PREPARATION OF GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

CONTRACT NO. 43428762

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)FOR WATER AND SANITATION SHORT-TERM INTERVENTIONS PILOT DECENTRALIZATION OF 2 NO. WASTE WATER TREATMENT PLANTS; NEXT TO GAHEYR PRIMARY SCHOOL AND AT HAAR HAAR IDP CAMP IN SOUTH GALKAYO, SOMALIA

SEPTEMBER 2025

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LIST OF ABBREVIATIONS

AfDB		African Development Bank
BOD	-	Biological Oxygen Demand
CEDAW		Convention on the Elimination of All Forms of Discrimination against Women
C-ESMP		Construction – Environment and Social Management Plan
CoC		Code of Conduct
ESIRT		Environment and Social Incidence Reporting Toolkit
EHS		Environmental Health and Safety
EIA		Environmental Impact Assessment
ESMP		Environment and Social Management Plan
FAO		Food and Agricultural Organization
FGS		Federal Government of Somalia
GRC		Grievance Redress Committee
GM		Grievance Mechanism
GRM		Grievance Redress Mechanism
IDP		Internally Displaced Person
IFC		International Finance Cooperation
ILO		International Labour Organization
H&S		Health and Safety
NEMA	-	National Environmental Management Authority
MHM		Menstrual Hygiene Management
NGO		Non-Governmental Organization
NOx		Sulphur Oxides
SOx		Nitrogen Oxides
SOP		Standard Operating Procedures
SEAH		Sexual Exploitation and Abuse
SEP		Stakeholder Engagement Plan
SH		Sexual Harassment
SWALIM		Somalia Water and Land Information Management
OHS		Occupational, Health and Safety
Pm		Particulate Matter
PPE		Personal Protective Equipment
UNEP		United National Environment Program
TMP		Traffic Management Plan
ToR		Terms of Reference
UNICEF		United Nations Children Fund
WHO		World Health Organization

E.1 Definition of Terms

Table 0.1: Glossary Summary

Term	Definition
Effluent	Wastewater or treated water discharged from a treatment plant, septic tank, or industrial facility into the environment, typically into surface waters or for reuse.
Greywater	Wastewater generated from domestic activities such as laundry, dishwashing, and bathing, excluding toilet waste. It contains lower levels of contamination than black water.
Pit Latrine	A simple sanitation facility consisting of a hole in the ground over which a structure is built, used for the collection and containment of human waste. May be lined or unlined and can include various superstructure designs.
Sanitation	The provision of facilities and services for the safe disposal and treatment of human waste (urine and faeces) and the maintenance of hygienic conditions through services such as wastewater disposal.
Sedimentation	A water or wastewater treatment process in which suspended particles settle out of the water by gravity in a clarification tank or basin.
Septic Tank	An underground watertight chamber constructed of concrete, fiberglass, or plastic, designed to receive and partially treat domestic wastewater through settling and anaerobic bacterial digestion before discharge to a drain field.
Sludge	The solid or semi-solid material that settles at the bottom of septic tanks, sedimentation basins, or wastewater treatment units, consisting of organic and inorganic matter requiring periodic removal.
Suspended Solids	Small solid particles that remain in suspension in water or wastewater and do not dissolve, measured as Total Suspended Solids (TSS) in water quality analysis.
Ventilated Improved Pit (VIP) Latrine	An improved pit latrine design that includes a vent pipe to remove odors and reduce fly breeding, featuring a screened vent and a darkened interior to attract flies to the vent.
Wastewater	Water that has been used and contains dissolved or suspended waste materials from domestic, commercial, or industrial sources, requiring treatment before discharge or reuse.
Wastewater Treatment Plant (WWTP)	A facility designed to treat wastewater from various sources through mechanical, biological, and chemical processes to remove contaminants before safe discharge to the environment or reuse.

F. EXECUTIVE SUMMARY

F.1 Project Information

The Federal Government of Somalia has applied for funding from the African Water Facility, to help improve adaptability to climate change and create society resilience through the Building Resilience to Climate Change through WASH in South Galkayo, Project. The Project will support immediate key interventions, undertake preparation studies for bankable projects, which will include identification of site-specific climate risks and vulnerabilities, determination of appropriate climate adaptation and mitigation measures including strengthening watershed and WASH management in the targeted towns of Galkayo and its respective peripheral urban poor settlements and villages.

UNICEF Somalia appointed Tertiary Consulting Engineers Ltd in Joint venture with Vital Care Consultancy Limited to carry out the study in six months and come up with bankable investment projects to address the water and sanitation inadequacy in the city of South Galkayo.

The consultant is required to perform a water and sanitation infrastructure and management baseline assessment. In this regard the team shall be required to analyze current water, solid waste, latrine and fecal sludge management/treatment, wastewater and storm water drainage conditions and modality/functionality of the water and sanitation service providers. The Environment and Social Impact Assessment discussed in this report discusses Water and Sanitation Short-Term Interventions proposed for South Galkayo, Somalia. The proposed intervention will be installation of 2No. waste water treatment plants (DTF 1 & DTF 2) on a parcel of land along Jidka Road opp Gaheyr Primary School and at Haar Haar IDP camp within coordinates Latitude 6.753326^{o} and Longitude 47.451540^{o} and coordinates Latitude 6.692557^{o} and Longitude 47.442853^{o} respectively.

The proposed project will require a total estimated budget cost of 364,000 USD which comprises of construction cost of 132,000 USD each and an ESMP implementation cost of 100,000 USD.

F.2 Water and Sanitation Short Term Interventions

The scope of works will comprise of;

- Pilot decentralized wastewater treatment plants at public institutions - (Hospitals/Health centers and schools)
- Community awareness drives and Public-Private Partnerships strategic plan for management.
- Introduce community-led maintenance plans with user contributions or fee systems, form & train Community Sanitation Committees to oversee shared facilities.

F.3 Objectives of ESIA

Reference is made to the African Development Bank adopted an Integrated Safeguards System (ISS) (also referred to as the "2023 ISS") Environmental and Social Operational Safeguard 1: Assessment and Management of Environmental and Social Risk and Impact. The aim of this overarching Operational Safeguard (OS), together with the other Operational Safeguards (Oss) that complement it, is to mainstream environmental and social (E&S) considerations, including those related to climate change vulnerability. into Bank operations and thereby contribute to sustainable development in the continent. Therefore, the Objectives of the ESIA are aligned to the provisions of relevant environment laws of FSG and AfDB OS 1 as summarized below.

- Screen and categorize the project according to the significance of its potential environmental and social impacts, in line with the AfDB's Operational Safeguard 1 (OS 1) classification system.
- Define the scope of assessment (scoping) to identify key environmental and social issues, areas of influence, and project components requiring detailed study.
- Review existing information on environmental and socio-economic condition of the project area and baseline surveys.
- Review existing legal, institutional and policy framework relevant to the proposed project.
- Identify and evaluate significant potential impacts, both positive and negative of the proposed works.
- Provide appropriate mitigation measures for the management of environmental and social impacts associated with the Project
- Provide a platform for public and stakeholder to provide views, opinions and recommendations with regards to the Project.
- Develop and Environmental and Social Management Plan (ESMP) to guide in decision making and future auditing.
- To assess the relative importance of impacts of the alternative project designs, plans, materials and locations.
- Inform the Project design team on key Project components that require amendments or review in order the comply to safeguards provisions.
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F.4 Legal and Policy Regulatory Instruments

Federal Government of Somalia

The ESIA made reference to below listed Legal and Policy provisions in Federal Government of Somalia

Table F.1: FSG Legal Provisions

No.	Legal Provision	Description
1.	Constitution of Somalia (2012)	Establishes the right to a clean and healthy environment (Art. 25) and obligates the state to protect ecosystems, biodiversity, and natural resources (Art. 45).

2.	National Environmental Policy (NEP) (2017	Aims to promote sustainable development through integrated environmental management, pollution control, and natural resource conservation.
3.	Climate Change Policy (2020)	Provides national direction for climate mitigation and adaptation, focusing on resilience in water, agriculture, health, and energy sectors
4.	National Adaptation Plan (NAP) Framework	Framework for implementing Somalia's adaptation priorities under the Paris Agreement
5.	Environmental Protection and Management Act (2024)	Consolidates environmental protection measures, formalizes EIA and environmental audits, and strengthens enforcement
6.	National Environmental Policy (NEP	Updated NEP includes climate change, disaster risk reduction, and sustainable resource management.
7.	Environmental and Social Impact Assessment (EIA) and Audit Regulations	Provide detailed procedures for conducting EIAs, audits, public participation, and disclosure
8.	Water Resources Law	Governs sustainable use, allocation, and protection of water resources; prohibits pollution of water sources
9.	Forests and Wildlife Law	Provides for protection of forests, wildlife conservation, and biodiversity management
10.	Fisheries Law (1985)	Regulates exploitation of marine resources, prohibits discharge of pollutants into coastal waters
11.	Environmental Management Bill	Establishes environmental governance institutions, introduces a formal EIA process, and defines penalties for non-compliance

Institutional Framework

Table F.2: FSG Institutional Framework

No.	Institution	Relevance
1.	Ministry of Environment and Climate Change (MoECC)	National policy oversight on environment, climate change, and safeguards; custodian of the Environmental Protection and Management Act (2024) and EIA regulations.
2.	Ministry of Energy and Water Resources (MoEWR)	Oversees water policy, water quality standards, groundwater/water source protection, and wastewater regulation at national level
3.	Federal Member State Ministries (Galmudug)	Responsible for the implementation and coordination of water resource management and infrastructure development within the region.
4.	UNEP – Environment Program	Providing environmental expertise, coordinating water management, fostering integrated water resource management for resilience against drought and floods, and promoting nature-based solutions.
5.	UNICEF Somalia	Supports WASH programming in schools and health centres; often co-funds or provides technical support in sanitation projects
6.	AfDB	Project financier; requires compliance with 2023 ISS. Provides technical guidance, safeguard screening, and monitoring during project lifecycle

The African Development Bank Integrated Safeguards System (ISS)

In 2013, the African Development Bank adopted an Integrated Safeguards System (ISS) (also referred to as the "2023 ISS"), which established the Bank Group's commitment to sustainable development, consolidating and building on the Environment (2004) and Involuntary Resettlement (2003) safeguard1 policies, as well as cross-cutting policies and strategies on gender (Gender Strategy for 2021–2025, "Investing in Africa's Women to Accelerate Inclusive Growth"), and then the Civil Society Engagement Framework (2012).

The updated ISS improves the consistency of the Bank's approach to key thematic issues, Environmental and Social Assessment (ESA), and stakeholder engagement activities through their 10nr Oss. The 10nr E&S OSs set out the requirements for Borrowers relating to the identification and assessment of E&S risks and impacts associated with operations supported by the Bank.

The ten E&S OSs establish the standards that Borrowers shall meet, as appropriate, in projects, activities, and initiatives supported through Bank financing throughout the life cycle of operations. However, this project only triggers 9/10 of the OS as summarized below.

Table F.3: AfDB Operational Safeguards Summary

No	OS	Provisions
1	Operational Safeguard 1	Assessment and Management of Environmental and Social Risk and Impact
2	Operational Safeguard 2	Labour and Working Conditions
3	Environmental and Social Operational Safeguard 3	Resources Efficiency and Pollution Prevention and Management
4	Environmental and Social Operational Safeguard 4	Community Health, Safety and Security
7	Environmental and Social Operational Safeguard 7	Vulnerable Groups
10	Environmental and Social Operational Safeguard 10	Stakeholder Engagement and Information Disclosure

F.5 Baseline Setup

South Galkayo town is one of the largest cities in Somalia with an approximate population of 137,000 (International Crisis Group, 2015) which serves as the capital of the north-central Mudug region. It is semi-arid, receiving an average of only about 158mm of rainfall per year. Water sources include berkads (rainwater harvesting), shallow wells, and boreholes. The most reliable source of water is through the deep boreholes, although the water is brackish.

