment monitoring tools; Safety Risk Assessment forms; Training attendance registers	Contractor (primary implementer); FAO Technical Assistance team (training, oversight); FAO Supervising Engineer (verification) NPCU – MoAI (labor compliance oversight); Hirshabeelle State PIU (worker engagement/support)	Construction & Operation	Daily OHS toolbox talks; Weekly OHS inspections by contractor; Weekly FAO supervision Monthly labor audits	Included in contract price Supported under FAO supervision budget; Included in MoAI operational costs

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Poor site layout and unsafe access paths; Exposure to dust during excavation and backfilling; Drowning and water-edge hazards during work adjacent to the river; C. Administrative and Compliance Risks: Poor implementation of Labor Management Procedures (LMP); No worker GM or weak confidential reporting system; Lack of OHS incident reporting, RCAs, and training; Labor standards not aligned with national laws or EHSGs; Inadequate record-keeping (hours worked, incidents, contracts).	Implement heat-stress management (adjust shifts, rest breaks); Train machinery operators and enforce licensing requirements; Conduct Safety Risk Assessments and update site layout; Keep accident and near-miss logs and conduct Root Cause Analysis (RCA); C. Administrative Measures: Monthly refresher training for all workers; Maintain up-to-date labor registers, GM records, OHS logs; Enforce Code of Conduct (CoC) for all workers with clear penalties; Continuous supervision by FAO to ensure compliance.					
ESS3 – Resource Efficiency and Pollution Prevention						

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Pollution Risks: Dust emissions from excavation, vehicle movement, dry soils; Noise and vibration from machinery and equipment; Air emissions (smoke, diesel fumes) from poorly maintained machinery (negligible); Fuel and oil spills contaminating soil and water sources; Risk of contamination of the Shabelle River from construction runoff; Increased turbidity and sediment load in the Shabelle River or connected drainage during excavation; Improper storage of construction materials near water bodies. B. Waste Management Risks:	Pollution Control: Use water sprinklers to suppress dust on required access roads and work sites; Maintain vehicles and machinery regularly (oil change, tuning, filter replacement); Limit noisy activities to daytime hours and notify nearby households; Store fuel/oil in bunded, labeled containers away from waterways; Keep spill kits on site and train workers on their use; Prevent runoff from entering the Shabelle River. Waste Management: Implement Waste Management Plan (WMP); Clearly label waste bins: general waste, hazardous waste, organic waste;	Waste Management Plan (WMP); Water truck / sprinklers; Fuel/oil bunds; Spill kits; Water testing kits (TDS, TSS); Training materials	Contractor (primary implementer) FAO Supervising Engineer (verification); NPCU – MoAI (oversight); Hirshabeelle State PIU (coordination & local enforcement)	Construction & early operation	Daily pollution checks; Weekly waste & fuel inspections; Monthly reporting by contractor; Continuous monitoring during excavation & earthworks	Included in contract ; Included in FAO supervision budget

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Accumulation of construction debris and vegetation waste; Lack of proper waste segregation (hazardous vs non-hazardous); Disposal of waste in unauthorized locations; Community exposure to unsafe waste piles; Improper disposal of geotextile off-cuts and packaging materials; Lack of segregation between hazardous and non-hazardous waste; Disposal of waste in grazing areas; C. Water & Soil Quality Risks: Erosion and sedimentation entering river/canal systems (low); High Total Dissolved Solids (TDS) water used for irrigation causing soil salinization;	Identify authorized disposal sites in collaboration with WUC & State MoAI; Remove debris regularly and ensure safe transport to disposal sites; Prohibit burning of waste; Reuse suitable excavated material for embankment shaping where feasible C. Water & Soil Quality Safeguards: Minimize vegetation disturbance to avoid exposed soils. Install erosion control measures (brush barriers, silt fences were required); Conduct TDS/TSS analysis before allowing irrigation water use; Avoid using water with TDS > 1,500 ppm for irrigation;					

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Increased Total Suspended Solids (TSS) in canal water; Contamination of shallow water sources; Localized waterlogging caused by altered surface drainage during trenching and backfilling; Soil productivity loss due to compaction in grazing land/cultivated plots adjacent to works. Soil salinization risks if poor quality water accumulates;	Monitor turbidity during excavation near water inlets. Restore surface contours after trench closure; Monitor post rainfall drainage conditions and correct pooling immediately.					
ESS4 – Community Health, Safety, and Security						
A. Community Health & Safety Risks: Exposure to construction hazards (machinery, trucks, excavations); Unsafe access around open trenches, axillary structures (open excavations, gabion works and intake or drainage	A. Community Health & Safety Measures: Install robust fencing, barriers, and warning signage around all hazardous zones; Restrict unauthorized entry into the construction area except for workers;	Security Management Plan (SMP); Traffic Management Plan (TMP); Fencing, barriers & signage; Debris removal procedures;	Contractor (primary implementer); FAO Supervising Engineer (verification & compliance enforcement); FAO Technical Assistance (training & oversight);	Construction	Daily safety checks (Contractor); Weekly FAO supervision; Monthly security reviews;	Included in contractor's BoQ; Included in project management & FAO supervision budget

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
structures) and unstable banks; Child safety risks when children walk near the site or along farm paths; Livestock injury risks due to unstable embankments or open excavation zones; Temporary disruption of livestock movement routes and watering access; Electrical hazards during installation and testing of gabion works, hydraulic structures and machinery; Community exposure to dust and noise during peak excavation works. B. Security Risks: Misconduct, intimidation, or abuse by security personnel; Tension or conflict between hired guards and communities;	Conduct community awareness sessions on construction risks, especially targeting women, youth, and farmers; Provide safe and clearly marked temporary access routes including footpaths, vehicle bypasses, and pedestrian crossings around all work areas involving open excavations, gabion works and hydraulic structures; Install perimeter fencing around active embankment work zones to prevent uncontrolled access; Ensure proper embankment compaction and slope stabilization; Remove debris regularly following EHS guidelines; B. Security Management Measures: Implement and monitor the Security Management Plan (SMP);	EHSguidelines; GM system (including security channel); Training materials (security, GBV, community safety); Community awareness materials Asset inventory logs; Incident reporting forms.	Hirshabeelle State PIU (community coordination); WUC (local communication)		Continuous community sensitization	

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Excessive or disproportionate security practices; Theft or vandalism of gabion mesh, tools, fuel and construction equipment during or after installation; Sporadic insecurity affects material transport routes and workforce safety. C. Fragility, Conflict & Social Tension Risks: Harmful inward migration driven by perceived project benefits; Community dynamics disrupted by labor influx; Clashes or friction between villages over canal access, water distribution, or workforce selection; D. Traffic and Road Safety Risks:	Hire security guards from the local community & train human rights, respectful engagement, and proportional use of force to avoid conflicts; Require guards to sign and comply with a Security Code of Conduct; Secure storage of construction materials and equipment in fenced and guarded areas; Install hydraulic structures only when site security arrangements are in place; Coordinate material transport schedules with district authorities and local leaders; Implement night-time security patrols where required; Report security incidents immediately through the project GM and SMP channels. C. Fragility & Social Risk Mitigation:					

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Increased traffic from machinery, trucks, and service vehicles; Accidents involving children, livestock, or farmers using the same paths; Unsafe turning points, blind spots, and unregulated movement of heavy equipment.	Base targeting decisions on FINA findings and transparent vulnerability criteria; Conduct consultations with local authorities, village elders and WUCs/Canal Committee to reduce tension; Track population influx risks and adjust site management plans accordingly; Provide clear communication on project benefits and eligibility. D. Traffic and Road Safety Controls: Develop and implement a Traffic Management Plan (TMP); Enforce strict speed limits around work zones; Install traffic warning signs at key points used by pedestrians, trucks and livestock;					

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
	Train vehicle operators and road workers on safety risks; Maintain access routes clear and safe for community use.					
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement						
ESS5 is not currently triggered because the Dabaan 1 and Dabaan 2 embankment footprints are within existing public embankment corridors and no land acquisition, physical displacement or permanent economic displacement is expected. Temporary risks comprise restricted farm, footpath, livestock or irrigation access and unforeseen crop or asset disturbance. Any unforeseen impact will be screened before work proceeds and managed under the ESMP and ESS5.	Maintain open community access routes and farm paths wherever possible; Use temporary bypass paths and clearly mark safe pedestrian areas; Provide advance notice (48–72 hours) before temporary flow interruptions or access restrictions; Coordinate daily with the WUC to manage water distribution schedules;	Consultation records; Access route signage; WUC/Canal Committee coordination logs GM system	Contractor (implementation); State PIU (liaison & awareness) FAO Supervising Engineer (verification); NPCU (oversight)	Pre-construction & Construction	Daily access checks; Weekly community updates	Included in contractor's BoQ;

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
ESS6 – Biodiversity Conservation						
Temporary disturbance to livestock and small fauna using canal corridors; Short-term alteration of micro-habitats during excavation. Clearing of invasive species (Prosopis juliflora) without controlled disposal may lead to seed spread and re-infestation; Minor vegetation clearance within embankment footprints and embankment areas; Temporary disturbance to grazing areas used by livestock; Disturbance to small fauna including birds, reptiles, and rodents common in semi-arid rangelands;	Limit vegetation removal to areas strictly needed for embankment shaping; Avoid harming livestock; maintain access routes for grazing animals; Ensure machinery operates only within the existing embankment footprint; Prohibit dumping spoil in vegetated or grazing areas. Remove Prosopis juliflora using controlled cutting techniques; Collect, transport, and dispose of Prosopis biomass at approved disposal sites; Prohibit leaving cut Prosopis material on site; Maintain temporary livestock crossing points where	Hand tools with controlled clearing techniques were required; Site supervision checklists Controlled clearing tools; Supervised biomass disposal procedures; Daily site supervision logs.	Contractor (implementation); FAO Supervising Engineer (monitoring); State PIU (coordination)	Construction	Daily supervision during clearing; Weekly monitoring by FAO SE	Included in contractor's BoQ;

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Temporary alteration of micro habitats due to excavation and spoil placement; Risk of uncontrolled disposal of cleared vegetation leading to land degradation; Increased livestock concentration around active embankment work zones potentially affecting surrounding vegetation. Note: No sensitive species or critical habitats identified during the baseline survey. Impacts are site-specific and fully reversible.	embankment works interrupt access routes; Supervise excavation to prevent unnecessary disturbance of natural areas; Restore disturbed surfaces after construction; Monitor embankment slopes for erosion and revegetate where required.					
ESS8 – Cultural Heritage						
Low probability of encountering cultural or historical materials during excavation Note: No known cultural heritage sites are located within the project's footprint,	Chance Find Procedure. If archaeological material, artifacts, structures, graves, human remains, fossils or an object or site of possible cultural, historical or religious value is encountered, the contractor shall: (1) stop all work within the affected area	Chance Finds Procedure; Reporting forms; Barrier tape/fencing materials	Contractor (implementation); FAO Supervising Engineer (verification); NPCU – MoAI (oversight)	Construction	Activate procedure only if triggered; Immediate reporting within same day	Contractor cost (no additional budget required)

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
but chance finds remain possible.	immediately; (2) secure, cordon and protect the location and prevent removal, handling or photography; (3) notify the supervising engineer and the Hirshabelle PIU the same day; (4) enable the PIU to notify the competent cultural-heritage authority and relevant local authority; (5) record the discovery, coordinates, time, persons present and protection measures without disturbing the find; (6) comply with the authority's assessment and instructions; and (7) resume work only after written clearance. Human remains shall be treated with dignity and handled only by authorized authorities. All workers shall receive induction on this procedure before excavation.					
ESS10 – Stakeholder Engagement and Information Disclosure						

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
A. Inclusion & Participation Risks: Exclusion of women, youth, minority, and vulnerable groups from consultations and project decisions; Poor communication causing confusion about project benefits or schedules; B. Information Disclosure Risks: Insufficient dissemination of project information to farmers and water users; Limited understanding of temporary water disruptions or construction impacts; C. GM Risks: Low awareness or poor access to the grievance mechanism; Difficulty monitoring social harm or addressing complaints promptly.	A. Inclusion Measures: Implement the Stakeholder Engagement Plan (SEP) throughout project stages; Hold inclusive consultations ensuring participation of women, youth, elders, WUC members, and vulnerable groups; Provide schedules, updates, and notices in simple local Somali language. B. Information Disclosure: Regularly inform communities of construction timelines, flow interruptions, and safety precautions; Share updates through WUCs, village leaders, and State PIU; Display key information on boards at site and village centers. C. GM Strengthening:	Stakeholder Engagement Plan (SEP); GM tools (register, hotline, complaint forms); Consultation attendance sheets; Community information boards	NPCU – MoAI (oversight); Hirshabeelle State PIU (community engagement); FAO Technical Assistance (support & training); Contractor (on-site disclosure, GM awareness)	Pre-construction & Construction	Weekly community updates; Monthly GM reviews; Consultations as needed	Included in project management budget; Included in contractor obligations