Half of households in Somalia reported lacking access to improved latrines. The situation is even more critical in high-density neighborhoods and informal IDP settlements, estimated at 72 verified IDP settlements as of March 2024, where sanitation facilities are overcrowded, poorly maintained, and often shared among many households. In some areas, significantly more common in rural areas than urban areas,

open defecation is still practiced due to a lack of accessible, safe toilets. During rainy seasons, the absence of proper drainage leads to flooded latrines, which spread fecal matter across South Galkayo municipality and residential areas—posing severe public health risks, including outbreaks of cholera, diarrhea, and other waterborne diseases.

The town relies on ground water for domestic use, livestock, and small-scale farming. Boreholes are generally between 90 meters to 260 meters deep and in some areas can be 400 meters deep. Shallow wells are usually less than 20 meters deep. While yields vary from one aquifer to another, most shallow wells yield between 2.5 and 10 m3/hr., borehole yields are mostly between 5 to 20 m3/hr. (FAO/SWALIM, 2012). However, the water supply cannot meet the demand of the current population, and the quality of water is saline requiring treatment to meet the WHO drinking water standards before distribution.

There are 14 no boreholes provide ground water source for South Galkayo town. The sources of energy for the water abstraction from boreholes are solar, power grid and generator. The boreholes are distributed to various locations in the town. Once the water is abstracted from it collected in the reservoirs, it is then distributed to the consumers through uPVC pipes which are laid along the road reserve. Both Arafat and Durdur Water companies have laid up their independent distribution network.

South Galkayo plays a vital economic role in central and southern Somalia, serving as a regional trade and service hub that connects southern regions, Galmudug State, and neighbouring Ethiopia. The town's economy is driven by a mix of formal and informal activities, with wholesale and retail trade forming a core income source. Shops and markets supply both imported goods—such as foodstuffs, fuel, and household items—and local products, making South Galkayo a major distribution point for surrounding rural areas.

Livestock and livestock products remain a critical economic driver, with Galkayo functioning as a major livestock trading centre that connects producers from rural areas with export routes through ports like Bossaso. The service sector—closely tied to this trade—supports veterinary services, transportation logistics, and export facilitation, creating employment opportunities across the town. Overall, South Galkayo's economy reflects a dynamic mix of trade, services, and remittance-fuelled entrepreneurship, which are vital to both urban livelihoods and rural-urban linkages.

Charcoal, used by wealthier households, and fuelwood, used by poorer households, restaurants and bakeries, provide most of the energy for cooking in Galkayo town. Unplanned urban development has led to deforestation for charcoal/fuelwood

production, unsanitary living conditions (lack of sewage treatment and proper waste disposal) and possible overexploitation of water resources.

The current climate variability of Somalia is that the amount of rainfall received across the country varies dramatically in time and space, from drought periods to erratic periods of intense downpours and flooding. The prominent observation from analysis of the weather station rainfall data, across all regions and seasons in Somalia, demonstrates a high inter-annual and inter seasonal variation in rainfall is shown to vary between the range of 57 mm and 660 mm at one weather station in central Somalia during a 20-year observation period (UNDP/ICPAC, 2013). Galmudug state, characterized by its hot, arid to semi-arid conditions has seasonal rainfall variations averaging 200mm.

Since 1960s, Somalia has experienced at least one major climate extreme event in each decade (Balint et al 2011). Major floods that have been experienced since 1960 include 1961, 1977, 1981, 1997-98, 2005, 2006 and 2009. Major drought events were experienced in 1969, 1976, 1984, 1987, 1999, 2001, 2004 and 2010. In the past decade (2001 to 2010), the country has been alternating from drought to floods within the years (FAO SWALIM, 2012). The observed pattern (IPCC 2007, 2012) shows increasing variability in rainfall for Somalia suggesting an increase in the frequency and severity of future droughts and flash flood events. Somalia is vulnerable to several natural hazards, including drought and floods, and is projected to be at even greater risk in the future due to climate change. The climate is mainly arid to semi-arid, and Somalia has one of the highest inter-annual variations of rainfall in Africa.

F.6 Stakeholder Consultations

A total of 5 key informant interviews and 6 Focused Group Discussions (FGD) were conducted with representatives from the following sectors. Additionally, Public participation forums were held from 3rd to 4th September, 2025 at the Five Star Hall Galkayo South.

Table F.4: Key Informant Interviews

Institution / Stakeholder	Date	Key Issues Discussed
Ministry of Women and Human Rights Development (MoWHRD) – Galmudug	May 31st 2025	Gender gaps in WASH policies, GBV referral pathways, FGM prevalence, and MHM needs
Ministry of Water and Energy – South Galkayo Office	May 30th 2025	Access to safe water, community water management, challenges in IDP settlements
Galkayo Local Authority (Municipal Office)	May 29th 2025	Urban sanitation, solid waste management, and community infrastructure needs
Ministry of Health – Galkayo Hospital	June 4th	Public health and hygiene, links between WASH and

Institution / Stakeholder	Date	Key Issues Discussed
	2025	maternal/child health
Representatives from Local NGOs (e.g., CISP)	June 4th 2025	Women's participation in service delivery, local, GBV issues, WASH interventions, community outreach

Table F.5: Focus Group Discussions

Group Type	Date	Location	Key Issues Raised
Women-headed households (IDP camp)	June 1st 2025	Hayaan Bacaadweyne Camp	Long distances to water points, lack of latrines, MHM challenges, security concerns
Adolescent girls (ages 13–18)	May 31st 2025	Hayaan Bacaadweyne Camp	Lack of MHM materials, school attendance issues, privacy in sanitation facilities
Men (local leaders & elders)	May 30th 2025	Town Center	Community roles in infrastructure, traditional norms, support for water systems
Female youth (ages 18–30)	May 31st 2025	Town Center	Vocational needs, participation in water committees, menstrual stigma
Male youth	June 2nd 2025	South Galkayo Market	Livelihood challenges, involvement in hygiene promotion, water source maintenance
Women entrepreneurs	June 2nd 2025	South Galkayo Market	Access to microfinance, sanitation in market areas, female business participation

Table F.6: Public Forums on 3rd to 4th September, 2025 at Five Star Hall

#	Issue	Mitigation
1	The proposed site location is unsuitable due to its close proximity to critical social infrastructure (health center, mosque, residential homes) and newly established vulnerable IDP households.	To relocate current health centre, IDPs settlement and stop town growing towards this direction or to assign another location for this project
2	Despite the positive outcomes, the project may generate environmental and social risks. These include vegetation loss, soil degradation, and pollution of water resources.	To minimize risks, environmental impact assessment (EIA) recommendations and environmental management plans (EMPs) must be implemented
3	A labor influx management plan and community awareness programs on health, gender, and education are recommended.	Local labor should be prioritized, and contractors must follow fair labor standards
4	Health and safety risks can be mitigated by enforcing occupational safety standards, providing personal protective equipment (PPE), training workers regularly, and monitoring pollution levels with appropriate dust and noise control measures.	Continuous monitoring and evaluation (M&E) will allow timely corrective actions, while a grievance redress mechanism will ensure community concerns are addressed. Alignment with Somalia's National Environmental Policy (2020) will further strengthen transparency, inclusivity, and sustainability in project implementation.

F.7 Project Positive Impacts

Table F.7: Project Positive Impacts summary

	Positive Impacts
Phase	
Construction	• **Employment Creation**: At construction stage workers will be deployed to help in construction and land preparation activities. This will include both skilled and unskilled personnel especially from the local population. The estimated job opportunities will be approximately 50 with 60-70% of workforce occupied by unskilled personnel and 30-40% occupied by skilled personnel. • **Income/Revenue to Government**: Income to government will be realized in terms of taxes generated during the acquisition of relevant statutory licenses which include but are not limited to Water Services License, EIA License, Business permit, Operators permit among others. Materials to be used during construction will also be taxable through revenues generated, the government will be capable of financing its responsibility to her citizens. • **Income to Other Businesses**: During implementation of the project, there will be need for transporters, suppliers of raw materials and other service providers, who will benefit from the proposed development
Operational	• Reduced pollution of natural hydrological systems in the area. • Reduced cases of water borne diseases associated with pollution of water resources by raw sewage. • Improve aesthetic outlook of Galkayo municipality that is currently comprised by raw sewer • Trigger development of modern infrastructure within Galkayo town due to availability of adequate sewer infrastructure. • Reduce distances covered by exhausters to sludge discharge points (reduced costs) • Residents will decommission pit latrines which are expensive to construct and unsustainable in the long run due to short fill-up duration.

F.8 Construction Phase Negative Impacts

A summary of negative Impacts anticipated during construction stage are summarized in the table below.

Table F.8: Construction Stage Negative Impacts and Impact ranking

Impact Area	Negative Impact	Ranking	Mitigation Measures
Water Resources	Surface/groundwater contamination from wastewater, drilling fluids, or accidental spills	**High**	Proper containment of wastewater and fuels; safe disposal of drilling fluids; establish buffer zones from water sources
Soil Resources	Excavation and soil disturbance leading to erosion and compaction	**Medium**	Backfilling, soil stabilization, and controlled excavation methods
Air Quality	Dust emissions and exhaust fumes from machinery	**Medium**	Regular water sprinkling, covering stockpiles, proper equipment maintenance
Noise & Vibration	Disturbance to hospital/school operations and nearby communities	**High**	Use of silencers, restrict noisy works to daytime, provide notice to institutions
Flora	Clearance of small vegetation for site preparation	**Low**	Minimize clearing, replant disturbed areas, avoid unnecessary removal
Solid & Liquid Waste	Improper disposal of construction debris, packaging, and wastewater	**High**	Segregate wastes, reuse/recycle where possible, dispose in designated sites
Traffic & Safety	Increased risk of accidents around schools/hospitals due to movement of construction vehicles	**High**	Traffic management plan, signage, speed limits, awareness to staff/students

F.9 Operation Phase Negative Impacts

Sanitation Interventions

The short-term interventions as detailed in the feasibility report will entitle (i) Deploy mobile desludging units to empty overflowing latrines, (ii) Construct emergency latrines and soak pits in high-density or flood-prone zones, (iii) Construction and rehabilitation of onsite waste water facilities- 100 Units of Septic tanks and soak pits -Public places and vulnerable communities and (iv) ***Pilot decentralized wastewater treatment at public institutions - (Hospitals/Health centers and schools)***. The interventions will pose negative pollution related impacts during operation that will be mitigated as summarized below.

Table F.9: Operation Phase Negative Impacts and Impact ranking

Impact Area	Negative Impact	Ranking	Mitigation Measures
Water Resources	Risk of contamination from poorly treated effluent, sludge mismanagement, or chemical leaks	**High**	Regular monitoring, proper sludge disposal, secondary containment for chemicals
Soil Resources	Soil pollution from leakage of treatment by-products or sludge	**Medium**	Safe storage and lined disposal sites for sludge, periodic soil testing
Air Quality	Odor emissions from sludge handling and chemical use	**Medium**	Odor control systems, proper ventilation, covering sludge drying beds
Noise & Vibration	Noise from pumps, blowers, and mechanical equipment	**Low–Medium**	Use noise-dampening equipment, regular maintenance, restrict high-noise operations
Flora & Fauna	Localized impact from effluent discharge affecting vegetation or	**Low**	Ensure effluent meets discharge standards, reuse treated water for

	water-dependent organisms		landscaping
Solid & Liquid Waste	Generation of sludge, chemical containers, laboratory waste	**High**	Segregate, treat, and dispose in compliance with environmental regulations; recycling where possible
Occupational Health & Safety	Risks to staff from exposure to chemicals, pathogens, and machinery	**High**	PPE use, staff training, emergency response plans, safe chemical handling procedures

F.10 Environmental and Social Management Plan

Table F.10: ESMP Summary

Anticipated Impact	Mitigation Measures	Responsibility	Monitoring Parameter	Budget (USD)
Contamination, disruption of drainage	Proper pipeline alignment; install silt traps; no waste dumping in water sources	Contractor, Supervising Engineer	Water quality checks; drainage condition	4,500
Erosion, loss of topsoil, contamination	Stockpile topsoil; erosion control; safe fuel/oil storage	Contractor, EHS Officer	Area disturbed vs. footprint; evidence of erosion; spill records	5,000
Dust nuisance, respiratory impacts	Water spraying; cover stockpiles; maintain equipment	Contractor, EHS Officer	Dust levels (visual); service logs; complaints	3,500
Nuisance to communities/workers	Restrict works to daytime; maintain equipment; provide ear protection	Contractor, Clerk of Works	Noise readings; PPE use; complaints	2,500
Vegetation loss, habitat disturbance	Minimize clearance; avoid unnecessary removal; restore disturbed areas	Contractor, District Environmental Office	Area cleared vs. design; restoration evidence	3,000
Accidents, restricted access, conflicts	Fence sites; provide signage; traffic management plan; awareness sessions	Contractor, Local Administration	Records of accidents; fencing/signage present; grievance log	5,500
Accidents, injuries, unsafe exposure	Provide PPE; training; enforce protocols; emergency preparedness	Contractor, Supervising Engineer	Incident records; PPE provision; training logs	6,500
Strain on services, GBV/SEA incidents, tension	Hire locally; enforce Code of Conduct; GBV/SEA awareness and reporting	Contractor, District Labor Office	% local hires; GBV/SEA cases resolved; grievances	5,500
Pollution, soil/water contamination	Segregate waste; provide bins; licensed hauler; prohibit open burning	Contractor, Local Authority	Waste disposal records; site condition	4,000

Loss of cultural heritage	Train workers; stop work & notify authorities	Contractor, Supervising Engineer	Records of chance finds & actions taken	1,000
				41,000

F.11 Findings and Recommendations

The AfDB has an ISS that includes Operational Safeguards (OS), and Environmental and Social Procedures (ESAP) used for risk assessment and classification. This particular proposed project is under category 2.

Assessment Recommendations:

- The Bid documents prepared for the Project incorporate the Environment, Social Health and Safety Provisions discussed under Chapter 7 of this report (Environment and Social Impact Assessment and Mitigation Measures).
- The contractors through the support of ESHS officer will ensure that all workers sign Code of Conduct (CoC) before site deployment
- The supervising and contractor will undertake training of personnel on Environment, Social, Health and Safety matters tailored to the Project Scope prior to commencement of works
- The contractor will through the ESHS officer apply the provision of Environment and Social Management Toolkit (ESIRT) in management of incidences and accident's during project implementation stage
- The contractor will prepare monthly and quarterly reports on status of implementation of Environment and social compliance measures discussed in this report.
- Contractor will be required to commit to implementing the Environment, Social Health and Safety (ESHS) Provisions by (ii) Hiring ESHS officers, (ii) Developing site specific (C-ESHS) and Sub Plans listed under Table 7-1 and (iii) Implement Provisions of the Plans and Undertake Monthly and Quarterly reporting of ESHS compliance.

1. BACKGROUND INFORMATION

1.1 Project Information

South Galkayo, located in the Mudug region of Somalia and serving as a major urban center in Galmudug State, is experiencing rapid urbanization driven by rural-urban migration, internal displacement due to conflict and climate shocks, and natural population growth. Over the past decade, this growth has strained the town's limited infrastructure, especially its water, sanitation, and hygiene (WASH) services. The town's sanitation challenges are compounded by its arid climate, limited government capacity, and recurring episodes of drought and conflict that continue to displace populations from surrounding rural areas.

The majority of South Galkayo residents rely on on-site sanitation solutions, primarily traditional pit latrines and unlined or poorly constructed septic tanks, many of which are located in high-density and flood-prone areas. These facilities are often inadequate, unsafe, and unhygienic, leading to frequent overflows, groundwater contamination, and the spread of disease. The situation is particularly dire in informal settlements and IDP camps, where poor access to desludging services and waste management exacerbates the risk of public health crises.

With a population exceeding 100,000 as of 2023 and early 2024, including more than 14,000 IDPs, South Galkayo's existing water and sanitation systems are overwhelmed. Water supply remains irregular and expensive, disproportionately affecting vulnerable groups such as women and children, who often bear the burden of water collection. Sanitation services are equally deficient, especially in schools, health facilities, and informal settlements, where sharing of basic toilets is common. Fecal sludge management (FSM) is non-functional, and there is no city-wide sanitation strategy or reliable infrastructure to support future growth

The Terms of Reference (ToR) for this project stress the urgent need to develop climate-resilient, scalable, and context-appropriate sanitation solutions for South Galkayo. This includes decentralized wastewater treatment systems (DEWATS), fecal sludge treatment plants (FSTPs), and resilient on-site sanitation options, particularly for high-risk, flood-prone, and informal settlements. The sanitation master plan must also integrate land use, population projections, and infrastructure planning while promoting community engagement and institutional coordination. To address these gaps, the Federal Government of Somalia—with support from the African Water Facility—is implementing the "Building Resilience to Climate Change through WASH in South Galkayo" project.

1.2 The Project Location

South Galkayo is located in the southern part of Galkayo City, within the Mudug region of Somalia's Galmudug State. The town lies within the catchment of several seasonal drainage channels that flow from the surrounding semi-arid plateaus during the Gu (April–June) and Deyr (October–December) rainy seasons. These ephemeral waterways, commonly known as "Toggas", temporarily carry stormwater runoff, often resulting in localized flooding in low-lying neighbourhoods. While these seasonal rivers remain dry for much of the year, their impact during rainfall events is significant, particularly in informal settlements and flood-prone zones across South Galkayo.

The location of the town is as presented in the figure below in the Federal Republic of Somali.

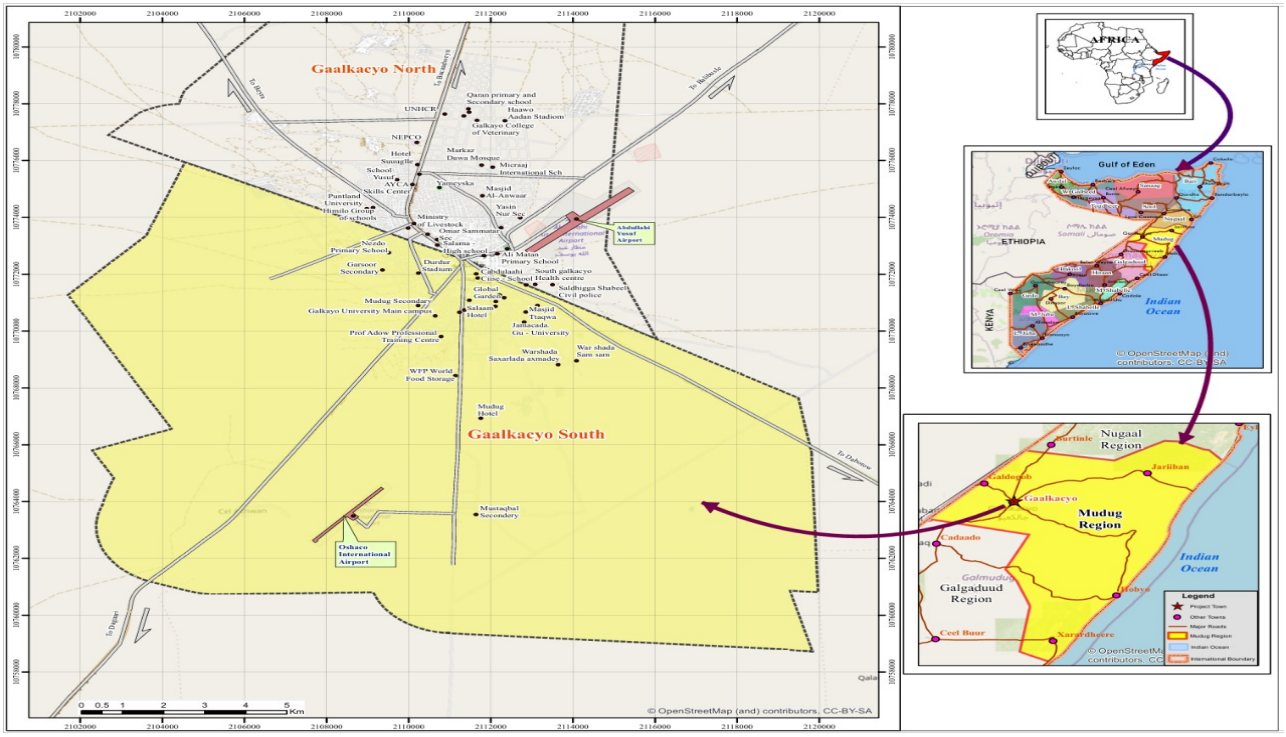


Figure 1.1: Study Area of South Galkayo

The proposed waste water treatment plant (DTF 1) will be installed at a parcel of land along Jidka Road next to Gaheyr Primary School at coordinates Latitude 6.753326° and Longitude 47.451540° and proposed waste water treatment plant (DTF 2) will be installed at Haar Haar IDP camp; coordinates Latitude 6.692557° and Longitude 47.442853° as presented in the figures below;

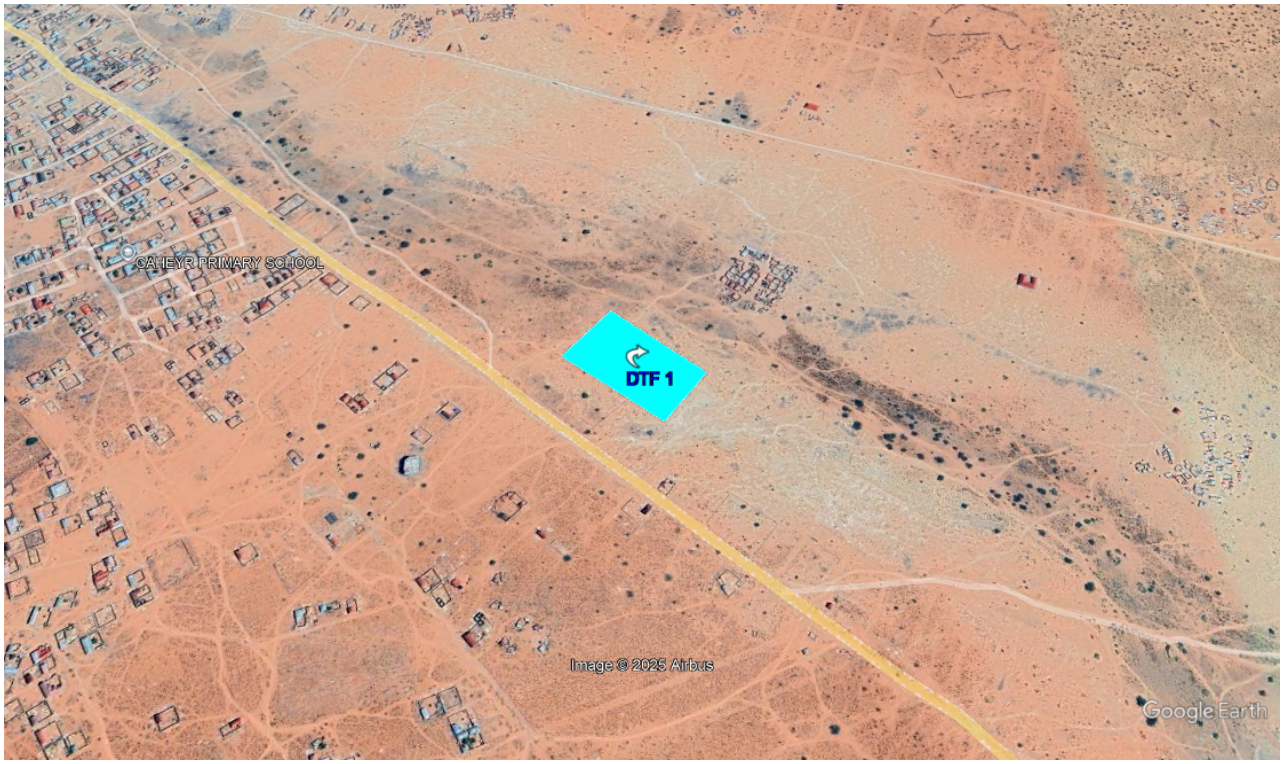


Figure 1.2: Layout Location of DTF 1

Source: Google Earth

Figure 1.3: Layout Location of DTF 2
Source: Google Earth

Galkayo is located in the north-central part of Somalia, and is the capital of Mudug region, which connects the Northern and Southern parts of the country. Also, the town is located at an intersection crossroad area, which makes South Galkayo a thriving trade town. Goods from the Bosaso port in the north-east, Berbera in the north-west, agricultural products from the south and livestock from Ethiopia all find their way and exchange hands in Galkayo. The distance from Galkayo to Somalia's Capital City of Mogadishu is approximately 721 km and it is 229km from Garowe, Puntland state of Somalia. Its Global Positioning System is 6° 47' 14.1828'' N and 47° 26' 21.2496'' E.