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
	Disseminate/publicize GM channels widely (phone numbers, focal persons, complaint boxes); Maintain GM logs at PIU & contractor level; Provide feedback to complainants and close cases promptly; Monitor GM performance monthly and escalate cases if unresolved.					
SEA/SH – Sexual Exploitation, Abuse & Harassment						
Risk of SEA/SH involving workers and community members; Worker–community interaction increasing vulnerability of women and girls; Underreporting due to stigma or fear; Security personnel misconduct;	SEA/SH Prevention and Response Procedure and Code of Conduct. Before mobilization, the contractor shall adopt the project SEA/SH Action Plan; appoint trained male and female focal points; map confidential referral services; and ensure every worker, driver and security worker signs a Code of Conduct prohibiting sexual exploitation, abuse, harassment, transactional sex, sexual activity with persons under 18,	SEA/SH Action Plan; worker and security Codes of Conduct; confidential referral map; training records; focal-point appointments; non-identifying case reporting protocol.	Contractor (implementation); FAO Technical Assistance (training & oversight); FAO Supervising Engineer (verification); State PIU (community awareness); NPCU (compliance)	Construction	Monthly worker training Continuous GM availability; Weekly supervision	Included in contract price; Included in TA & project management budget

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Risks / Impacts	Mitigation Measures	Methods / Tools / Resources	Responsibility	Project Phase	Timeline / Frequency	Mitigation Budget
Cross-cuts ESS1, ESS2, ESS4 & ESS10.	retaliation and abuse of authority. Induction and refresher training shall explain prohibited conduct, sanctions and confidential reporting. SEA/SH complaints shall bypass community mediation, shall not require proof or investigation by local committees, and shall be referred promptly through survivor-centered channels based on informed consent, confidentiality, safety and non-discrimination. Only non-identifying case data may be reported. Breaches shall trigger contractual sanctions and referral to competent authorities where appropriate and consented.					

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6.1 Environmental & Social Monitoring Plan

The monitoring plan covers pre-construction, construction and handover. The contractor conducts and records daily inspections; the supervising engineer verifies compliance weekly and at critical work stages; the PIU environmental and social specialists conduct monthly reviews; and the NPCU undertakes periodic oversight. Evidence includes approved plans, inspection checklists, photographs, material and waste records, worker files, toolbox and training records, traffic logs, incident and near-miss records, grievance registers and corrective-action closure. Serious incidents are notified under the project incident protocol.

The Environmental and Social Monitoring Plan describes how the implementation of mitigation measures will be tracked and verified during construction. Monitoring ensures that safeguards commitments are being followed, emerging issues are addressed promptly, and corrective actions are taken when required. It also clarifies the roles of the Contractor, FAO, the State PIU, and the NPCU in supervising compliance with environmental and social requirements. All monitoring activities are covered under the ESMP budget and project supervision costs. Table 5 below presents the indicators, methods, responsibilities, and reporting arrangements for continuous monitoring of ESMP implementation.

Table 5:Environmental & Social monitoring Plan

ESS / Area	Monitoring Indicators	Monitoring Method	Responsibility	Frequency	Reporting To
ESS1 – E&S Risk Management	-Embankment stability and absence of erosion - Water flow continuity during construction - Implementation status of ESMP/C-ESMP - Conflict incidents logged and resolved - Drainage pathways maintained (no waterlogging observed) - Soil compaction observed in grazing land/cultivated areas - Spoil disposed only in approved locations - Evidence of cumulative impacts (resource pressure, population influx)	- Routine site inspections - Photographic evidence (before/after works) - Daily contractor site logs - GM database review - post-rainfall drainage checks	Contractor / FAO Supervising Engineer / State PIU	Daily / Weekly	NPCU & FAO
ESS2 – Labor & Occupational Health & Safety (OHS)	- PPE availability and proper use - Worker attendance, contracts, and age verification - Toolbox talks conducted as scheduled - Worker GM cases registered and resolved - OHS incidents and RCA reports - Heat-stress prevention measures implemented - Safe handling of gabion materials, machinery, excavations and work near water	- Direct observation - Review of worker registers and contracts - OHS logs and accident registers - GM review - Heat-stress and excavation safety checklists	Contractor / FAO Supervising Engineer	Daily / Weekly / Monthly	NPCU

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ESS / Area	Monitoring Indicators	Monitoring Method	Responsibility	Frequency	Reporting To
ESS3 – Pollution Prevention & Resource Efficiency	- Dust and noise levels within acceptable limits - Compliance with approved spoil disposal locations - Proper waste segregation (hazardous and non-hazardous) - TDS/TSS water quality test results - Fuel and oil spill incidents recorded and addressed - No contamination of surface or groundwater observed - No localized water pooling due to altered drainage	- Visual inspections - Water and soil quality testing - Waste Management Plan (WMP) records - Spill incident logs - post-backfilling surface inspections	Contractor / FAO Supervising Engineer	Daily / Weekly	State PIU / NPCU
ESS4 – Community Health, Safety & Security	- Safety signage, fencing, and barriers in place - Traffic control measures functioning - Construction debris promptly removed - Security conduct logs maintained - Traffic incidents involving people or livestock - Security incidents (theft, vandalism, intimidation) - Safe access routes maintained for pedestrians and farmers	- Safety audits - Community feedback sessions - GM review - Incident and security logs - WUC coordination records	Contractor / FAO Supervising Engineer	Weekly	NPCU
ESS5 – Temporary Access Management	- Access routes and farm paths kept open where possible - Temporary bypass paths functional - No unresolved complaints on blocked access - Advance notice provided before water or access disruptions	- Site inspections - WUC coordination and communication logs - GM review	Contractor / FAO Supervising Engineer	Daily	State PIU / FAO
ESS6 – Biodiversity Conservation	- Vegetation clearance minimized and controlled - Livestock access and grazing routes maintained - Prosopis juliflora removed and disposed of properly - No spread of invasive species observed	- Field observations - Site supervision checklists - Biomass disposal verification	Contractor / FAO Supervising Engineer	Weekly	NPCU
ESS8 – Cultural Heritage	- Chance finds managed according to procedure	- Review of Chance Finds records and reports	Contractor / FAO Supervising Engineer	If triggered	NPCU
ESS10 – Stakeholder Engagement &	- Community consultations conducted as per SEP - Project information displayed at site and village level - GM usage and case closure rate - Community awareness of safety measures and water	- SEP records - Consultation attendance sheets - GM monitoring and reports	State PIU / FAO Technical Assistance	Weekly / Monthly	NPCU

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ESS / Area	Monitoring Indicators	Monitoring Method	Responsibility	Frequency	Reporting To
Information Disclosure	interruptions - Timely feedback provided to complainants				
SEA/SH – Cross-cutting (ESS1, ESS2, ESS4, ESS10)	- Code of Conduct signed and enforced - SEA/SH training delivered to workers and communities - SEA/SH GM cases managed confidentially - Survivor-centered referral pathways functional - Separate sanitation facilities for men and women available	- Training records - CoC compliance logs - Confidential GM review	Contractor / FAO Technical Assistance / State PIU	Worker induction; monthly refresher; continuous confidential GM availability; weekly compliance verification	PIU E&S Specialists / NPCU

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6.2 Capacity Building and Training Plan

Traffic Management Plan. Before mobilization, the contractor shall submit a site-specific plan showing approved haul routes, delivery periods, speed limits, loading and parking areas, reversing controls, banksmen, pedestrian and livestock crossings, warning signs, barriers and emergency contacts. Drivers shall be licensed, vehicles roadworthy, loads secured and movements restricted near settlements and peak pedestrian periods. Communities shall receive advance notice of abnormal deliveries or temporary access changes. The contractor shall inspect controls daily, record incidents and near misses, remove mud or debris from public routes, and revise the plan where monitoring identifies unacceptable risk.

Effective implementation of this ESMP depends on the capacity of the contractor, supervising institutions, and community structures to understand and apply the environmental and social requirements. The capacity-building activities will:

- Familiarize all actors with the ESMP, World Bank ESF requirements, and relevant national regulations.
- Strengthen the contractor's ability to prepare and implement a Contractor ESMP (C-ESMP), including OHS, GM, SEA/SH, and waste management.
- Equip the PIU and supervising engineers to monitor ESMP compliance and report effectively.
- Build the capacity of the Canal/Water User Committee and community representatives to support operation and maintenance (O&M), use the GM, and promote GBV/SEA/SH awareness.
- Ensure all workers receive induction and continuous toolbox talks on OHS, Code of Conduct, GM, and SEA/SH prevention.

These trainings will be delivered jointly by FAO with the State MoAI PIU, and the contractor's OHS/E&S team

Table 6: Summary of Capacity Building Plan

Target Group	**Training Topic(s)**	**Timeline / Frequency**	**Type / Modality**	**Lead Facilitator(s)**	**Cost / Responsibility**
Prospective Contractors (bidders)	Key E&S clauses in bidding documents; ESMP and ESF obligations; minimum OHS, LMP and SEA/SH requirements	Once, during pre-bid / pre-contract briefing	Short indoor or virtual session	FAO E&S Specialist, NPCU/PIU	Covered under FAO TA / project preparation
Contractor's Project Manager, Site Engineer, OHS/E&S Officer, Foremen	C-ESMP preparation and implementation; OHS procedures and emergency response; Waste Management Plan; Worker and Community GM; SEA/SH Action Plan and Code of Conduct	At project start (mobilization)	Half-day face-to-face workshop plus on-site practical session	FAO E&S Specialist and State PIU E&S staff	Covered under FAO TA / PIU operating budget
PIU E&S Specialist and Supervising Engineer (State MoAI / NPCU)	Supervision and monitoring of ESMP/C-ESMP; WB ESF and national ESIA requirements; review of contractor E&S reports; use of simple monitoring tools	At start of work and one mid-term refresher	Face-to-face or online training session	FAO E&S Specialist	Covered under FAO TA / PIU operating budget

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Target Group	Training Topic(s)	Timeline / Frequency	Type / Modality	Lead Facilitator(s)	Cost / Responsibility
Water User Committee and Community Representatives (elders, women, youth)	Basic canal O&M; community role in ESMP monitoring; GM access and referrals; GBV/SEA/SH awareness; community safety around works	Once during mobilization and one refresher before completion	On-site participatory training in the project community	FAO and PIU E&S staff, with WUC	Covered under FAO TA / PIU community engagement budget
All Construction Workers (including drivers and security staff)	OHS (PPE use, site rules, safe excavation, traffic management); Code of Conduct; worker GM; SEA/SH prevention and sanctions; appropriate security behavior	Induction for all new workers and weekly toolbox talks	On-site toolbox talks / tailgate sessions	Contractor's OHS/E&S Officer, supervised by supervising engineer / FAO	Included in contractor's contract cost

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7. Implementation Arrangements

Effective implementation of the subproject's rehabilitation activities requires close coordination among the Federal MoAI, the Hirshabelle State MoAI PIU, FAO as the Technical Assistance provider, the contractor, and community structures. Responsibilities have been organized to ensure that environmental and social measures are applied consistently and in full alignment with the World Bank ESF and national regulations.