1.3 Local Administration

Galkayo is a major city in central Somalia and is divided into two administrative zones: North Galkayo, administered by Puntland, and South Galkayo, which serves as a key district under the Galmudug State in Somalia's federal system. South Galkayo is the administrative capital of the Mudug region within Galmudug and plays a central role in the region's governance and service delivery. The town's administration is led by a local council and a mayor, who are responsible for overseeing essential public services including sanitation, water supply, health, and urban development. The implementation of decentralization reforms and democratization efforts, such as local elections, has further shaped governance in the area.

South Galkayo has a diverse and densely settled population, made up of multiple Somali clan groups, with major representation from the Hawiye clan family, particularly the Sa'ad sub-clan of

Habar Gidir. Population estimates are critical for effective planning, especially in managing urban expansion, internal displacement, and resource allocation. The presence of both permanent residents and a large number of internally displaced persons (IDPs) t Haar Haar, Calanely and Hawlwadaag IDP camps due to recurrent droughts and conflict has significantly increased pressure on basic services, particularly in informal settlements. This dynamic population landscape highlights the need for inclusive, data-driven urban governance and sustainable infrastructure development.

1.4 Objectives of ESIA

Reference is made to the African Development Bank adopted an Integrated Safeguards System (ISS) (also referred to as the "2023 ISS") Environmental and Social Operational Safeguard 1: Assessment and Management of Environmental and Social Risk and Impact. The aim of this overarching Operational Safeguard (OS), together with the other Operational Safeguards (Oss) that complement it, is to mainstream environmental and social (E&S) considerations, including those related to climate change vulnerability. into Bank operations and thereby contribute to sustainable development in the continent. Therefore, the Objectives of the ESIA are aligned to the provisions of relevant environmental laws of FSG and AfDB OS 1 as summarized below.

- Screen and categorize the project according to the significance of its potential environmental and social impacts, in line with the AfDB's Operational Safeguard 1 (OS 1) classification system.
- Define the scope of assessment (scoping) to identify key environmental and social issues, areas of influence, and project components requiring detailed study.
- Review existing information on environmental and socio-economic condition of the project area and baseline surveys.
- Review existing legal, institutional and policy framework relevant to the proposed project.
- Identify and evaluate significant potential impacts, both positive and negative of the proposed works.
- Provide appropriate mitigation measures for the management of environmental and social impacts associated with the Project
- Provide a platform for public and stakeholder to provide views, opinions and recommendations with regards to the Project.
- Develop and Environmental and Social Management Plan (ESMP) to guide in decision making and future auditing.
- To assess the relative importance of impacts of the alternative project designs, plans, materials and locations.
- Inform the Project design team on key Project components that require amendments or review in order the comply to safeguards provisions.
- .

1.5 Assessment Methodology

The assessment was guided by Good International Industry Practice (GIIP) guide on preparation of Environmental and Social Impacts assessments as presented in **figure 1.3** below.

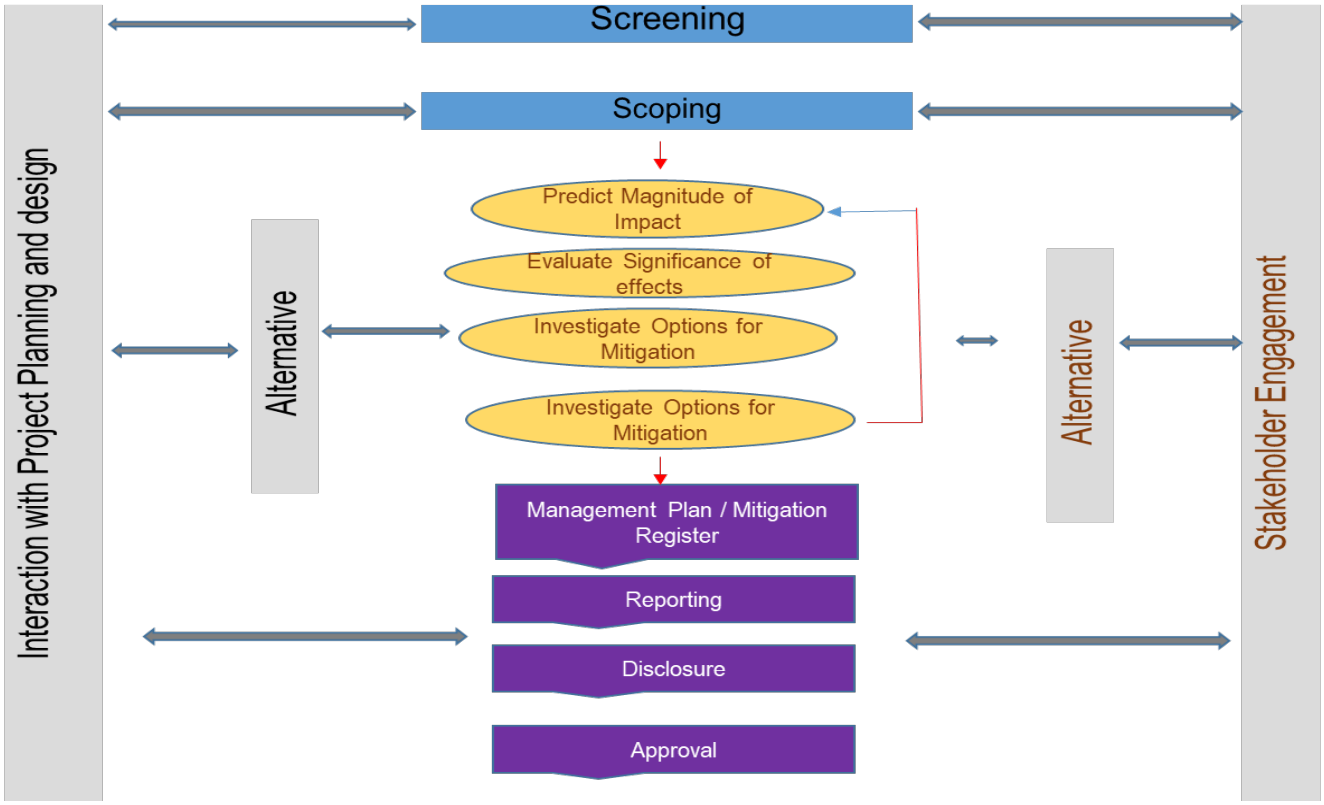


Figure 1.4: Impact Assessment Process

1.5.1 Initial Screening and Baseline Assessment

To provide a context within which the impacts of the Project can be assessed, a team of environmentalists undertook a site visit, within the months of May and June, 2025 along the proposed water pipeline alignments using the Project KML files. The purpose of the visit was to identify bio physical and socio-economic data and receptors. The focus was to understand the baseline setup of flora and fauna, water resources, soils, land use and landscape as well as secondary literature review.

1.5.2 Stakeholder Engagement

Stakeholder engagements inform of community meetings, Key Informant Interviews (KII) and Focused Group Discussions (FGD) were conducted during the ESIA process to inform project stakeholders of the proposed project and explain the likely impacts, both positive and negative, during the project life cycle. Stakeholder Identification and analysis was done in close liaison with the local administration with Galkayo Town. Detailed Stakeholder Consultation process is presented separately under chapter 5 of this report.

1.5.3 Impact Assessment Methodology

Impact identification and assessment starts with scoping and continues through a structured impact assessment process. The principal steps followed are summarized in **Figure 1.3** above and comprises the below listed steps.

Table 1.1: Principal Steps of Impact assessmentStep 1 -	**Impact prediction** – This step involves identifying and forecasting the potential environmental and social impacts that could result from the proposed Project and its related activities. Environmental resources likely to be impacted may include air, water, soil and biodiversity while social receptors include land use, business disruptions, and vulnerable groups
Step 2 -	**Impact evaluation** -Once potential impacts are identified, they are assessed to determine their overall significance. This evaluation considers, the magnitude of the impacts, the sensitivity and values of the affected environmental or social receptors.
Step 3 -	**Mitigation and enhancement** – Appropriate measures are proposed to address the impacts identified. For negative impacts, mitigation measures are designed to avoid, minimize, reduce or compensate for the adverse effects on the environment and communities. As for positive impacts, enhancements measures are developed to strengthen the beneficial outcomes
Step 4 -	**Residual impact evaluation** – This final step involves reassessing the significance of impacts after applying the proposed mitigation and enhancement measures. It helps in determining residual impacts that would remain even with effective implementation of the measures. This evaluation is essential in analysing the sustainability of the proposed mitigation measures and in making informed decision making including the need for additional safeguards

1.5.4 Impact Evaluation Methodology

Impact evaluation is a structured and detailed assessment process used to determine the significance of the identified impacts in Step 1. This process involves key steps, commencing with the characterization of each potential impact and finalising with an overall significance rating. The process is outlined below.

Characterizing Impact Attribute.

The terminology used to describe impact characteristics is shown in the table below

Table 1.2: Impact characteristics

Characteristic	Definition	Designation
Type	A Descriptor indicating the relationship of the impact to the Project (in terms of cause and effect	Direct, Indirect, Induced
Extent	The 'reach' of the impact (e.g., confined to a small area around the Project Footprint, Projected for several km etc.)	Local, Regional, International
Duration	The time period over which a resource/ receptor is affected	Temporary, Short term, long term Permanent
Scale	The size of the impact (e.g., the size of the area damaged or impacted, the fraction of a resource that is lost or affected, etc.)	No fixed designation, intended to be a numerical value or a qualitative description of intensity
Frequency	A measure of the constancy or periodicity of the impact	No fixed designation, intended to be a numerical value or a qualitative description

2. Impact Type Definitions

The type of impact is further defined as follows in the table below

Table 1.3: Impact Type Definitions

Definition	Designation
Direct	Impacts that result from a direct interaction between the Project and a resource/receptor (e.g., between occupation of a plot of land and the habitats which are affected
Indirect	Impacts that follow on from the direct interactions between the Project and its environment as a result of subsequent interactions within the environment (e.g., viability of a species population resulting from loss of part of a habitat as a result of the Project occupying a plot of land).
Induced	Impacts that result from other activities (which are not part of the Project) that happen as a consequence of the Project (e.g., influx of camp followers resulting from the importation of a large Project workforce).

3. Unplanned Events and Likelihoods

For unplanned events such as accidental spills or equipment failures, an attribute described as likelihood is assessed. This refers to the probability of an event occurring during the Projects lifecycle under normal operating conditions. The likelihood of an unplanned event occurring is designated using a qualitative scale, as described in the table below

Table 1.4: Definition of Likelihood

Likelihood	Definition
Unlikely	The event is unlikely but may occur at some time during normal operating conditions
Possible	The event is likely to occur at some time during normal operating conditions.
Induced	Impacts that result from other activities (which are not part of the Project) that happen as a consequence of the Project (e.g., influx of camp followers resulting from the

	importation of a large Project workforce).
Likely	The event will occur at normal operating conditions (i.e., it is essentially inevitable).

4. Assigning Magnitudes.

Once an impact's characteristics are defined, each impact is assigned a magnitude which is a measure of the severity of the impact on the resource or receptor. Magnitude is a function of a combination of the following impact characteristics:

- Extent
- Duration
- Scale
- Frequency

The magnitude designations themselves are universally consistent, but the descriptions for these designations vary on a resource/receptor-specific basis. The universal magnitude designations are:

- Positive
- Negligible
- Small
- Medium
- Large

In the case of a positive impact, no magnitude designation (aside from 'positive') is assigned. It is considered sufficient for the purpose of the area of influence to indicate that the Project is expected to result in a positive impact, without characterizing the exact degree of positive change likely to occur.

In the case of impacts resulting from unplanned events, the same resource/receptor-specific approach to concluding a magnitude designation is utilized, but the 'likelihood' factor is considered, together with the other impact characteristics, when assigning a magnitude designation.

5. Evaluating Sensitivity, Vulnerability and Importance

Parallel to magnitude, the sensitivity, vulnerability and importance of each affected resource or receptor are assessed. These terms collectively describe how susceptible the receptor/resource is to be impacted. Considerations may include legal protection, government policy, stakeholder views and economic or cultural value.

As in the case of magnitude, the sensitivity/vulnerability/importance designations themselves are universally consistent, but the definitions for these designations vary on a resource/receptor basis. The sensitivity/vulnerability/importance designations used herein for all resources/receptors are:

- Low
- Medium
- High

6. Determining Impact Significance

Once the magnitude of impact and sensitivity/vulnerability/importance of resource/receptor are characterized, the significance was assigned for each impact. Impact significance was designated using the matrix shown in the table below.

Table 1.5: Impact Significance

		Sensitivity / Vulnerability / Importance of Resource / Receptor		
Magnitude of Impact		Low	Medium	High
	Negligible	Negligible	Negligible	Negligible
	Small	Negligible	Minor	Moderate
	Medium	Minor	Moderate	Major
	Large	Moderate	Major	Major

The matrix applies universally to all resources/receptors, and all impacts to these resources/receptors, as the resource/receptor-specific considerations were factored into the assignment of magnitude and sensitivity, vulnerability and importance designations that enter into the matrix.

1.5.5 Mitigation and Enhancement Measures

Further, once the significance of an impact was characterized, the next step was to evaluate what mitigation and enhancement measures are warranted. For the purposes of this assessment, the following order or hierarchy was applied for development of mitigation:

- Avoid at Source, reduce at Source: avoiding or reducing at source through the design of the Project (e.g., avoiding by siting or re-routing activity away from sensitive areas or reducing by restricting the working area or changing the time of the activity).
- Abate on Site: add something to the design to abate the impact (e.g., pollution control equipment, traffic controls, perimeter screening and landscaping).
- Abate at Receptor: if an impact cannot be abated on-site then control measures can be implemented off-site (e.g., noise barriers to reduce noise impact at a nearby residence or fencing to prevent animals straying onto the site).
- Repair or Remedy: some impacts involve unavoidable damage to a resource (e.g., agricultural land and forestry due to creating access, work camps or materials storage areas) and these impacts can be addressed through repair, restoration or reinstatement measures.
- Compensate in Kind, Compensate Through Other Means: where other mitigation approaches are not possible or fully effective, then compensation for loss, damage and disturbance might be appropriate (e.g., planting to replace damaged vegetation, financial compensation for damaged crops or providing community facilities for loss of fisheries access, recreation and amenity space).

The priority in mitigation for the Project was to first apply mitigation measures to the source of the impact (i.e., to avoid or reduce the magnitude of the impact from the associated Project activity), and then to address the resultant effect to the resource/receptor via abatement or compensatory measures or offsets (i.e., to reduce the significance of the effect once all reasonably practicable mitigations have been applied to reduce the impact magnitude

Residual Impact

In addition, once mitigation and enhancement measures were specified the next step in the Impact Assessment Process was to assign residual impact significance. This is essentially a repeat of the impact assessment steps discussed above, considering the implementation of the proposed mitigation and enhancement measures.

1.5.6 Management and Monitoring and Audit

The final stage in the impact assessment process was the development of a management plan for implementing controls and mitigation and monitoring effectiveness. Monitoring is done to verify that: a) impacts or their associated project components remain in conformance with applicable standards; and b) mitigation measures are effectively addressing impacts and compensatory measures and offsets are reducing effects to the extent predicted. An Environmental and Social Management Plan (ESMP), which is a compilation of all actions identified in the impact assessment, is provided in Chapter 7. This includes mitigation measures, compensatory measures and offsets and management and monitoring activities.

2. PROPOSED PROJECT INTERVENTIONS

2.1 Project Proponent

The project proponent is the federal Government of Somalia, through the Ministry of Energy and Water Resource with technical support aligned to AfDB and UNICEF water sector interventions. The proponent is responsible for financing, construction oversight, and eventual operation and maintenance of the components.

2.2 Proposed Waste Water Treatment Intervention Components in South Galkayo

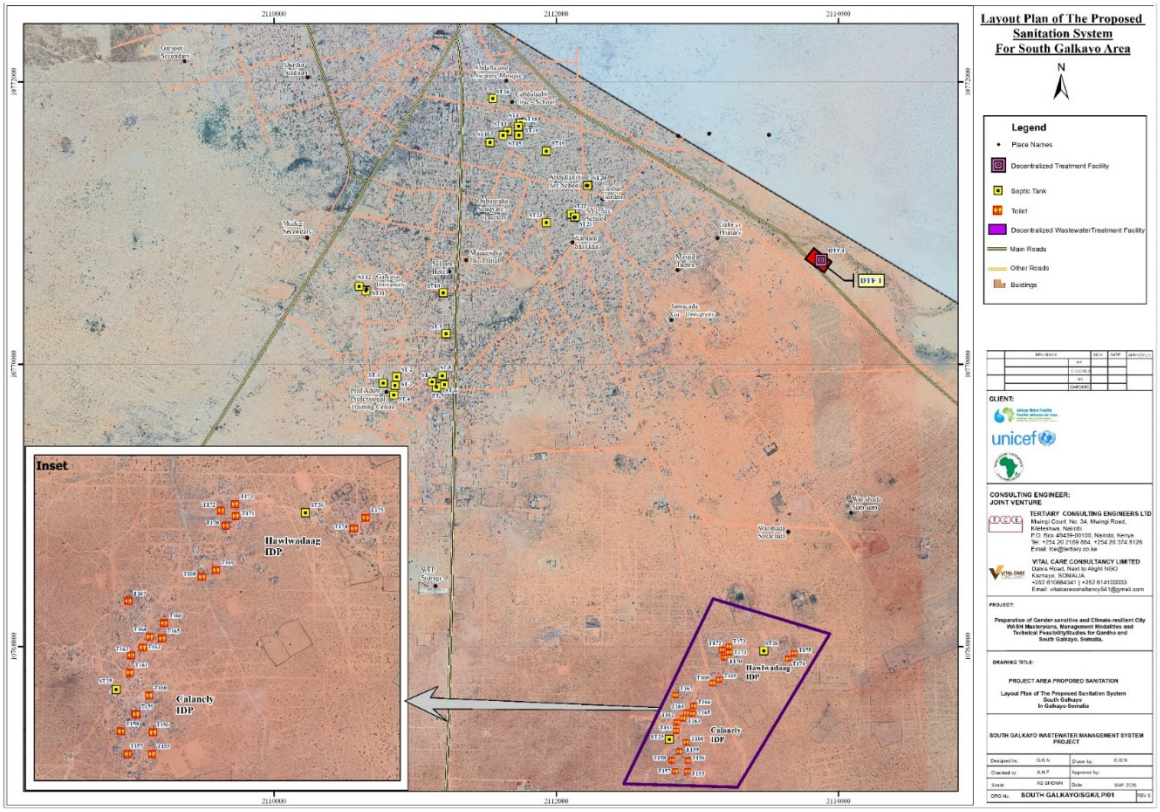
The scope of works will comprise of;

- Pilot decentralized wastewater treatment plants at public institutions - (Hospitals/Health centers and schools)
- Community awareness drives and Public-Private Partnerships strategic plan for management.
- Introduce community-led maintenance plans with user contributions or fee systems, form & train Community Sanitation Committees to oversee shared facilities.

2.3 Project Location

The proposed waste water treatment plant (DTF 1) will be installed at a ¼ acre parcel of land along Jidka Road next to Gaheyr Primary School at coordinates Latitude 6.753326° and Longitude 47.451540°. and proposed waste water treatment plant (DTF 2) will be installed at Haar Haar IDP camp; coordinates Latitude 6.692557° and Longitude 47.442853°

Figure 2.1: Layout Plan of the Project Area



2.4 Estimated Project Costs for Galkayo

Based on the adopted unit rates, the cost estimates for waste water treatment facility for South Galkayo are summarized in the **table 2-1** below

Table 2.1: Estimated Project Costs

No.	Position/Description	Unit	Quantity	Unit Cost (USD)	Total Cost (USD)
1	Pilot decentralized wastewater treatment along Jidka Road next to Gaheyr Pri. School and at Haar Haar IDP Camp	No.	2	132,000	264,000
2	Introduce community-led maintenance plans with user contributions or fee systems, form & train Community Sanitation Committees to oversee shared facilities	L/S	1	50,000	50,000
3	Public-Private Partnerships strategic plan for management	Job	1	20,000	20,000
	Total				**334,000**

2.5 Project Phases:

1. Phase I (Immediate): Detailed design, community consultations, and construction of the initial ponds and treatment units.
2. Phase II (Intermediate): Construction of the full series of ponds and the dedicated sludge handling facilities (drying beds).
3. Phase III (Long Term): Commissioning the plant, training operators, and establishing a plan for the reuse of treated water in local agriculture or afforestation.

2.6 Equipment and Material to be Used:

1. **Construction**: Excavator, backhoe, concrete mixer, compactors. Materials include cement, gravel, pipes, and possibly a geo-membrane liner for the ponds.
2. **Operation:** Maintenance tools and a vacuum truck for periodic sludge removal.

2.7 Waste Streams:

1. **Construction:** Excavated soil, rock, and construction debris.
2. **Operation:**
    - Treated Effluent: Safely treated water for reuse.
    - Stabilized Sludge: Larger quantities of sludge that can be composted and used as fertilizer.
    - Screenings & Grit: Solid materials removed at the inlet for disposal.

2.8 Project Design

Conceptual and detailed engineering design: influent screening, primary settling, secondary treatment (ponds/wetlands/biological reactors), sludge handling/drying, disinfection, tertiary polishing (if reuse planned). Include hydraulic and process design for peak and dry-season flows.

Design for local conditions: low-tech/resilient options (stabilization ponds, constructed wetlands) where grids are weak; include solar pumping and low-energy aeration where needed.

Sludge management design: dewatering beds, drying lagoons, safe transport routes, options for co-composting or controlled landfill.

Reuse & discharge plan: standards for irrigation reuse, aquifer recharge, or safe discharge to downstream environments.