The main institutional responsibilities are as follows:

- MoAI-FGS / NPCU: Provides overall oversight, approves the ESMP and the Contractor ESMP (C-ESMP), ensures compliance with the Environmental and Social Commitment Plan (ESCP), consolidates E&S performance reports, and submits official updates to the World Bank.
- FAO Somalia (Technical Assistance and Supervision): Leads technical assessments, safeguards training, and construction supervision. As the Supervising Engineer, FAO conducts regular site inspections, verifies compliance with the ESMP and C-ESMP, issues non-compliance notices, monitors corrective actions, and reports environmental and social indicators through the S-FSRP MIS and dashboard.
- Hirshabelle State MoAI PIU: Facilitates field operations, supports community engagement, maintains the state-level grievance register, accompanies supervision missions, and ensures that community-level safeguard commitments and notifications are consistently applied.
- Federal Ministry of Environment and Climate Change (MoECC): The Federal Ministry of Environment and Climate Change (MoECC) serves as the national authority for environmental and social regulation in accordance with the Environmental Protection and Management Act (2024) and related regulations, which guide the preparation and implementation of the ESMP.
- Construction Contractor: Implements all ESMP requirements through an approved C-ESMP. Core responsibilities include environmental protection, occupational health and safety, labor management in line with the LMP, maintaining a worker grievance mechanism, enforcing SEA/SH Codes of Conduct, and applying community safety and traffic measures. The contractor must maintain daily logs, incident records, OHS documentation, and weekly reports.
- Community Structures (Water User Committee and village leaders): Support construction access, communication schedules, assist with handling minor grievances, monitor water distribution during temporary interruptions, and contribute to long-term operation and maintenance of the rehabilitated canal.

Reporting follows a coordinated structure: the contractor submits weekly updates to FAO and the State PIU; FAO verifies compliance and prepares consolidated supervision notes; and the NPCU compiles and submits environmental and social performance reports to the World Bank. Serious incidents or accidents must be reported within 24 hours in line with ESF and project protocols.

At the end of construction, FAO and the State PIU will conduct a joint inspection with the contractor and community representatives to confirm that all works meet design and safeguards requirements. Following this, the rehabilitated subprojects will be handed over to the Hirshabeelle State MoAI and the Water User Committee for continued operation and maintenance, with periodic post-construction monitoring to ensure sustainability.

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8. Public Consultation and Disclosure

Stakeholder engagement for the Dabaan 1 and Dabaan 2 river embankment rehabilitation subprojects in Hillaac Village, Beledweyne District was conducted in accordance with the S-FSRP SEP and included consultations at both government and community levels. Key stakeholders engaged during the assessment included MoAI-FGS/NPCU, MoAI-HSS PIU, Beledweyne District Administration, village elders, irrigation representatives, women, youth, IDPs, pastoral households, and other vulnerable groups. Discussions focused on the current condition of the existing embankments, recurrent flooding impacts including El Niño events, agricultural losses, environmental and social risks, proposed gabion stabilization works, drainage intake structures, mitigation measures, implementation arrangements, and the functioning of the project-level GM.

8.1 Consultations with MoAI-HSS

As part of the technical assessment mission conducted on October 2, 2025, consultations were held with MoAI-HSS and Beledweyne District authorities to review the proposed scope of works and confirm alignment with district and state flood resilience priorities. The discussions emphasized the increasing frequency and severity of riverine flooding along the Shabelle River, recurrent embankment breaches, damage to irrigated farmland, and the urgent need for engineered stabilization of vulnerable riverbank sections.

The consultations further clarified institutional roles and responsibilities related to oversight, community mobilization, GM coordination, environmental compliance, and security liaison under the SMF. Government representatives endorsed the prioritization of the Dabaan 1 and Dabaan 2 embankment sections under S-FSRP and expressed commitment to facilitating contractor access, supporting community coordination, and ensuring smooth implementation and supervision throughout construction and early operation.

8.2 Community Consultations in Hillaac Village

Community consultation meetings were conducted in Hillaac Village with participation from elders, irrigation users, women, youth, IDPs, and other vulnerable groups. The communities confirmed several key issues:

- Recurrent flooding due to weakened embankment sections at Dabaan 1 and Dabaan 2;
- Repeated crop losses and soil erosion affecting agricultural livelihoods;
- Temporary displacement and damage to irrigation infrastructure during high discharge periods;
- Concerns regarding embankment height and its potential impact on access to river water for irrigation;
- The need for controlled intake chambers to ensure continued irrigation abstraction;
- Safety risks during construction, particularly related to excavation and heavy machinery;
- Interest in local employment opportunities; and
- The need for transparent grievance reporting and clear communication of project timelines.

Communities expressed strong support for the use of gabion box structures with compacted soil backfill, noting that similar designs have previously been implemented in Beledweyne and are considered effective for flood defense. They further agreed to facilitate site access and coordinate with the contractor through local leadership structures.

8.3 Key Issues Raised and How They Are Addressed

Participants raised several priority concerns, including recurrent flood damage, embankment height and water accessibility, construction safety, temporary restriction of irrigation access, labor selection transparency, and clarity regarding the GM and SEA/SH reporting channels.

These concerns have been addressed through:

i. Installation of engineered gabion embankments along 870 meters at Dabaan 1 and 690 meters at Dabaan 2 to enhance flood protection and structural stability;
ii. Incorporation of intake chambers and gated drainage structures to maintain controlled irrigation access while preventing river backflow;
iii. Implementation of construction safety measures including signage, temporary barriers, supervised excavation, and traffic management;

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iv. Provision of temporary coordination mechanisms to minimize disruption to irrigation abstraction during work;
v. Transparent local recruitment procedures aligned with the LMP; and
vi. Establishment and dissemination of a functional GM at community and PIU levels, including confidential SEA/SH reporting channels and enforcement of Codes of Conduct.

All consultation forms, attendance sheets, photographic records, and contact details of participants are included in Annexes 4a and 4b.

A summary of meetings held with stakeholders is presented in Table 6 below.

Table 7:Stakeholder Meeting Summary

Date	**Stakeholder Group**	**Location**	**Purpose**	**Main Points Raised**	**Answers Provided**
02/10/2025	MoAI-HSS and Beledweyne District Authorities	Beledweyne	Discuss project prioritization and review technical considerations	Recurrent flooding; embankment breaches; agricultural losses; need for durable stabilization; institutional coordination	- Confirmed prioritization under S-FSRP. - Endorsed gabion-based stabilization approach. - Agreed on inclusion of intake chambers and drainage structures. - Clarified coordination roles among MoAI, FAO, PIU, and District Administration.
02/10/2025	Community Representatives (Elders, Women, Youth, IDPs, Irrigation Users)	Hillaac Village	E&S screening and field assessment	Recurrent flood damage; concern over embankment height; need for water access; safety risks; employment expectations; clarity on GM	- Confirmed installation of gabion structures with soil backfill. - Confirmed inclusion of intake chambers for irrigation access. - Assured implementation of construction safety measures. - Explained local recruitment aligned with LMP. - Explained GM and SEA/SH reporting mechanisms.

Minutes and attendance sheets are provided in Annexes 5a and 5b.

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8.4 Information Disclosure

Once approved, the ESMP will be shared with MoAI-HSS, the State PIU, and community representatives in Hillaac Village. Copies will be displayed at the MoAI office in Beledweyne and at public gathering points in Hillaac Village, including village meeting areas and locations agreed upon with elders and irrigation representatives.

Prior to construction, the project team will conduct community awareness sessions in Hillaac Village to explain the scope of works, embankment stabilization timelines, temporary irrigation access arrangements, safety measures around excavation zones and heavy machinery operations, and procedures for submitting grievances. Specific emphasis will be placed on explaining the embankment design, the inclusion of intake chambers for controlled water access, and construction phase safety protocols.

The ESMP will also be submitted to the NPCU and the WB for broader public disclosure in accordance with S-FSRP requirements.

This approach ensures continuous community access to project information and maintains a transparent and inclusive platform for feedback throughout implementation.

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9. Grievance Mechanism (GM)

The Grievance Mechanism (GM) provides an accessible and transparent process for community members, workers, and other stakeholders to raise concerns related to the subproject's rehabilitation. Its objectives are to enable timely and fair resolution of issues, strengthen communication between the project and the community, identify recurring concerns that may require adjustments to project implementation, provide confidential channels for sensitive complaints including SEA/SH, and ensure that no one is excluded from project benefits due to fear of retaliation.

9.1 GM Structure and Process

The GM follows a simple pathway that prioritizes resolving issues as close as possible to the community level. Complaints may be submitted verbally or in writing to the Water User Committee focal persons, the Hirshabelle MoAI PIU representative, FAO field staff, the contractor's environmental or OHS officer, or trusted community leaders. Each concern is recorded in the SFSRP GM register or the standard digital template used across the project.

Once grievance is received, the responsible focal point acknowledges receipt ordinarily within 48 hours and conducts an initial assessment to determine the nature and severity of the issue. Minor matters such as noise, disturbance, or simple clarifications can often be resolved immediately at this stage. Issues requiring further investigation are reviewed jointly by the State PIU and FAO, and where necessary, the contractor. A proposed resolution is typically provided within 7 to 14 days, depending on complexity. If a matter cannot be resolved locally or if the complainant remains dissatisfied, it may be escalated to the NPCU or, for serious or unresolved cases, to the World Bank's Grievance Redress Service. After a resolution is agreed upon, the case is formally closed in the GM register. All GM tools, registers, and standard complaint templates referenced in this section are provided in Annex 6: Grievance Mechanism Tools and Templates

9.2 Handling of SEA/SH-Related Cases

Complaints involving gender-based violence, sexual exploitation, or harassment follow a confidential survivor-centered process. They are reported directly to the designated GBV focal point or through any confidential channel, without requiring personal details or written statements. Such cases are never handled by community leaders or recorded with identifying information. The GBV focal point immediately refers survivors to appropriate service providers and ensures their safety and dignity. All contractor workers are required to sign the Code of Conduct and undergo compulsory training on respectful behavior and SEA/SH prevention. Therefore, regular refresher training will be conducted, and sanctions including suspension or termination are applied in cases of Code of Conduct violations, in line with contractual obligations and national law.

9.3 GM Accessibility and Communication

The mechanism is designed to be easily accessible. Stakeholders may submit grievances directly to WUC or PIU focal points, through phone calls or written submissions, via designated complaint boxes in public locations, or verbally during mobilization and community meetings. FAO field teams also receive complaints during supervision missions. Information on GM procedures will be shared regularly in community sessions, displayed on notice boards, and reinforced during pre-construction awareness activities. Dissemination of GM information in local languages, engagement of female focal points, separate confidential channels for SEA/SH cases (including hotline numbers), targeted outreach to women, youth, IDPs, and persons with disabilities, and monitoring of GM accessibility using sex- and vulnerability-disaggregated data.

9.4 Roles and Responsibilities

Community focal points, Water User Committees and village leaders may receive and refer complaints, but every complaint shall be entered in the formal PIU or contractor register. Receipt will be acknowledged within 48 hours. A resolution will normally be communicated within 7 to 14 calendar days; where additional investigation is needed, the complainant will receive an update and revised resolution date. The PIU maintains the official community GM register and the contractor maintain the Worker GM register. Anonymous complaints are accepted and retaliation is prohibited. SEA/SH complaints bypass community structures and use confidential survivor-centered channels.

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Sensitive complaints, including those related to Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), will be handled through separate, confidential, and survivor-centered channels (see the full guidelines & Steps in Annex 6), using trained focal points and referral pathways, without requiring disclosure to community structures. Escalated or unresolved cases are referred to the NPCU, which oversees higher-level resolution and reports significant grievances to the World Bank in line with ESF requirements. The GM will be subject to periodic performance monitoring and reporting, including analysis of grievance types, resolution rates, and timelines, using sex- and vulnerability-disaggregated data to assess accessibility and effectiveness of the mechanism.

9.5 Monitoring, Reporting, and Improvement

The GM is monitored continuously to track the nature of complaints, their frequency, and the time taken to resolve them. The State PIU prepares monthly summaries for FAO, which are consolidated into NPCU's quarterly environmental and social performance reports to the World Bank. As implementation progresses, the project team will review the mechanism's performance and introduce improvements where needed, including additional training, enhanced community communication, or adjustments to reporting tools.

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10. ESMP Implementation Budget.

To ensure effective implementation of mitigation measures commensurate with the Moderate Environmental and Social Risk classification of the clustered river embankment subprojects (Dabaan 1 and Dabaan 2), a dedicated ESMP implementation budget has been allocated.

For ease of financial management, contract administration, and safeguards monitoring, the ESMP allocation has been standardized at:

- **USD 16,000 for Dabaan 1**
- **USD 16,000 for Dabaan 2**

Resulting in a total clustered ESMP allocation of USD 32,000

The equal allocation approach reflects the similar technical configuration, risk profile, and safeguards requirements of both embankment sections, while ensuring proportional coverage of environmental and social mitigation measures during implementation.