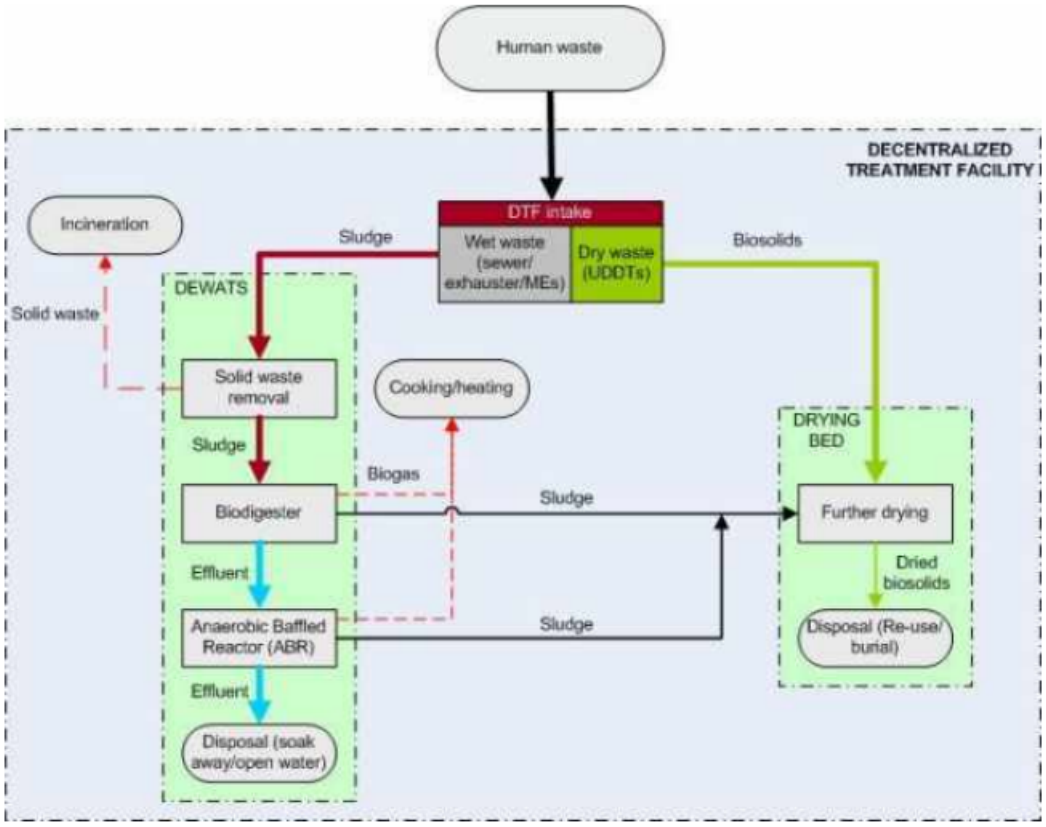


Figure 2.2 Schematic diagram of the Decentralized Treatment Facility (DTF)

3. SITE BASELINE INFORMATION

3.1 Climate

South Galkayo's climate is of arid and semi-arid just like Somalia's terrain consists mainly of arid and semi-arid plateaus, plains, and highlands. Most of the country is flat, rising in the southern and central regions to a few hundred meters above sea level near the Ethiopian border. Somalia's Arid and Semi-Arid Lands (ASALs) make up more than 80 percent of the country's landmass and are characteristically prone to extreme weather conditions, including high mean surface temperature, periods of extended drought, and highly erratic rainfall and strong winds (UNDP/ICPAC, 2013).

The county has an average annual rainfall of about 250 mm. However, there are variations in spatial distributions of rainfall, with about 500 mm recorded annually in the northern highlands and between 300 and 500 mm in the southern regions. The coastal plains register only between 50-150 mm. A few small areas along the coastal strip of Somalia are classified as sub humid. Rainfall in Somalia has great spatial and temporal variability. Seasonal rainfall is dominated by the north and south movement of the Inter-Tropical Convergence Zone (ITCZ), delineated into four seasons:

- Jiilaal: dry season from December to March. The north-east monsoon is in dominance and conditions are generally dry and warm/hot. The northern parts of the country experience some cool and dry air during this season, while the central and southern parts experience very hot conditions.
- i Gu': rainy season starts from April to June. Relatively wet and hot conditions prevail, with Gu' considered as the major rainy season in the country. The southern regions receive more rains than the north. Occasionally, the Gu' season extends into June or July because of the Xagaa rains, which are produced by the onset of the moist onshore winds.
- Xagaa: dry season is from July to September. The south-west monsoon dominates, bringing relatively cool conditions, with showers along the coast, but dry inland.
- Deyr: rainy season is from October to November. The rainfall received in this season is less than that of the Gu' rainy season.

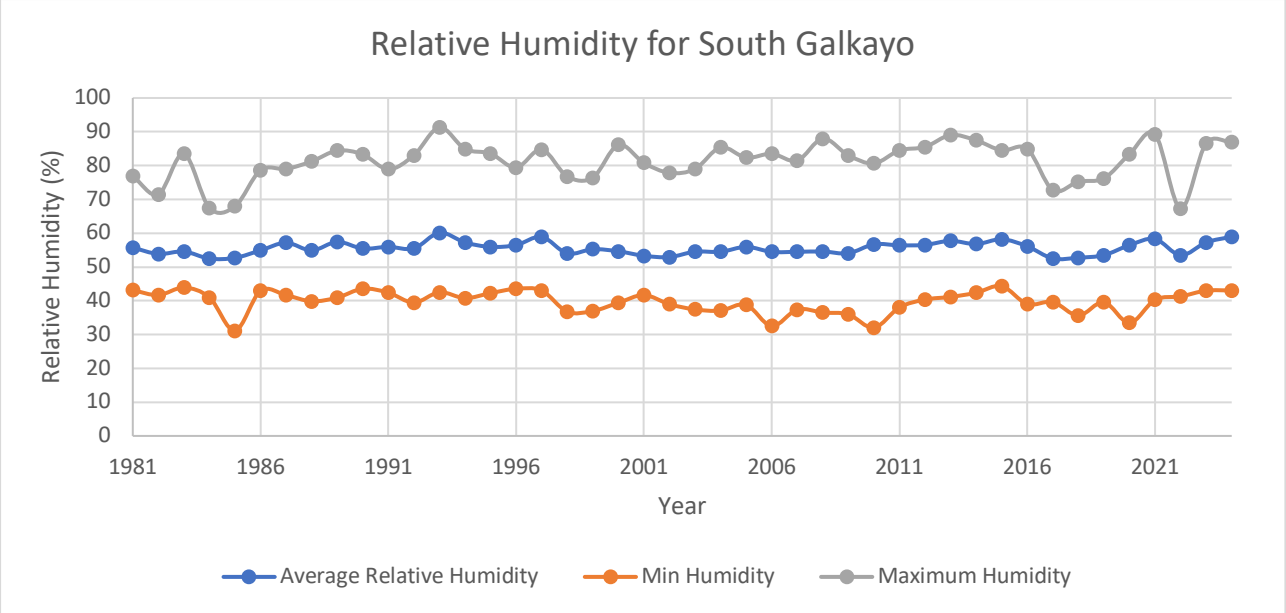


Figure 3.1: Relative Humidity of South Galkayo
Source: Google

The Average high and low temperatures are as presented in the figure below. The months of March and October having the highest average high temperatures.

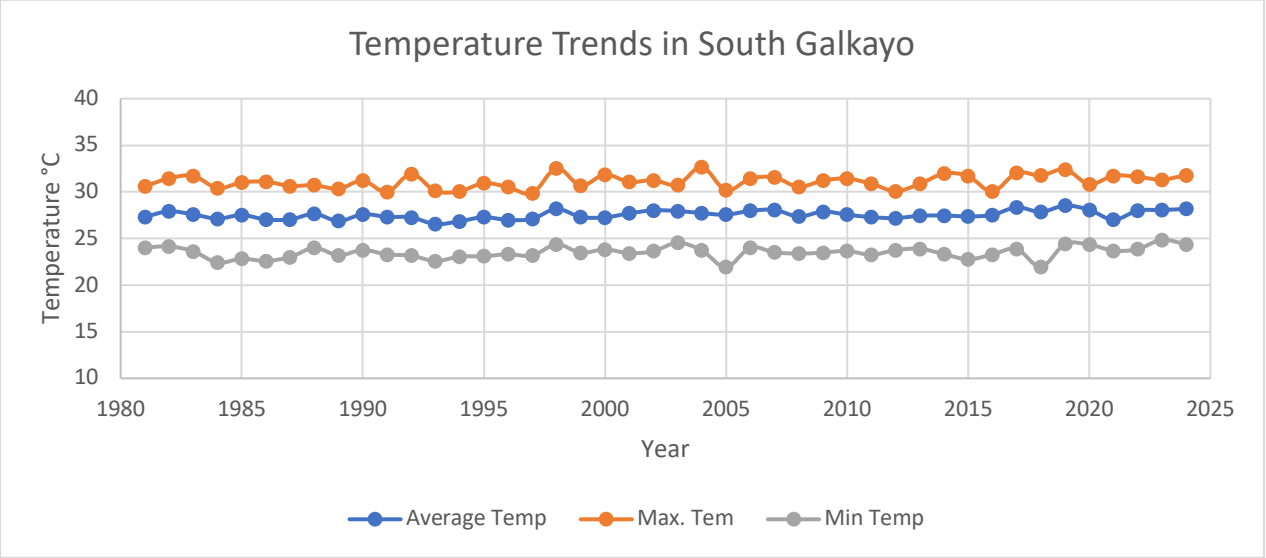


Figure 3.2: Average High and Low Temperature in South Galkayo from 1981 - 2024
Source: Google

The figure below shows the annual rainfall patter from 1981 to 2023. The trend shows that 1981 -1985 was the worst dry period while from 2021 rainfall has been at its peak.

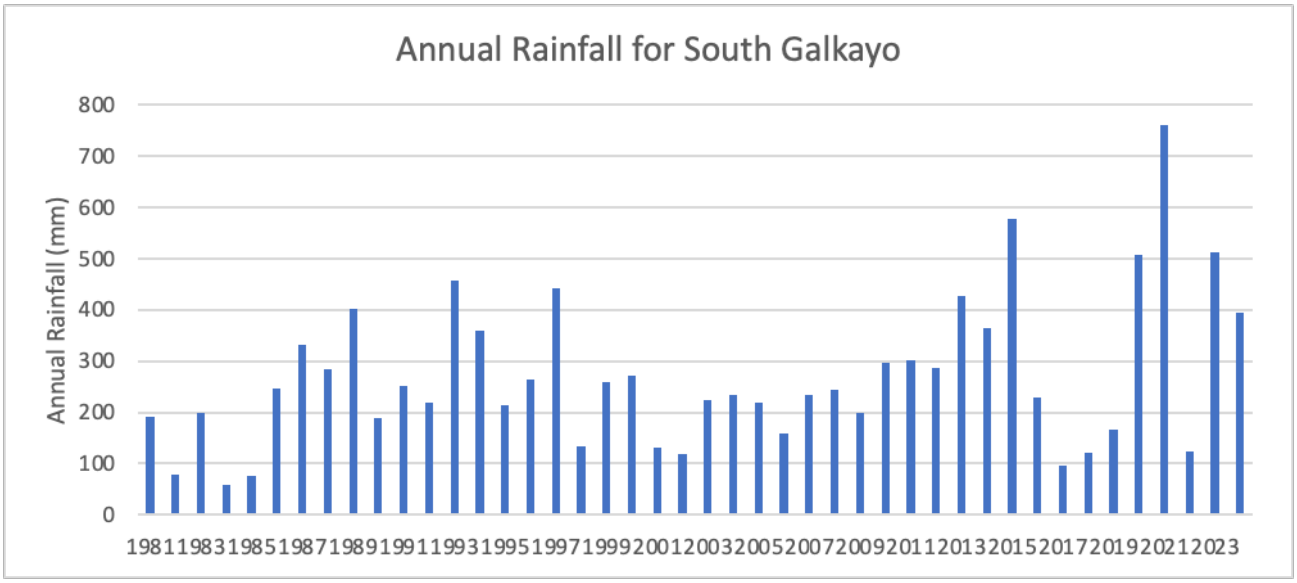


Figure 3.3: Annual rainfall for South Galkayo

3.2 Physical and Topographic Conditions

3.2.1 The Project Town Location

South Galkayo is located in the southern part of Galkayo City, within the Mudug region of Somalia's Galmudug State. The town lies within the catchment of several seasonal drainage channels that flow from the surrounding semi-arid plateaus during the Gu (April–June) and Deyr (October–December) rainy seasons. These ephemeral waterways, commonly known as "Toggas", temporarily carry stormwater runoff, often resulting in localized flooding in low-lying neighbourhoods. While these seasonal rivers remain dry for much of the year, their impact during rainfall events is significant, particularly in informal settlements (IDP Camps) and flood-prone zones (low-lying areas) across South Galkayo.