Table 8:ESMP Budget Distribution

ESMP Component	**Description of Activities Covered**	**Estimated Cost (USD)**
1. OHS Implementation	PPE, safety signage, excavation barriers, first-aid kits, heat-stress mitigation, toolbox talks	3,750
2. Environmental Measures	Erosion control, sediment management, spoil disposal, dust suppression, spill prevention	3,250
3. Social Safeguards	Community awareness, SEA/SH messaging, Code of Conduct enforcement, community safety measures	1,900
4. GM Management	Complaint boxes, hotline operation, GM registers, confidential SEA/SH channels	900
5. Monitoring & Reporting	Joint monitoring missions, compliance verification, safeguards reporting	2,400
6. Stakeholder Engagement (SEP)	Community consultations, disclosure materials, coordination meetings	1,800
7. Capacity Building	Training on ESF, OHS, LMP, SEA/SH, and GM	2,000
Total ESMP Cost (Per Subproject):		**USD 16,000**
Total Clustered ESMP Budget (Dabaan 1 & 2):		**USD 32,000**

The ESMP implementation budget of USD 16,000 per subproject is embedded within the contractor's contract price and covers site-level environmental and social mitigation measures, including OHS provisions, environmental controls, community safety measures, GM implementation, stakeholder engagement, and safeguards capacity building.

Supervision, institutional oversight, safeguards verification, and compliance monitoring by FAO and the PIU are financed separately under the FAO Technical Assistance Agreement and the PIU operational budget and are therefore not included within the contractor's ESMP allocation.

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11. References:

1. FAO (2023). ESIA for Beledweyne Flood Protection and Irrigation Rehabilitation – SFSRP. Mogadishu: FAO Somalia.
2. FAO (2023). Simplified Environmental and Social Management Plan (ESMP) for Canal Rehabilitation in Southwest State, Hirshabeelle , and Hirshabeelle. FAO Somalia
3. FAO SWALIM (2021). Hydrological Data and Flood Risk Mapping for the Shabelle Basin. Nairobi: FAO SWALIM.
4. MoAI (2022). Shabelle River Basin Flood and Irrigation Profile. Mogadishu: Ministry of Agriculture and Irrigation.
5. MoAI (2025) Environmental and Social Management Plan (ESMP): Construction of Office Building for the Ministry of Agriculture and Irrigation (MoAI)
6. MoEWR (2022). Somalia National Environmental Outlook. Mogadishu: Ministry of Environment and Water Resources.

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Annexes

Annex 1: Environmental and Social Screening

Annex 1a: Environmental and Social Screening – DABAAN 1 River Embankment

Table 9: Annex 1A-Environmental and Social Screening – DABAAN 1 River Embankment

Project Name		Somalia Food System Resilient project (SFSRP) (P177816)				
Project Description		This subproject under the S-FSRP involves the rehabilitation and stabilization of the Dabaan 1 River Embankment located in Hillaac Village, Beledweyne District, Hirshabelle State, along the Shabelle River. The intervention will reinforce approximately 870 meters of riverbank using engineered gabion box structures with compacted soil backfill and geotextile layers to reduce erosion and prevent recurrent flood breaches affecting nearby settlements and agricultural land. The work also includes construction of six intake chambers to allow controlled irrigation abstraction while preventing flood backflow. The subproject was screened on October 2, 2025, and classified as Moderate Risk due to temporary construction-related impacts such as soil disturbance, sediment runoff, dust and noise emissions, community health and safety risks, and occupational health and safety hazards. These impacts are site-specific and reversible and will be managed through implementation of a site-specific ESMP and the contractor's C-ESMP in accordance with WB ESF.				
Prepared By		Shuaib Muse Cidhere	Date of Preparation		**2/10/2025**	
Approved By			Date of Approval			
No	**Question**	**Yes**	**No**	**E&S risk rating, -Low, Moderate, Substantial & High**	**Documents Required**	**Remarks/Comments**
	ESS1: Assessment and Management of Environmental and Social Risks					
1	Does the project affect downstream water flows?		No	Low	ESMP	There will be temporary interruptions during implementation, such as abstraction of river access for irrigation water.
2	Does it require clearing of trees, pasture/browse?	Yes		Low	ESMP	Little vegetations along the riverbanks.

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3	Is an Environmental and/or Social Assessment required?	Yes		Moderate	ESMP	ESMP to cover OHS, waste, community safety.
4	Is there a risk of diversion of project benefits?	Yes		Moderate	SEP + GM	Possible during temporary water disruptions.
5	Is there a risk of lack of monitoring due to remoteness/insecurity?		No	Moderate	SMP	Liaising with local authorities while considering Beledweyne/ Somali's general context.
6	Will the project generate dust, noise, or air pollution?	Yes (minor)		Low	ESMP	Manage by water spraying & restricting to daytime works.
	ESS2: Labor and Working Conditions					
7	Any risk of child/forced labor?	Yes (potential)		Moderate	LMP / C-ESMP	Age verification, written contracts, prohibition of forced labor and worker-GM monitoring are required.
8	Does the activity include construction?	Yes		Moderate	ESMP	Works involve embankment earthworks, gabion installation and hydraulic structures.
9	Risk of lacking OHS for workers?	Yes		Moderate	OHS Plan	Toolbox talks, PPE, safe procedures.
10	Are workers provided with PPE?	Yes (mandatory)		Moderate	OHS Plan	Helmets, boots, gloves, and vests.
11	Are workers trained on safety/machinery?	Yes (mandatory)		Moderate	OHS Plan	Induction + toolbox training.
12	Risk of delayed/underpayment?	Yes (Possible)		Moderate	LMP	Ensure fair contracts, monitor payments.
13	Are women equally included in work opportunities?	Yes (to be ensured)		Moderate	LMP + GBV Plan	Promote equal access; monitor gender inclusion.
	ESS3: Resource Efficiency and Pollution Prevention					
14	Will the project use large volumes of materials?	Yes		Low	ESMP	Mainly soil/water for excavation.

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15	Will it use water reducing community supply or water during or after construction, which will reduce the local availability of ground water and surface water?		No	Low	ESMP	River has sufficient flow; use mainly for curing/dust suppression.
16	Will it create solid/vegetation wastes?	Yes		Low	WMP	Spoil & vegetation debris cleared in/around the canal banks
17	Will it create hazardous waste (fuels, oils)?	Yes (fuels/lubricants)		Moderate	ESMP + WMP	Store in bunded areas far from canal; spill kits available.
18	Will it result in wastewater discharges?		No	Low	ESMP	Canal follows water and rainwater may disturb the excavation. Use settling pits before release.
19	Will it disturb flora/fauna?		No	Low	–	Agricultural setting; no critical habitats nearby.
20	Will it require chemical inputs (pesticides/fertilizers)?		No	Low	–	Not applicable.
21	Risk of accidental spills/leaks?	Yes		Low	ESMP	Spill prevention measures, bunding, fire extinguishers.
	ESS4: Community Health and Safety					
22	Risk of community exposure to physical hazards (open excavation)?	Yes		Moderate	ESMP	Fence off site, signage, and safe crossing points.
23	Risk of traffic/road accidents?	Yes		Moderate	Traffic Management Plan / ESMP	Temporary truck and machinery movements share routes with pedestrians, farmers and livestock; implementing the site-specific TMP.
24	Risk of GBV/SEAH due to labor influx?	Yes		Low	GBV Action Plan	Awareness, code of conduct, reporting channels.

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25	Risk of spread of communicable diseases (due to labor influx, sanitation, or hygiene issues	Yes		Moderate	ESMP	Hygiene, PPE, awareness campaigns.
26	Is an area where there have been insecurity incidents in the past 12 months?		No	Moderate	Security Management Plan	Coordinate with authorities, proportionate security.
	ESS5: Land Acquisition, Restrictions on Land Use, Resettlement					
27	Will land be acquired?		No	Low	–	Works within canal footprint.
28	Will households/assets be displaced?		No	Low		no assets/households be displaced
29	Will there be restrictions of access?	Yes		Moderate	ESMP	Temporary during embankment and hydraulic structure works and rehab/reconstruction of auxiliary structures
30	Risk of loss of income, assets or livelihoods?		No	Low		No risk of assets, income loss or livelihoods.
31	Involve significant excavations, demolition, and movement of earth, flooding, or other environmental changes?	Yes		Low	ESMP	Excavation of canal bed only and
32	Will IDPs/vulnerable groups be affected?		No	Low	SEP + GM	No direct, but IDPs and vulnerable groups are included in consultation and compensation processes, if impacts arise.
	ESS6: Biodiversity Conservation					
33	Will the project affect sensitive ecosystems (e.g., intact natural forests, mangroves, wetlands) or threatened species?		No	Low	–	Canal lies in agricultural setting; no critical habitats nearby.

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34	Will it cause soil erosion/degradation?	Yes (minor)		Low	ESMP	
35	Affect habitats/migration routes?		No	Low	–	No wildlife corridors nearby.
36	Spread invasive species via spoil?	Yes		Low	WMP	Approved spoil disposal only.
	ESS7: Indigenous Peoples / Historically Underserved Communities					
37	Are Indigenous Peoples or historically underserved traditional communities present in or around the project area?		No	N/A	–	No such groups identified communities in Beledweyne District/ Hirshabelle State or in generally Somalia
38	Could the project affect Indigenous Peoples' rights, lands, resources, or culture?		No	N/A	–	Not applicable in Somalia context
	ESS8: Cultural Heritage					
39	Is site near archaeological/cultural heritage?		No	Low	–	None identified.
40	Potential for chance finds?	Yes	Low		Chance Find Procedure	Contractor to apply chance find protocol.
	ESS9: Financial Intermediaries					
42	Is the project implemented through financial intermediaries (banks, MFIs)?		No	N/A	–	It is a direct rehabilitation activity, not financial intermediation.
43	Will financial intermediaries on-lend funds to sub-projects?		No	N/A	–	Not applicable.
	ESS10: Stakeholder Engagement and Disclosure					
44	Risk of exclusion of women/youth in consultations?	Yes (Possible)		Moderate	SEP	Ensure equal participation.
45	Lack of grievance redress?		No	Low	GM	Functional GM in place.

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46	Lack of government consultation?	Yes (generally weak)		Moderate	SEP	Continuous engagement with local authorities.
47	Historical exclusion of disabled persons?	Yes (Possible)		Moderate	SEP	Ensure accessibility & inclusion.
48	Lack of social baseline data?	Yes		Moderate	ESMP	Use rapid participatory appraisal + FAO data.
	EHS Screening (Environmental, Health & Safety)					
49	Does intervention cause dust/noise/air pollution?	Yes (minor)		Low	ESMP	Water spraying is required where necessary.
50	Large volumes of construction materials?	Yes		Low	ESMP	Locally sourced where possible.
51	Solid waste properly managed?	Yes		Low	WMP	Contractor to implement WMP.
52	Are chemicals (fuel/lube) properly handled?	Yes		Moderate	ESMP	Bunded storage, away from the canal.
53	Wastewater discharge risks?	Yes (rainwater)		Low	ESMP	Settling pits before release.
54	Excavations/tunnels?	Yes		Low	ESMP	Embankment excavation; control spoil, secure work zones and reinstate disturbed riverbank areas.
55	Risk of over-exertion?	Yes		Moderate	OHS Plan	Task rotation, rest breaks, hydration.
56	Slips & falls risk?	Yes		Moderate	OHS Plan	Safe walkways, signage.
57	PPE availability?	Yes		Moderate	OHS Plan	Enforced PPE use, monitoring.
58	Workers trained in OHS?	Yes		Moderate	OHS Plan	Toolbox talks, induction.
59	High-risk activities?	Yes		Moderate	OHS Plan	Excavation, machinery, working near water; mitigation required.

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60	Traffic Risks?	Yes		Moderate	OHS Plan	Temporary – Community (pedestrian), workers and trucks will require safe paths near rehab/reconstructing activities during implementation.

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Annex 1b: Environmental and Social Screening – DABAAN 2 River Embankment

Table 10:Annex 1B: Environmental and Social Screening – DABAAN 2 River Embankment

Project Name		Somalia Food System Resilient project (SFSRP) (P177816)				
Project Description		This subproject under the S-FSRP involves the rehabilitation and stabilization of the Dabaan 2 River Embankment located in Hillaac Village, Beledweyne District, Hirshabelle State, along the Shabelle River. The intervention will reinforce approximately 690 meters of riverbank using engineered gabion box structures with compacted soil backfill and geotextile layers to prevent recurrent flood breaches affecting adjacent settlements, irrigated farmland, and parts of Beledweyne town. The work includes construction of nine intake chambers and two controlled drainage inlet structures to regulate surface runoff discharge and prevent river backflow during flood events. The subproject was screened on October 2, 2025, and classified as Moderate Risk due to temporary construction-related impacts including soil disturbance, sediment runoff, dust and noise emissions, community health and safety risks, and occupational health and safety hazards. These impacts are site-specific and reversible and will be managed through implementation of a site-specific ESMP and the contractor's C-ESMP in accordance with WB ESF.				
Prepared By		Shuaib Muse Cidhere	Date of Preparation		**02/10/2025**	
Approved By			Date of Approval			
No	**Question**	**Yes**	**No**	**E&S risk rating, -Low, Moderate, Substantial & High**	**Documents Required**	**Remarks/Comments**
	ESS1: Assessment and Management of Environmental and Social Risks					
1	Does the project affect downstream water flows?		No	Low	ESMP	There will be temporary interruptions during implementation, such as abstraction of river access for irrigation water.
2	Does it require clearing of trees, pasture/browse?	Yes		Low	ESMP	Little vegetations along the canal banks.
3	Is an Environmental and/or Social Assessment required?	Yes		Moderate	ESMP	ESMP to cover OHS, waste, community safety.
4	Is there a risk of diversion of project benefits?	Yes		Moderate	SEP + GM	Possible during temporary water disruptions.

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5	Is there a risk of lack of monitoring due to remoteness/insecurity?		No	Moderate	SMP	Liaising with local authorities while considering Beledweyne/ Somali's general context.
6	Will the project generate dust, noise, or air pollution?	Yes (minor)		Low	ESMP	Manage by water spraying & restricting to daytime works.
	ESS2: Labor and Working Conditions					
7	Any risk of child/forced labor?	Yes (potential)		Moderate	LMP / C-ESMP	Age verification, written contracts, prohibition of forced labor and worker-GM monitoring are required.
8	Does the activity include construction?	Yes		Moderate	ESMP	Works involve embankment earthworks, gabion installation and hydraulic structures.
9	Risk of lacking OHS for workers?	Yes		Moderate	OHS Plan	Toolbox talks, PPE, safe procedures.
10	Are workers provided with PPE?	Yes (mandatory)		Moderate	OHS Plan	Helmets, boots, gloves, and vests.
11	Are workers trained on safety/machinery?	Yes (mandatory)		Moderate	OHS Plan	Induction + toolbox training.
12	Risk of delayed/underpayment?	Yes (Possible)		Moderate	LMP	Ensure fair contracts, monitor payments.
13	Are women equally included in work opportunities?	Yes (to be ensured)		Moderate	LMP + GBV Plan	Promote equal access; monitor gender inclusion.
	ESS3: Resource Efficiency and Pollution Prevention					
14	Will the project use large volumes of materials?	Yes		Low	ESMP	Mainly soil/water for excavation.
15	Will it use water reducing community supply or water during or after construction, which will reduce the local availability of ground water and surface water?		No	Low	ESMP	River has sufficient flow; use mainly for curing/dust suppression.

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16	Will it create solid/vegetation wastes?	Yes		Low	WMP	Spoil & vegetation debris cleared in/around the canal banks
17	Will it create hazardous waste (fuels, oils)?	Yes (fuels/lubricants)		Moderate	ESMP + WMP	Store in bunded areas far from canal; spill kits available.
18	Will it result in wastewater discharges?		No	Low	ESMP	Canal follows water and rainwater may disturb the excavation. Use settling pits before release.
19	Will it disturb flora/fauna?		No	Low	–	Agricultural setting; no critical habitats nearby.
20	Will it require chemical inputs (pesticides/fertilizers)?		No	Low	–	Not applicable.
21	Risk of accidental spills/leaks?	Yes		Low	ESMP	Spill prevention measures, bunding, fire extinguishers.
	ESS4: Community Health and Safety					
22	Risk of community exposure to physical hazards (open excavation)?	Yes		Moderate	ESMP	Fence off site, signage, and safe crossing points.
23	Risk of traffic/road accidents?	Yes		Moderate	Traffic Management Plan / ESMP	Temporary truck and machinery movements share routes with pedestrians, farmers and livestock; implementing the site-specific TMP.
24	Risk of GBV/SEAH due to labor influx?	Yes		Low	GBV Action Plan	Awareness, code of conduct, reporting channels.
25	Risk of spread of communicable diseases (due to labor influx, sanitation, or hygiene issues	Yes		Moderate	ESMP	Hygiene, PPE, awareness campaigns.
26	Is an area where there have been insecurity incidents in the past 12 months?		No	Moderate	Security Management Plan	Coordinate with authorities, proportionate security.

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	ESS5: Land Acquisition, Restrictions on Land Use, Resettlement					
27	Will land be acquired?		No	Low	–	Works within canal footprint.
28	Will households/assets be displaced?		No	Low		no assets/households be displaced
29	Will there be restrictions of access?	Yes		Moderate	ESMP	Temporary during embankment and hydraulic structure works and rehab/reconstruction of auxiliary structures
30	Risk of loss of income, assets or livelihoods?		No	Low		No risk of assets, income loss or livelihoods.
31	Involve significant excavations, demolition, and movement of earth, flooding, or other environmental changes?	Yes		Low	ESMP	Excavation of canal bed only and
32	Will IDPs/vulnerable groups be affected?		No	Low	SEP + GM	No direct, but IDPs and vulnerable groups are included in consultation and compensation processes, if impacts arise.
	ESS6: Biodiversity Conservation					
33	Will the project affect sensitive ecosystems (e.g., intact natural forests, mangroves, wetlands) or threatened species?		No	Low	–	Canal lies in agricultural setting; no critical habitats nearby.
34	Will it cause soil erosion/degradation?	Yes (minor)		Low	ESMP	
35	Affect habitats/migration routes?		No	Low	–	No wildlife corridors nearby.
36	Spread invasive species via spoil?	Yes		Low	WMP	Approved spoil disposal only.
	ESS7: Indigenous Peoples / Historically Underserved Communities					
37	Are Indigenous Peoples or historically underserved traditional communities present in or around the project area?		No	N/A	–	No such groups identified communities in Beledweyne District/ Hirshabelle State or in generally Somalia

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38	Could the project affect Indigenous Peoples' rights, lands, resources, or culture?		No	N/A	–	Not applicable in Somalia context
	ESS8: Cultural Heritage					
39	Is site near archaeological/cultural heritage?		No	Low	–	None identified.
40	Potential for chance finds?	Yes	Low		Chance Find Procedure	Contractor to apply chance find protocol.
	ESS9: Financial Intermediaries					
42	Is the project implemented through financial intermediaries (banks, MFIs)?		No	N/A	–	It is a direct rehabilitation activity, not financial intermediation.
43	Will financial intermediaries on-lend funds to sub-projects?		No	N/A	–	Not applicable.
	ESS10: Stakeholder Engagement and Disclosure					
44	Risk of exclusion of women/youth in consultations?	Yes (Possible)		Moderate	SEP	Ensure equal participation.
45	Lack of grievance redress?		No	Low	GM	Functional GM in place.
46	Lack of government consultation?	Yes (generally weak)		Moderate	SEP	Continuous engagement with local authorities.
47	Historical exclusion of disabled persons?	Yes (Possible)		Moderate	SEP	Ensure accessibility & inclusion.
48	Lack of social baseline data?	Yes		Moderate	ESMP	Use rapid participatory appraisal + FAO data.
	EHS Screening (Environmental, Health & Safety)					
49	Does intervention cause dust/noise/air pollution?	Yes (minor)		Low	ESMP	Water spraying is required where necessary.

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50	Large volumes of construction materials?	Yes		Low	ESMP	Locally sourced where possible.
51	Solid waste properly managed?	Yes		Low	WMP	Contractor to implement WMP.
52	Are chemicals (fuel/lube) properly handled?	Yes		Moderate	ESMP	Bunded storage, away from the canal.
53	Wastewater discharge risks?	Yes (rainwater)		Low	ESMP	Settling pits before release.
54	Excavations/tunnels?	Yes		Low	ESMP	Embankment excavation; control spoil, secure work zones and reinstate disturbed riverbank areas.
55	Risk of over-exertion?	Yes		Moderate	OHS Plan	Task rotation, rest breaks, hydration.
56	Slips & falls risk?	Yes		Moderate	OHS Plan	Safe walkways, signage.
57	PPE availability?	Yes		Moderate	OHS Plan	Enforced PPE use, monitoring.
58	Workers trained in OHS?	Yes		Moderate	OHS Plan	Toolbox talks, induction.
59	High-risk activities?	Yes		Moderate	OHS Plan	Excavation, machinery, working near water; mitigation required.
60	Traffic Risks?	Yes		Moderate	OHS Plan	Temporary – Community (pedestrian), workers and trucks will require safe paths near rehab/reconstructing activities during implementation.

<table>
<tr><th>E&S Screening</th><th colspan="2">Results and Recommendation</th><th></th></tr>
<tr><td rowspan="2">Screening Results:

Summary of Critical Risks and Impacts Identified</td><td>Risk/Impact</td><td>Individual Risk/ Impact Rating</td><td>Mitigation

At the end of the screen process, tabulate the mitigation measures in an ESMP Format (see below)</td></tr>
<tr><td>Moderate</td><td>C</td><td rowspan="2">Summary of Screening Result Justification</td></tr>
<tr><td rowspan="2">Is Additional Assessment Necessary?</td><td colspan="2">Screening Result</td></tr>
<tr><td colspan="2">- Environmental and/or Social Assessment required where project is undertaken</td><td>Mitigation measures will follow CERC ESMF:

- SEP
- GM</td></tr>
</table>

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Evaluate the Risks/Impacts and reflect on options (see below)	- Water interruptions during excavation and rehab/reconstruction of auxiliary structures - Soil Erosion and Degradation - Community Health and Safety - Worker Health and Safety (OHS) - Noise from construction machinery and culvert construction may disturb nearby farmers and workers and prolonged exposure could cause hearing issues for laborers - Gender/social exclusion risks	- SMP - LMP - OHS - SMP - GBV Action Plan
	No ESIA is required.	
		This project was classified as Category C- Moderate
	No ESIA & full ESMP is required	**Simplified ESMP will be needed**

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Annex 2: Government Land Ownership Confirmation

Land Status Confirmation. The proposed works are confined to existing public Shabelle River embankment corridors and associated government-managed hydraulic-structure footprints in Beledweyne District. The Hirshabelle Ministry of Agriculture and Irrigation confirms that the works do not require private land acquisition, physical displacement or permanent economic displacement. The contractor shall remain within approved setting-out limits. Any unforeseen land, asset, crop or livelihood impact shall be reported before disturbance, screened under ESS5 and resolved under the project ESMP; work in the affected area shall not proceed until the required measure is approved. Temporary access restrictions shall be managed through advance notice, sequencing and safe alternative access.

Dowlad Goboleedka Hirshabelle Ee Somaaliya
Wasaaradda Beeraha & Waraabka
Xafiiska Agaasimaha Guud

ولا ية هر شبيلي الصوما ليه
وزارةالزراعة والراي
مكتب مدير العام

HIRSHABELLE SATE OF SOMALIA
MINISTRY OF AGRICULTURE & IRRIGATION
OFFICE OF THE DIRECTOR GENERAL

REF:XAG/WBW/DHSH/569/2026 DATE:19/02/2026

Subject: Conformation of land ownership for Rehabilitation of Beledweyne Embankments

To Whom It May Concern,

The Ministry of Agriculture and Irrigation, Hirshabelle State of Somalia, hereby confirms that the land allocated for the rehabilitation of the below River Embankments and its auxiliary structures in Beledweyne District is **public land fully owned and managed by Hirshabelle State**

No	District Location	Embankment Name	Length (m)	GSP Coordinates	
				Latitude	Longitude
1	Beledweyne	Dabaan 2	690	4.763838	45.188835
2	Beledweyne	Hoodleey 1	60	4.788054	45.212019
3	Beledweyne	Doologaal	1000	4.782101	45.198990
4	Beledweyne	Dabaan 1	870	4.772469	45.185886
5	Beledweyne	Hoodleey 2	64	4.789951	45.20757
6	Beledweyne	Bacaad 2	50	4.869169	45.153565
7	Beledweyne	Bacaad 3	85	4.864339	45.158727
8	Beledweyne	Bacaad 1	120	4.867546	45.15615

Following consultations with the District Administration, Village Development Committees (VDCs), and community elders, the Ministry certifies that:

- The land designated for these subprojects is free from private ownership, claims, or disputes.
- The subprojects will not cause any physical or economic displacement of people or assets.
- The land has been voluntarily allocated for public use in support of the Somalia Food Systems Resilience Program (S-FSRP).