The location of the town is as presented in the figure below in the Federal Republic of Somali.

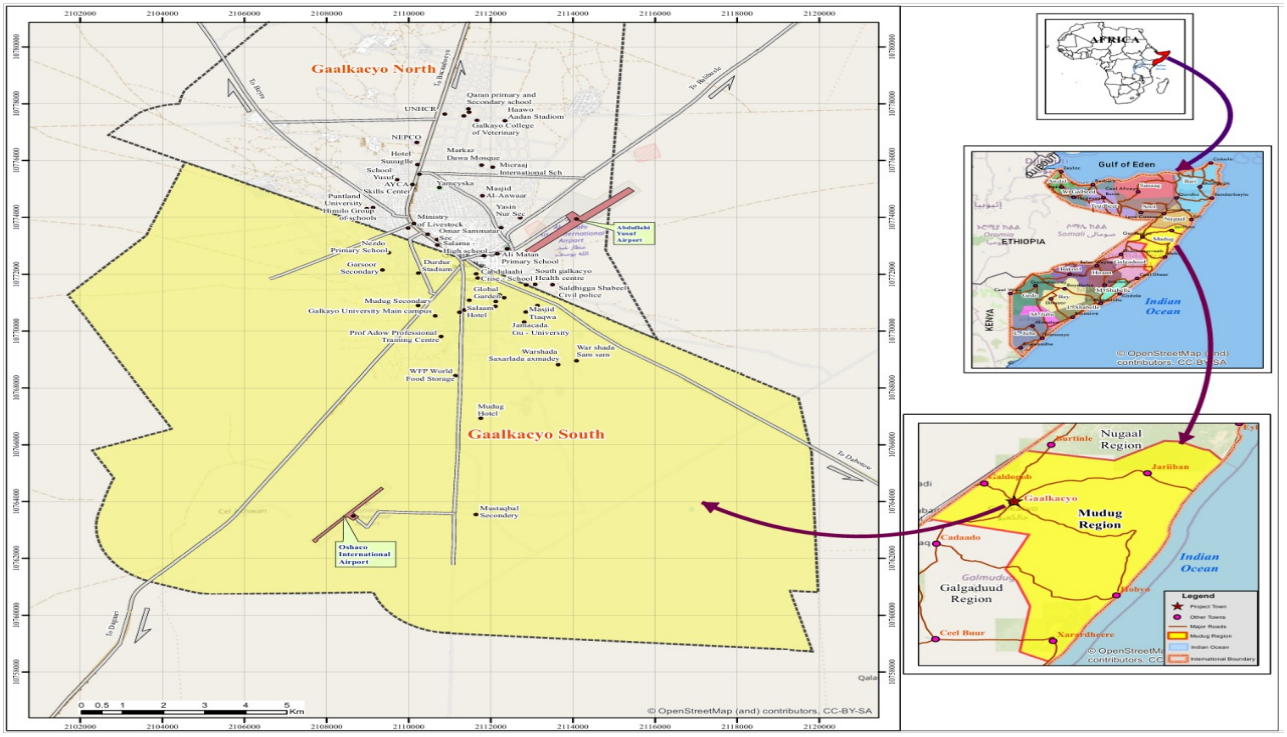


Figure 3.4: Study Area of South Galkayo

The proposed project location is as presented in the figure below;

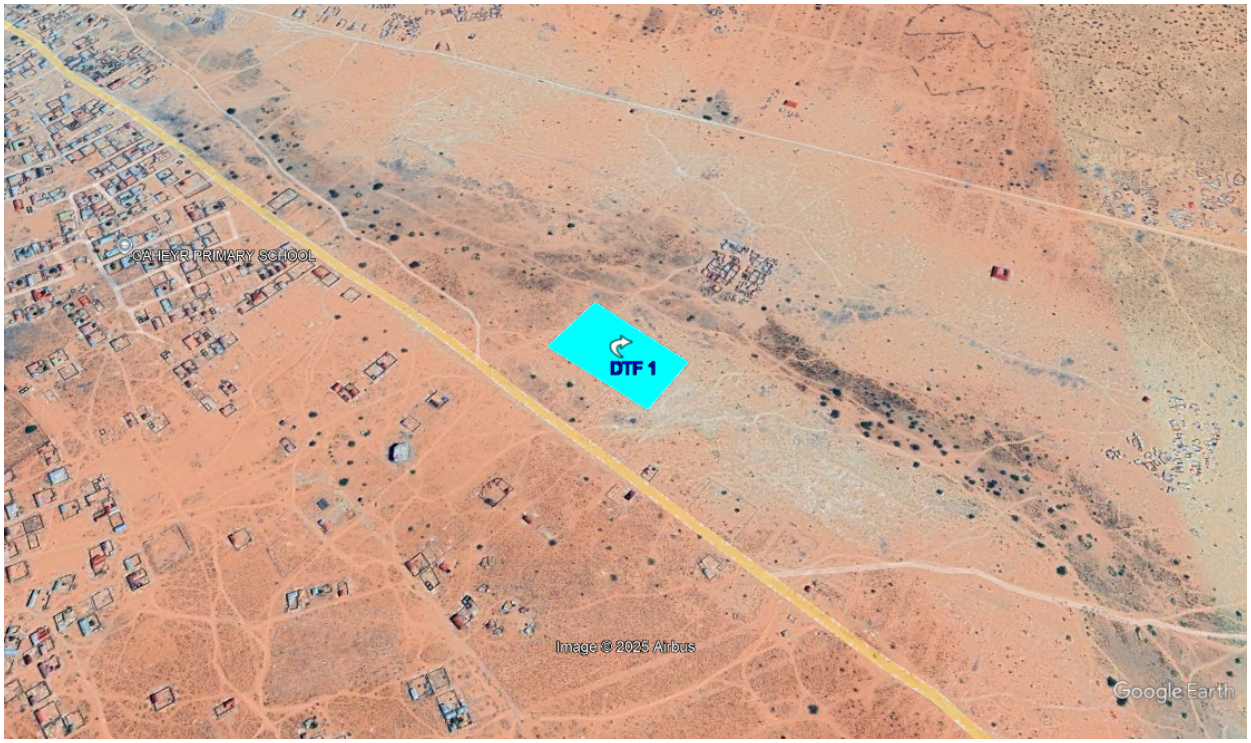
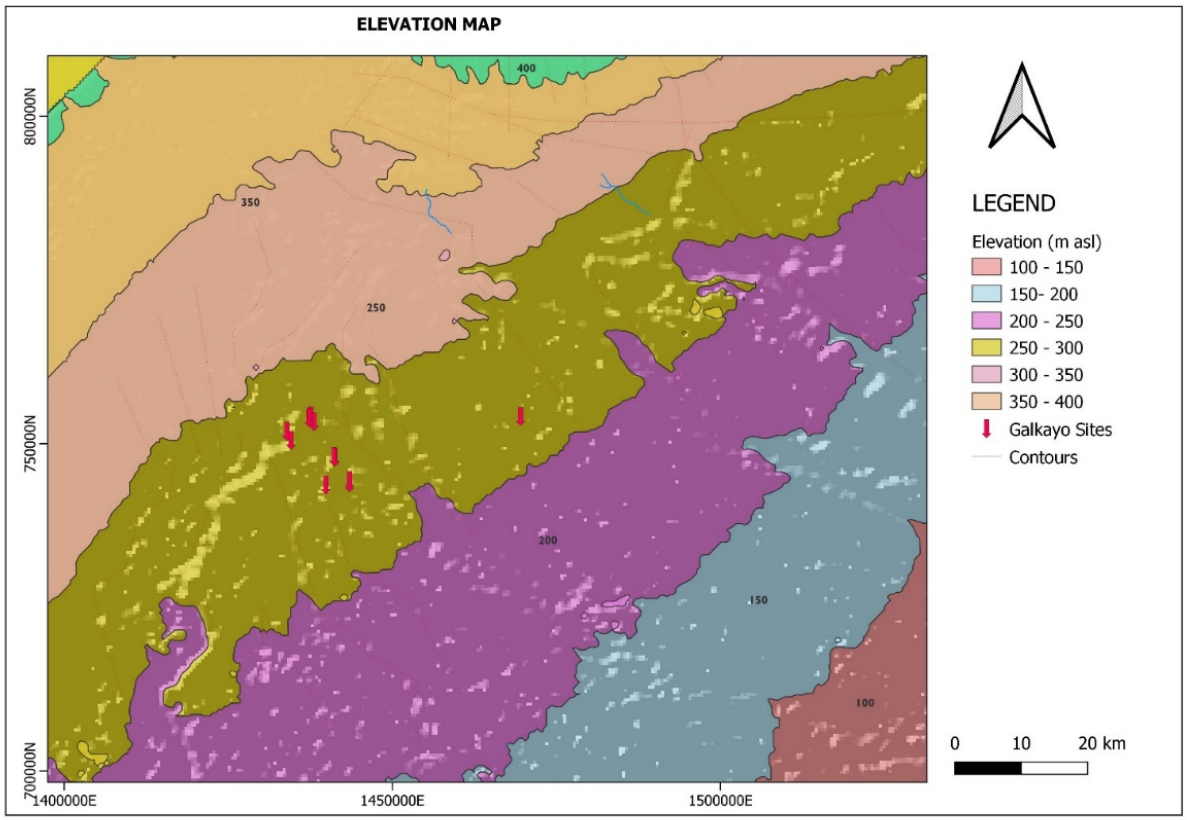


Figure 3.5: Wastewater Treatment Plant Location Layout
Source: Google Earth

3.2.2 Topography and Landscape

The topography of South Galkayo is flat. There is minimal slope and that is why when it rains in the town, water rains where it falls. This causes a lot of flooding for the town. The slope of the town id from the northern side sloping towards the southern part of the town. It brings in a lot of water from the Northern part of the town that is under the control of Puntland state.



3.2.3 Geology and Soils

South Galkayo's soil, in extension to project location, is characterized by generally thin, rocky, and low in fertility. These soils are primarily calcareous, meaning they have a high content of calcium carbonate and gypsum. They have poor water retention capacity, which is a major challenge given the region's sparse and irregular rainfall. Consequently, these soil types are not suitable for extensive rain-fed agriculture but are well-adapted for rangeland and pastoral activities, which form the basis of the local economy.

The geology is characterized by ancient crystalline basement rocks covered by thick layers of sedimentary rock from the Mesozoic and Cenozoic eras. The most significant geological formations are the limestone aquifers from the Eocene period. These limestone are crucial for forming karstic aquifers, which serve as the primary source of groundwater for the wells and springs that are vital for human and animal survival in this arid environment. The region's geological structure has been heavily influenced by the rifting of the Somali and Arabian Plates, which has created the sedimentary basins that hold these critical groundwater resources.

3.3 Biological Baseline Data

3.3.1 Flora:

- The project area is primarily peri-urban with patches of semi-arid vegetation.
- Dominant plant species: Acacia spp., Commiphora spp., drought-resistant shrubs, and scattered grasses.
- Vegetation is mostly disturbed due to urban development, livestock grazing, and human activity.
- Limited presence of trees within institutional compounds (schools, hospitals) which may provide shade but are few.

3.3.2 Fauna:

- Mammals: Small urban-adapted species such as rodents, cats, dogs, and some goats and sheep in peri-urban areas.
- Birds: Urban-adapted species such as pigeons, sparrows, and occasional migratory birds.
- Reptiles & Insects: Lizards, scorpions, and various insects typical of semi-arid urban environments.