This confirmation complies with **World Bank ESS5** and verifies that no involuntary resettlement or private land acquisition is associated with these subprojects

Sincerely **Abdullahi Ali Abdi**
Director General
Ministry of agriculture and irrigation Hirshabelle state

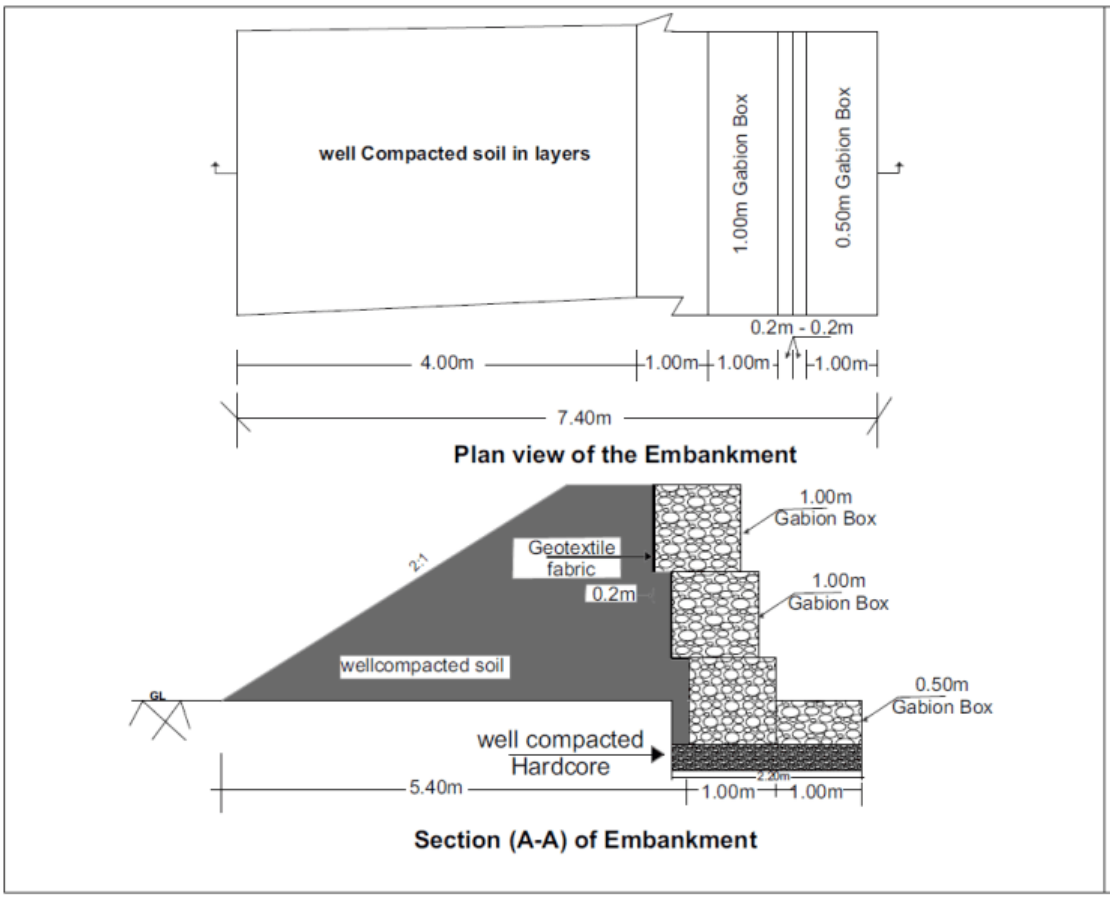
DOWLAD GOBOLEEDKA HIRSHABELLE · WASAARADDA BEERAHA & WARAABKA · XAFIISKA AGAASIMAHA GUUD · HIRSHABELLE STATE OF SOMALIA

Jowhar, Hirshabelle Somalia Email:dg.moai.hirshabellestate@gmail.com

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Annex 3: Drawings & Sections Layouts

Annex 3A: Drawings & Sections Layouts – Dabaan 1 River Embankment



Client

Ministry of Agriculture and Irrigation
Federal Republic of somalia
Ministry of Agriculture and Irrigation
Hirshabelle state of somalia

SFSRP - Somali Food Systems Resilience Project

Construction and Rehabilitation of River embankment at Dabaan 1, in Beledweyne Hirshabelle state

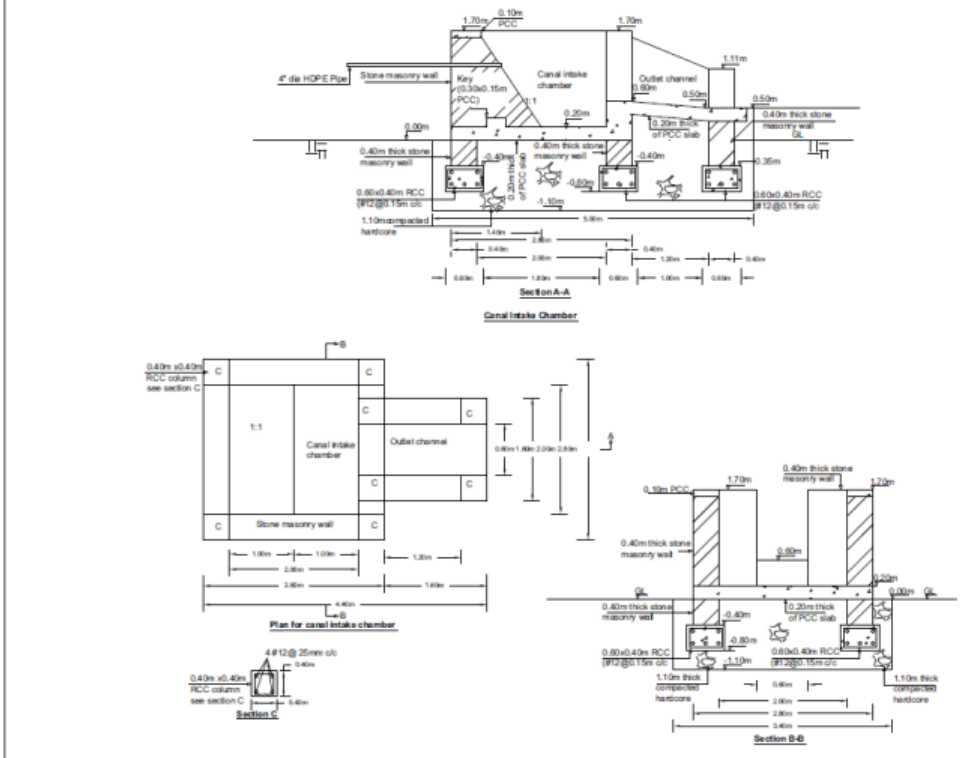
Designed by

ENG ABDIRAHMAN BASHIR DAHIR

checked by

ENG Yahye Husein mohamed

Date
20/January/2026
NOTE
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SCALE 1=100
Gabion Design
Start point 4.772469,45.185886
End point 4.765398,45.188447



Client

Ministry of Agriculture and Irrigation
Federal Republic of somalia
Ministry of Agriculture and Irrigation
Hirshabelle state of somalia

SFSRP - Somali Food Systems Resilience Project

Construction and Rehabilitation of River embankment at Dabaan 1, in Beledweyne Hirshabelle state

Designed by

ENG ABDIRAHMAN BASHIR DAHIR

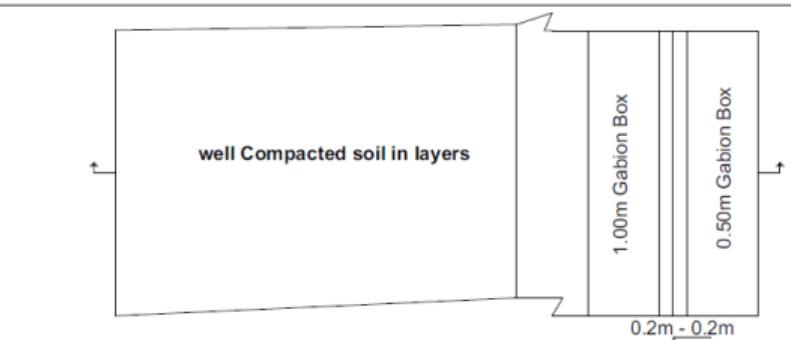
checked by

ENG Yahye Husein mohamed

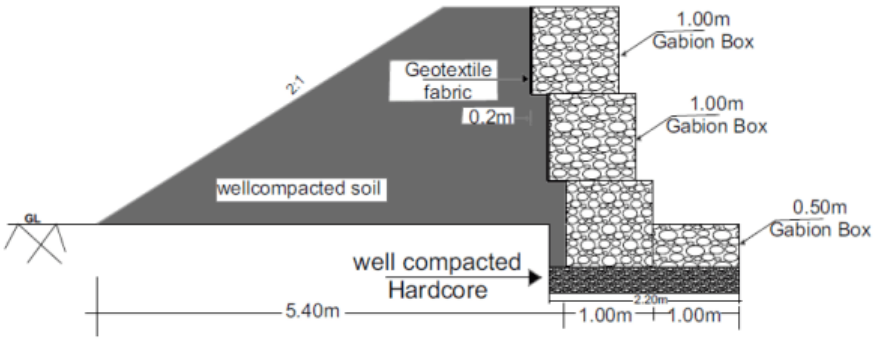
Date
20/January/2026
NOTE
All dimentions are in (M)
SCALE 1=100
Chamber Design

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Annex 3B: Drawings & Sections Layouts – Dabaan 2 River Embankment



Plan view of the Embankment



Section (A-A) of Embankment

Client

Ministry of Agriculture and Irrigation
Federal Republic of somalia
Ministry of Agriculture and Irrigation
Hirshabelle state of somalia

SFSRP - Somali Food Systems Resilience Project

Construction and Rehabilitation of River embankment at Dabaan 2, in Beledweyne Hirshabelle state

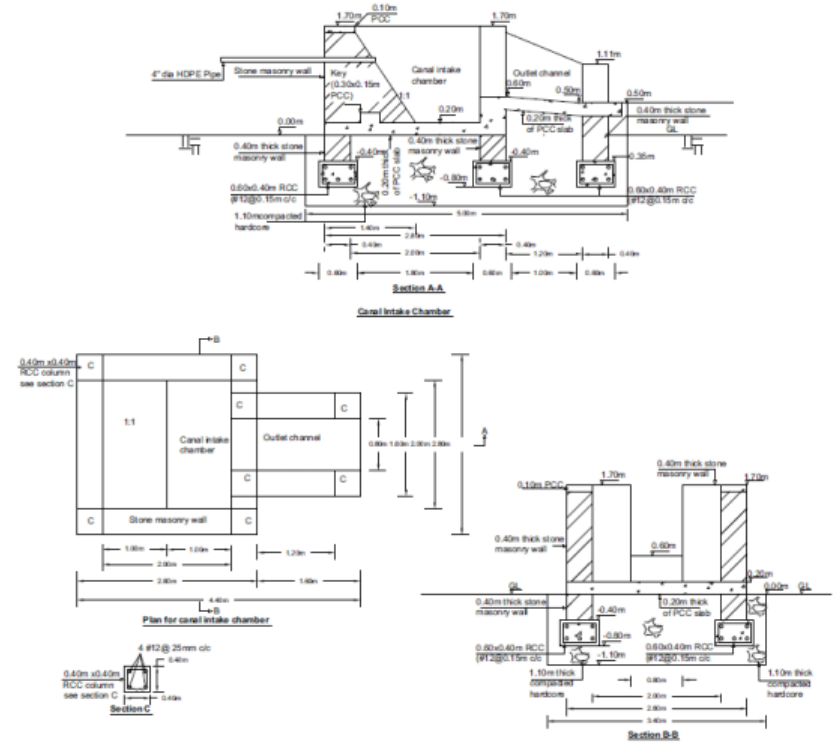
Designed by

ENG ABDIRAHMAN BASHIR DAHIR

checked by

ENG Yahye Husein mohamed

Date
20/January/2026
NOTE
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Gabion Design
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End point 4.757800,45.190432



Client

Ministry of Agriculture and Irrigation
Federal Republic of somalia
Ministry of Agriculture and Irrigation
Hirshabelle state of somalia

SFSRP - Somali Food Systems Resilience Project

Construction and Rehabilitation of River embankment at Dabaan 2, in Beledweyne Hirshabelle state

Designed by

ENG ABDIRAHMAN BASHIR DAHIR

checked by

ENG Yahye Husein mohamed

Date
20/January/2026
NOTE
All dimentions are in (M)
SCALE 1=100
Chamber Design

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Annex 4: Stakeholder Consultation Meeting Minutes and Attendances

Annex 4a: Hirshabelle MoAI Consultation Meeting Minutes and Attendance

1. **Consultation Dates:** 8/9/2025,
2. **Sub-project Types:** Canals & River embankments rehabilitation activities
3. **Specific Name of the Project:** FSRP
4. **Place of Consultation: State: Hirshabelle; Region:** Hiiraan; District: Beledweyne; Venue: MoAI-HSS office and Hillaac project community.
5. **Purpose of Consultation:** The consultation was organized to engage the Hirshabelle State Ministry of Agriculture and Irrigation (MoAI) and the Beledweyne District Administration regarding the planned river embankment and canal rehabilitation activities under the Somalia Food Systems Resilience Program (SFSRP).

   The meeting aimed to:

   - Discuss the condition and prioritization of the Dabaan 1 and Dabaan 2 embankment reaches and associated intake and drainage structures.
   - Identify institutional and community concerns, potential environmental and social risks, and appropriate mitigation measures in line with the World Bank Environmental and Social Standards (ESS).
   - Confirm the needs, priorities, and potential contributions of regional and district authorities, as well as community-level support.
   - Inform stakeholders about the technical, environmental and social data required for the ESMP, including affected households, embankment breaches, erosion and overtopping points, flood exposure, access constraints and construction materials.
   - Discuss embankment alignment, dimensions, breaches, overflow and erosion points, intake and drainage requirements, beneficiary areas, safe access, local materials and operation and maintenance responsibilities.

6. **Consultation Time:** Started 9:15
7. **Consultation Method:** Interviewing and discussion (group discussions and individual interviews)
8. **Consultation Agendas/ Issues:**
   - Coordination mechanisms among Hirshabelle State MoAI, FAO/S-FSRP technical team, and future contractors to facilitate site access and smooth implementation.
   - Rising river water levels during peak seasons and continued deterioration of weak embankment sections along the Jubba River.
   - Stakeholders preferred durable gabion and geotextile embankment rehabilitation with compacted backfill and controlled intake and drainage structures.
   - The importance of rehabilitating and upgrading intake structures to ensure reliable irrigation access, particularly after embankment elevation works.

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- The need for proper drainage outlets to prevent waterlogging and stagnant water near agricultural lands.
- The elevated-tank and pipeline-canal proposal related to a separate intervention and is excluded from the Dabaan cluster. Dabaan includes only the approved intake chambers and drainage inlet structures.

8. Additional Issues Raised During Consultation

- Several embankments reaches and uncontrolled irrigation openings were reported to be degraded and vulnerable to erosion or flood backflow.
- Multiple breached and weak sections were observed along river embankments, contributing to overflow and localized flooding.
- Both government representatives and community leaders emphasized the urgency of rehabilitating irrigation infrastructure to improve agricultural productivity and strengthen flood protection.

9. Agreed Agendas/ Issues

- The Hirshabelle State MoAI and Beledweyne District Administration supported rehabilitation of Dabaan 1 and Dabaan 2 and their controlled hydraulic structures.
- Local authorities committed to providing security support and coordination during assessment, construction, and post-construction phases.
- It was agreed that the Dabaan cluster would include only the approved canal intake chambers and drainage inlet structures; no elevated tank or pipeline system is included.
- All stakeholders agreed to cooperate fully with FAO/S-FSRP during implementation.
- The district administration committed to supporting communities in operation and maintenance (O&M) arrangements after rehabilitation.

10. Disagreed Agenda/issues including Reasons for Disagreement

- No major disagreements recorded

11. Consultation Ended Time: 15:30

Consultation Facilitators' Name & Role: Signature:

1. Shuaib Muse Cidhere, FAO Civil Engineer ----------
2. Eng. Mohamed Sanney ----------

Subproject's (IP) Seal: (optional) _____

Table 11: Annex 4A- Summary of Meeting Minutes – MoAI & Beledweyne District

Date	Location	Issues Raised	Raised By (Institutions)	Answer Provided (Short)	Responded By (Institution)
	Beledweyne – MoAI-HSS/District Office	Coordination among Hirshabele State MoAI, District Administration, FAO/FSRP, and contractors	Hirshabele State MoAI; FAO/FSRP	Full coordination agreed	FAO/FSRP; Hirshabele State MoAI

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08/09/2025	Beledweyne – MoAI-HSS/District Office	Degraded prioritized river embankments, uncontrolled irrigation openings and drainage interfaces	District Authorities; Hirshabele State MoAI	Rehabilitation supported	Hirshabele State MoAI
	Beledweyne – MoAI-HSS/District Office	Rising river water levels and deterioration of weak embankment sections	District Authorities	Flood protection measures agreed	Hirshabele State MoAI
	Beledweyne – MoAI-HSS/District Office	Preference for durable rehabilitation solutions based on site conditions	Hirshabele State MoAI; District Authorities	Site-specific solutions adopted	FAO/FSRP Technical Team
	Beledweyne – MoAI-HSS/District Office	Need for controlled intake chambers and drainage inlet structures at approved locations	Hirshabele State MoAI; District Authorities	Only approved intake and drainage structures are included; no tank	FAO/FSRP Technical Team
	Beledweyne – MoAI-HSS/District Office	Security and coordination during implementation	FAO/FSRP	Security support committed	District Administration
	Beledweyne – MoAI-HSS/District Office	Post-construction operation and maintenance (O&M)	Hirshabele State MoAI	O&M support confirmed	Hirshabele State MoAI

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Participants List/Attendance:

Food and Agriculture Organization of the United Nations

Date: 8/09/2025

Table 3: Consultation Attendants/ Participants: MOAI and Jowhar Disetrict

No.	Name of Participants	Stakeholder(community/government)	Age	Sex	Position /Role	Mobil phone No	Signature/Thumb
1	Mohamed Bashir Qasim	Goverment	53	M	Deputy Minister		
2	Abdurahman Sheikh Yalax	Goverment	39	M	Middle Shabele Coordina		
3	Mohamed Yasin Abdi	Government	35	M	HR - Director MOAI		
4	Mahad Ahmed Hilowle	FSRP-HSS	33	M	Env-Specialist		
5	Mohamud Abdurahman	FSRP- HSS	29	M	Social Safeguard		Mohamed

Food and Agriculture Organization of the United Nations

6	Cismaan Mohamed Mukhtar	Goverment	55	M	District Comissionaire		
7	Maxamed Abukar Cali	Goverment	28	M	Secretary Disetrict		
8	Abdukadir Hussein	FAO	37	M	JOSP Program Civil Eng.		Abdukadir
9	~~Shuaib Muse Gidhere~~	FAO	30	M	Civil Engineer		
10	Yahye Hussein Mohamed	FAO	32	M	Surveyor		
11	Abdishakur Osman Dahir	FAO	38	M	Civil Engineer		A. Shakur
12	Samale ~~Abdi~~ Mohamud	FAO	28	M	~~Civil~~ QA Eng		Samale
13	Mohamed Saney	Goverment MOAI	36	M	Community Mobilizer		

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Annex 4b: Beledweyne District Authorities Consultation

1. **Consultation Dates:** 23/9/2025,
2. **Sub-project Types:** River Embankment and Irrigation Canal Rehabilitation Works
3. **Specific Name of the Project:** FSRP
4. **Place of Consultation: State:** Hirshabelle, Regions: Hiiran, District: Beledweyne, District Office

Purpose of Consultation: The consultation was organized to engage the Beledweyne District Administration regarding the planned river embankment and canal rehabilitation activities under the Somalia Food Systems Resilience Program (SFSRP).

The meeting aimed at:

- Discuss the current condition of river embankments and irrigation canals, including flood-prone sections, open or breached embankments, and deteriorated canal segments.
- Share district-level knowledge on main river flow paths, overflow areas, and canal command areas affected by flooding and sedimentation.
- Align district priorities with those identified by the Hirshabelle State MoAI, FSRP, and technical teams for both embankments and canals.
- Confirm coordination, facilitation, and security support roles of the district administration during assessment and implementation.
- Identify institutional concerns, environmental and social risks, and safeguard considerations in line with the World Bank Environmental and Social Standards (ESS).

5. **Consultation Time:** Started 10:15
6. **Consultation Method:** Interviewing and discussion (group discussions and individual interviews)
7. **Consultation Agendas/ Issues:**

- Recurrent flood impacts in Beletweyne over the past several years and continued vulnerability of weakened river embankments.
- Poor condition of several irrigation canals, including sedimentation, bank erosion, and damaged intake points resulting from repeated flooding.
- Identification of main river flow paths, overflow points, open embankment sections, and priority canals requiring urgent rehabilitation.
- The interlinkage between embankment protection and canal functionality, emphasizing that canal rehabilitation is essential to restore agricultural production following flood control works.
- Coordination mechanisms between the Beletweyne District Administration, Hirshabelle State MoAI, FAO/S-FSRP, and contractors.

8. Additional Issues Raised During Consultation

- District authorities expressed appreciation to FAO and the Ministry of Agriculture and Irrigation for their sustained support to Beletweyne in responding to flooding over the past 6–7 years.

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- Continued flooding and canal deterioration were highlighted as major threats to livelihoods, food security, and local economic stability.
- Emphasis was placed on the need for integrated solutions, combining durable embankment rehabilitation with canal restoration and intake improvements.

9. Agreed Agendas/ Issues

- The Beletweyne District Administration welcomed the proposed river embankment and canal rehabilitation sub-projects and confirmed their alignment with district priorities.
- District authorities committed to liaising closely with the FSRP team, FAO, the State PIU, and the NPCU, and to facilitating all required administrative, coordination, and access support, particularly for contractors.
- The district shared information on priority embankment breaches, main river flow routes, and degraded canal sections, confirming alignment between district-identified sites and those prioritized by the Ministry.
- All parties agreed to maintain close coordination throughout assessment, construction, and post-rehabilitation phases.

10. Disagreed Agenda/issues including Reasons for Disagreement

- No major disagreements recorded

11. Consultation Ended Time: 15:30

Consultation Facilitators' Name & Role: Signature:

1. Shuaib Muse Cidhere, FAO Civil Engineer ----------
2. Eng. Mohamed Sanney ----------

Subproject's (IP) Seal: (optional) _____

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Table 12: Annex 4B- Table 10: Summary of the meeting minutes

Issues Raised	Raised By	Answer / Agreement Provided	Responded By (Officer / Institution)
Coordination mechanisms among FAO/S-FSRP, Hirshabele State MoAI, and District Authorities to ensure site access and smooth implementation	Hirshabele State MoAI; FAO/S-FSRP	Agreement reached on close coordination among institutions during assessment, construction, and post-construction phases	Shuaib Muse Cidhere, FAO
Rising river water levels during peak seasons and deterioration of weak embankment sections	District Authorities; Hirshabele State MoAI	Institutional support confirmed for embankment rehabilitation and flood protection measures under S-FSRP	Omer Osman Alasow, District Mayor
Preference for durable gabion and geotextile embankment rehabilitation with compacted backfill	Hirshabele State MoAI; District Authorities	Agreed that technically appropriate and site-specific solutions will be adopted based on assessments	Eng. Yahye Hussein, FAO
Importance of rehabilitating and upgrading intake structures following embankment elevation	Hirshabele State MoAI	Confirmation that intake rehabilitation will be incorporated into the irrigation system design	FAO/S-FSRP Technical Team
Need for proper drainage outlets to prevent waterlogging near agricultural lands	District Authorities	Drainage structures to be included in the design to mitigate waterlogging risks	Omer Osman Alasaw, District Mayor
Confirmation of the approved intake and drainage structures and exclusion of unrelated tank/pipeline components	Hirshabele State MoAI; District Authorities	Agreed to construct only the approved intake and drainage structures; no elevated tank or pipeline system is included	Shuaib Muse Cidhere, FAO
Degraded embankment reaches and uncontrolled irrigation openings	District Authorities; Hirshabele State MoAI	Confirmed rehabilitation of the prioritized embankment reaches and associated hydraulic structures	Eng. Mohamed Sanney, State MoAI
Presence of breached and weak river embankment sections causing localized flooding	District Authorities	Commitment to rehabilitate breached embankments as part of flood risk reduction measures	Eng. Ahmed Mohamud, State MoAI
Security and coordination support during implementation	FAO/S-FSRP	District Authorities committed to providing security and coordination support during all project phases	Maxamuud Cali Maxamuud, Deputy Mayor of Beledweyne District
Post-rehabilitation operation and maintenance (O&M) arrangements	Hirshabele State MoAI; District Authorities	District Authorities committed to supporting O&M arrangements in collaboration with relevant institutions	Omer Osman Alasow, District Mayor

Attended Participants List:

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Date: 23/09/2025

Table 3: Consultation Attendants/ Participants:

No.	Name of Participants	Stakeholder(community/government)	Age	Sex	Position /Role	Mobil phone No	Signature/Thumb
1	Cuman Cosman Cafatow	Local government	—	M	District chair	[redacted]	
2	Muxumed Cali Max'ud	—		M	Deputy	[redacted]3	
3	Axmed Afyare Dugow	—	—	M	Coordinator	[redacted]	
4	Abdiraxman garasow	—	—	M	office coord	[redacted]	
5	Cabdirizaq Hussein	—	—	M	Community mobilizer	[redacted]	

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Annex 4c: Community Consultation Minutes & Attendance – Dabaan 1 & 2

1. **Consultation Date:** 02/10/2025
2. **Sub-project Type:** River Embankment Rehabilitation
3. **Specific Name of the Project:** Rehabilitation of Dabaan 1 & Dabaan 2 River Embankments
4. **Place of Consultation: State: Hirshabeele, Region: Hiiraan , District: Beledweyne, Hillaac Village**
5. **Purpose of Consultation:**

The consultation was conducted to engage the Hillaac community and riverbank user representatives regarding the planned rehabilitation of Dabaan 1 and Dabaan 2 embankments under the Somalia Food Systems Resilience Project (S-FSRP).

The meeting aimed to:

- Discuss the current condition of the existing embankments and recurrent flood impacts along the Shabelle River.
- Identify priority failure points and structural weaknesses affecting settlements and farmland.
- Present the proposed gabion-based engineering solution and intake chamber design.
- Identify potential environmental and social risks and mitigation measures in line with the World Bank Environmental and Social Framework (ESF).
- Confirm community priorities, concerns, and support for the proposed works.
- Ensure inclusive participation of elders, women, youth, farmers, pastoralists, and vulnerable households in accordance with the Stakeholder Engagement Plan (SEP).

6. **Consultation Method**
    - The consultation used group discussions and individual interviews with elders, women, youth, IDPs, farmers, irrigation users and Water User Committee (WUC) representatives.
7. **Consultation Time Started:** 10:30

Table 13:Annex 4C- Key Issues Raised, Responses, and Agreements

Issues Raised	Raised By	Answer / Agreement Provided	Responded By (Officer / Institution)
Recurrent embankment breaches causing flooding of farms and residential areas.	Elders, farmers	Confirmed that 870m (Dabaan 1) and 690m (Dabaan 2) will be reinforced using engineered gabion structures with compacted backfill to prevent erosion and structural failure.	FAO Technical Team
Floodwater overflows affecting parts of Beledweyne town.	Community leaders	Explained that Dabaan 2 design includes drainage inlet structures to regulate runoff and prevent uncontrolled backflow during flood periods.	FAO / PIU

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Concern that higher embankment may restrict direct river water access for irrigation.	Farmers, irrigation users	Agreed to incorporate intake chambers to allow controlled and safe river water abstraction while maintaining flood protection integrity.	FAO Engineers
Temporary disturbance to farmland access during construction.	Farmers	Confirmed that contractors will coordinate with elders and farmland owners to maintain access routes and minimize disruption.	PIU
Safety risks during gabion installation and excavation works.	Women, elders	Confirmed that safety signage, controlled access, fencing of work zones, and community awareness sessions will be implemented in line with ESS4.	PIU/FAO Environmental Safeguards Officers
Request for prioritization of local labor.	Youth representatives	Confirmed local labor will be prioritized in line with LMP and transparent recruitment procedures.	PIU
Need for clear GM channels.	Women, youth	Confirmed that GM channels including hotline and focal points will be disclosed prior to construction. Confidential SEA/SH reporting mechanisms will also be operational.	FAO / PIU

Table 14:Annex 4C- Dabaan Community Meeting Summary

No	District	Location of Meeting	Date of Meeting	No. of Elders	No. of Women	No. of Men	Main Issues Raised	Agreed Actions	Names of Attendees
1	Beledweyne	Hillaac Village (Dabaan Area)	02/10/2025	5	10	18	Recurrent flooding; embankment erosion; access to river water; construction safety; labor opportunities	Full support for gabion reinforcement; intake chamber inclusion; local labor prioritization; GM operationalization; coordination with farmland owners	(Full attendance sheet attached in Annex)

8. Disagreed Agenda/issues including Reasons for

- No major disagreements were recorded. Some concerns regarding excavation scheduling and water disruptions were raised, but these were addressed by the commitment to phased works and advance community notifications.

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9. **12. Consultation Ended Time:** 15:05

Consultation Facilitators' Name & Role: **Signature:**

1. Shuaib Muse Cidhere, Civil Engineer ----------
2. Abdi-Shugri Abdullahi, Community Mobilizer ----------

Consulted Participant List/Attendance

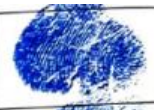
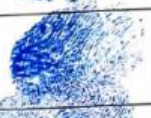
Food and Agriculture Organization of the United Nations

Date: 02/10/2025

Table 3: Consultation Attendants/ Participants: Damaan 1, 2 & 3 : Garasgaab

No.	Name of Participants	Stakeholder(community/government)	Age	Sex	Position /Role	Mobil phone No	Signature/Thumb
1	C/Qaadir Nuur Tawey	Community	43	M	Chair Elder		
2	Maxamed Ibrahim Cismaan	Community	54	M	Elder		
3	Cabdi Xussein Cismaan	Community	65	M	Elder		
4	Cabdiraxman Maxamed Xasa	Community	50	M	Elder		
5	Saalax Xassan Jiirow	Community	48	M	Elder		
6	Cismaan Max'ed Muumin	Community	49	M	Farmer		
7	Cali Mawliid Ibrahim	Community	~~30~~	M	Youth		
8	Cismaan C/qaadir Ciin	Community	51	M	Elder		
9	Cabdi Ibrahim Bare	Community	45	M	Farmer ~~Elder~~		
10	Nuur Xassan Faax	Community	71	M	Elder		
11	Cismaan Max'ed Nuur	Community	25	M	Youth		
12	Cabdi Cabdullahi Ciin	Community	58	M	farmer		
13	Cabdi Guure Dawad	Community	35	M	farmer		
14	Xasson Cismaan Qaxar	Community	45	M	farmer		
15	Maxamed Nuur Tawey	Community	44	M	farmer		
16	Siciid Cismaan Tawey	Community	31	M	farmer		
17	Cumar Cismaan Tawey	Community	39	M	farmer		
18	Samo Mawliid Ibrahim	Community	25	F	Farmer		
18	Kaawa Cali Ciimi	Community	45	F	farmer		
19	Saabiriin Aaden Axmed	Community	22	F	farmer		
20	Malyun Maxamed Nuur	Community	21	F	farmer		

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21	Xalaawi Muxumed Camalow	Community	52	F	Farmer	[redacted]6	
22	Sixiimo Muxumed Camalow	Community	45	F	Farmer	[redacted]6	
23	Muxumed Xassan Giin	Community	48	M	Farmer	[redacted]	
24	Xassan Cismaan Tawfiq	Community	32	M	Farmer	[redacted]	
25	Xabiiba Moscow Shaamow	Community	38	F	Farmer	[redacted]6	
26	Ubax Faarax Mateen	Community	32	F	Farmer	[redacted]3	
27	IQra Cabdi Cisman	Community	35	F	Farmer	[redacted]34	
28	Faadumo Cismen W.Dhere	Community	36	F	Farmer	[redacted]9	

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Annex 5: Grievance Redress Mechanism (GM) Tools and Templates

This annex presents the grievance process, reporting channels and key contacts for the Dabaan 1 and Dabaan 2 River Embankment Rehabilitation. Stakeholders may submit complaints at any time, anonymously or openly. The GM follows these steps:

- Step 1 – Submit a Complaint (Any Channel): Complaints may be submitted verbally or in writing through community leaders, WUC focal persons, the contractor, FAO field officers, the State PIU, or the toll-free numbers. SEA/SH cases bypass local structures and go directly to the PIU GBV Focal Point or FAO/OIG.
- Step 2 – Register and Acknowledge: The Hirshabeelle State PIU registers all complaints and acknowledges receipt (normally within 48 hours). Initial screening determines whether the issue can be resolved immediately or requires escalation.
- Step 3 – Assess and Resolve: The State PIU, FAO, and contractor collaborate to investigate and resolve issues—typically within 7–14 days. Technical issues may be escalated to NPCU if needed.
- Step 4 – Close or Escalate: If a resolution is accepted, the case is closed. If the complainant is not satisfied, the grievance may be escalated to NPCU or FAO Compliance, and ultimately to FAO OIG or the World Bank's GRS for serious cases.

Table 15:Annex 5 - GM Contact List (Project, State, National & FAO/OIG)

Level	Contact Person / Office	Contact Details	Notes
Project Level	WUC / Community Focal Points	Local contacts	First point of intake
State PIU – Hirshabeelle MoAI	Social Safeguards & GBV Team	**Email:** /gbv@fsrp.gov.so	State-level GM & GBV focal points
National PCU – MoAI-FGS	National FSRP GM Secretariat	**Hotlines: 570 / 540 (toll-free)**	National escalation channels
FAO Compliance Unit	Ibrahim Bare, AAP & Compliance Officer	Ibrahim.bare@fao.org	Responsible for FAO Somalia project accountability
	Head of Compliance, Risk Management, Accountability	Bakhta.Boualam@fao.org	Escalation for sensitive cases
FAO Somalia Complaint Hotline	FAO Feedback Hotline	+252 633 550 120	Phone/SMS option
FAO OIG – Independent Oversight	Office of the Inspector General	**Online: fao.ethicspoint.com Email: Investigations-hotline@fao.org / inspector-general-office@fao.org Mail: FAO OIG, Rome**	Serious, confidential, or unresolved cases

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Table 16:Annex 5 -GM Intake/register

GM Code	Date Received	Complainant (Optional)	Location	Issue Summary	Category	Action Required	Responsible Unit	Status	Date Closed	Notes

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SEA/SH Survivor-Centered Referral Pathway

This pathway ensures survivors can report safely and confidentially, without fear of retaliation or exposure. No personal details or written statements are required.

1. Safe and Confidential Reporting Options

Survivors may report directly to:

- State PIU GBV Specialist (confidential inbox): /gbv@fsrp.gov.so
- FAO Compliance Unit: Ibrahim.bare@fao.org
- FAO OIG (independent and confidential): fao.ethicspoint.com
- FAO OIG email: Investigations-hotline@fao.org

Note: SEA/SH cases must not be reported through community leaders or recorded in public registers.

2. Immediate Safety and Support

The GBV focal point ensures:

- Immediate safety assessment
- Confidential conversation
- No personal identification recorded
- Referral to local service providers (health, psychosocial, case management)
- SEA/SH cases are not mediated with alleged perpetrators and are kept separate from the general GM.

3. Coordination and Follow-Up

FAO and the State PIU coordinate discreetly to ensure the survivor receives assistance. No project staff investigate SEA/SH cases — they are treated strictly through survivor support and professional services.

4. Accountability Measures

The contractor must:

- Remove any implicated workers
- Retrain all personnel on the Code of Conduct
- Reinforce SEA/SH prevention during toolbox meetings
- Immediately remove any implicated workers from the site pending investigation.
- Apply contractual sanctions, including termination, in line with the Code of Conduct and national law.
- Report SEA/SH allegations promptly through confidential channels to the PIU/GBV focal point.
- Ensure non-retaliation against complainants and witnesses.

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Annex 6: Stakeholder Consultation Photos

Hirshabelle MoAI State meeting Photo Beledweyne District



Dabaan River Embankment Community Meeting Photos @ Dabaan Village



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