3.3.3 Environmental Sensitivity:

- No significant protected areas or endangered species in the immediate project area.
- Wildlife presence is minimal due to the urbanized nature of the site

3.4 Social Baseline Data

3.4.1 Demographic Data:

- Estimated population of South Galkayo town: **137000**, (ICG 2015).
- Population is predominantly ethnic Somali; clan structures influence social organization.
- Vulnerable groups include low-income households, women, children, and IDPs relying on communal water and sanitation facilities.

3.4.2 Land Ownership:

- Land ownership is a combination of state-owned, community-managed, and private land.
- The construction sites are primarily on public leased land, reducing risk of displacement.

3.4.3 Administrative Setup:

- **S**outh Galkayo is part of the Galmudug Federal Member State.
- **Local Governance:** Ward-level committees and traditional elders who influence community engagement and land-use decisions.
- **WASH Governance:** Community Water and Sanitation Committees (CWSCs) oversee water points and treatment facilities, ensuring equitable access and maintenance.

3.4.4 Infrastructure & Services:

- The town has **basic road networks** connecting key public institutions.
- Water supply is primarily from existing boreholes; sanitation coverage is limited.
- Health and educational institutions rely on community water sources, highlighting the need for improved water provision systems.

3.5 Sanitation Situation

3.5.1 Sanitation Systems

The existing sanitation system in South Galkayo is largely unplanned, fragmented, and insufficient to meet the demands of its growing and increasingly urbanized population. Most households use traditional pit latrines or pour-flush toilets that discharge into unlined pits or poorly built septic tanks, often constructed without technical guidance. These substandard systems pose serious health and environmental risks, particularly when pits overflow or collapse due to high water tables, poor soils, or lack of maintenance.

Fecal sludge management (FSM) in South Galkayo is virtually non-existent or informal, with infrequent and unsafe desludging practices. There is no functional fecal sludge treatment plant (FSTP) in operation, and fecal waste is frequently dumped in open areas, dry riverbeds, or shallow soak pits that leak into the environment, contaminating groundwater and soil.

The situation is even more critical in high-density neighborhoods and informal IDP settlements, estimated at 72 verified IDP settlements as of March 2024, where sanitation facilities are overcrowded, poorly maintained, and often shared among many households. In some areas, significantly more common in rural areas than urban areas, open defecation is still practiced due to a lack of accessible, safe toilets. During rainy seasons, the absence of proper drainage leads to flooded latrines, which spread fecal matter across residential areas—posing severe public health risks, including outbreaks of cholera, diarrhea, and other waterborne diseases.

South Galkayo's topography and poor drainage infrastructure further compound these problems. Low-lying areas become flood-prone, concentrating waste and runoff in the most vulnerable communities. The local government's capacity to manage sanitation is severely limited, with insufficient technical staff, limited funding, and weak enforcement of hygiene and construction standards. There is also a low level of public awareness on proper sanitation and hygiene practices, which contributes to unsafe disposal and widespread environmental contamination.

The private sector's role in FSM is minimal and unregulated, making desludging services unreliable, expensive, and often unsafe. In conclusion, South Galkayo's sanitation crisis stems from inadequate infrastructure, weak governance, and lack of safe treatment and disposal systems—necessitating urgent, integrated interventions that address containment, collection, treatment, and long-term climate and public health resilience.

3.5.2 Household and Communal Latrines

Sanitation in South Galkayo is predominantly characterized by the use of basic pit latrines, many of which are unimproved and poorly maintained. In IDP camps, the majority of residents rely on communal or shared pit latrines, which are often overused, unsanitary, and inadequate for the growing displaced population. Among low-income urban households, many families share latrines or resort to informal sanitation practices due to the lack of private household toilets. While a few recent NGO-led projects have begun installing improved ventilated VIP latrines in select settlements, the majority of existing facilities across both host communities and IDP camps remain substandard or non-existent.

Public institutions in South Galkayo—such as markets, health posts, and schools—frequently lack dedicated sanitation facilities or rely on outdated, poorly maintained latrines with insufficient capacity. Latrines fill up quickly, and in the absence of formal desludging or maintenance services, many end up overflowing or collapsing, exposing residents to direct health risks. With limited access to safe water, overall sanitation and hygiene conditions—particularly at the household level—remain severely compromised.

The primary challenges facing household and communal latrines in South Galkayo include: rapid population growth due to IDP influx, land tenure issues, and chronic underfunding. New arrivals often outnumber available facilities, and unplanned urban growth leaves no reserved space for new latrine construction. Weak governance structures, limited technical capacity within the municipal authority, and absence of routine maintenance systems further exacerbate the situation. In many cases, cultural barriers and gender-based concerns hinder latrine access—women and girls frequently walk long distances to find safe sanitation, often exposing themselves to security risks. Additionally, shortages of construction materials, supply chain constraints, and lack of trained local technicians stall both new construction and repair of sanitation infrastructure.

In summary, South Galkayo faces a severe deficit in both the quality and quantity of sanitation facilities, particularly for vulnerable populations. A major investment in latrine infrastructure, coupled with improved management systems, regular desludging, and community engagement, is urgently needed to protect public health and restore dignity for affected communities.

Figure 3.6:Shared Communal latrines in IDP camp

3.5.3 Septic Tanks

In South Galkayo, septic tanks represent one of the more advanced forms of on-site sanitation systems used primarily by residents in formal settlements, institutional compounds, and higher-income households. These systems are designed to provide primary treatment by channeling black water—and in some cases greywater—into an underground chamber where solids settle into sludge and partially treated effluent is directed into soak pits or infiltration trenches for further natural filtration. However, in practice, many septic tanks in South Galkayo

are poorly constructed and fail to meet proper technical standards. Common deficiencies include lack of watertight lining, absence of adequate leach fields, and improper venting, which compromises both functionality and safety.

Due to the flat terrain and clay-dominated soils in much of South Galkayo, natural infiltration is limited, leading to frequent soak pit failure, especially during rainy periods. In some areas, especially in unplanned settlements, septic tanks are directly connected to surface drains or seasonal riverbeds (wadis), causing unsafe effluent discharge and environmental contamination. The semi-arid climate, combined with low groundwater tables in some zones, has further complicated proper design and placement of septic systems. These challenges underscore the need for strict construction oversight, public awareness, and investment in regulated fecal sludge management to ensure septic systems in South Galkayo function effectively and do not pose risks to public health or the environment.

Figure 3.7: Pour flush Toilet in South Galkayo Household.

Figure 3.8: Unlined Septic tank in South Galkayo Residential Household.

A small number of premises, particularly government offices, health centers, hotels, and larger homes, have internal sewerage systems that convey waste from multiple toilets and plumbing points into a centralized compound septic tank. These are usually confined to higher-income neighborhoods or institutional compounds. However, regular desludging of these tanks is rare due to the limited availability of exhauster services.

3.5.4 Fecal Sludge Management

In South Galkayo, fecal sludge collected by exhausters (private institution operations) is typically dumped in open fields or informal sites on the outskirts of town, as there is no designated or engineered disposal site. This practice, while offering a temporary means of removing waste from densely populated areas, (mostly IDP camps), is highly unsustainable and poses serious environmental and public health risks. Without a properly lined containment area or treatment process, raw sludge infiltrates the soil, contaminates surface and groundwater sources, and contributes to the spread of disease—especially during the rainy season when runoff carries fecal matter into residential zones and shallow water points. The lack of regulation around desludging practices further exacerbates the situation, allowing unsafe dumping to occur without oversight or accountability.

To address these challenges, it is urgently necessary to establish a dedicated fecal sludge treatment plant (FSTP) and enforce municipal-level control over desludging activities. A formal FSTP would enable safe treatment, reuse, or disposal of sludge, mitigate groundwater contamination, and support long-term urban sanitation goals. Investing in such infrastructure is essential for protecting public health, improving the environmental integrity of South Galkayo, and transitioning away from harmful, informal practices.

4. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FRAMEWORKS

4.1 National Regulatory and Policy Framework

Table 4-1: National Regulatory and Policy Framework

Legal Provision	Description	Relevance
Constitution of Somalia (2012)		
Article 11	together with sub article (3) respectively provides that all citizens have equal rights regardless of sex, religion, social or economic status, political opinion, clan, disability, occupation, birth or dialect.	• Services from water treatment plant would serve all citizens with no discrimination.
Article 14	stipulates that a person may not be subjected to slavery, servitude, trafficking, or forced labor for any purpose.	• It prohibits the contractor from sourcing labour from underage citizens.
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.	• The project will create employment opportunities for both skilled and non-skilled workers.
Article 25	Establishes the right to a clean and healthy environment.	• The project must integrate climate resilience, waste reuse/recycling, and pollution control. • The project contributes to fulfilling the constitutional right to health and environmental protection by improving water quality.
Article 45	Obligates the state to protect ecosystems, biodiversity, and natural resources.	• The project must undergo Environmental and Social Impact Assessment (ESIA) before implementation to address all potential impacts to the environment.
Legislation & Policies		
Environment & Social Sectors		
National Environmental Policy (NEP	Approved on 13th February 2020, and backstopped by the Global Environment Facility (GEF) and the United Nations Development Program (UNDP), the stated goal of environmental policy is to improve the health and quality of life of the Somali people.	• The project involves interventions that will improve the health and quality of people. • The policy provisions will inform management of sanitation waste, prevention of soil and groundwater contamination, and environmental hygiene standards

		during project implementation .
Environmental and Social Impact Assessment (EIA) and Audit Regulations	As of March 2021, the Directorate of Environment and Climate Change has published draft environmental and social impact assessment (ESIA) regulations which provide detailed procedures for conducting EIAs, audits, public participation, and disclosure.	• The project must undergo Environmental and Social Impact Assessment (ESIA) before implementation
Water Resources Law	Governs sustainable use, allocation, and protection of water resources; prohibits pollution of water sources	• The proposed project will comprise installation of a water treatment plant which will • The act will form basis for protection of groundwater from infiltration and contamination caused by poorly sited or
The Somali Labour Code	It covers protection against risks to workers, notification procedures in occupational accidents, medical requirements at site and conveyance of injured workers to hospitals, among others.	• Construction activities involve local and possibly migrant laborers. • Risks include occupational health and safety (OHS) hazards, accidents, and labor influx impacts • The code will guide on worker safety during excavation, handling of waste, and PPE use
Health Sector		
The National Health Sector Strategic Plan *(HSSP-II 2017-2021)*	Strategy is based on nine building blocks and prioritizes governance and leadership, followed by human resources, services delivery, health financing, pharmaceuticals and medical technology, health intelligence and information system, social determinants of health, emergency preparedness and response, and health infrastructure	• Wastewater facilities directly affect **public health** by reducing waterborne diseases (cholera, diarrhea). • Construction phase may create risks of dust, noise, sanitation issues, and accidents • The act will provide guidance to disease prevention, sanitation standards, and hygiene promotion.
Water & Sanitation Sector		
Constitution of Somalia 2012	guarantees the right to clean water, sanitation, and a healthy environment	• The main objectives of proposed interventions are in line with promoting a healthy environment and providing clean water for citizens.
NEP 2017 EPMA 2024	Require ESIAs and safeguards for all water and sanitation projects	• ESIA approval is required before commencement of works • The Act will form basis for management of sanitation waste, prevention of soil and groundwater contamination, and environmental hygiene

		standards.
National Water Policy	Regulates water use, wastewater discharge, and pollution prevention	• The proposed project is governed by said laws.
Security Sector		
National Security & Safety Frameworks	Federal Government and Federal member State are responsible for ensuring security and public safety, including around critical infrastructure	• Construction activities may attract theft, vandalism, or community tensions; presence of heavy equipment may cause safety risks, community safety, especially around open pits during construction.
Land Sector		
Constitution of Somalia (2012) – Land & Natural Resources Art 43	Requires that land and natural resources are managed in the public interest, with land allocation guided by law	• The Waste Water Treatment Plant public land to prevent land-use conflicts

4.2 Institutional Capacity for Environmental Management in FGS

Table 4-2: Institutional capacity in FGS

No.	Institution	Relevance
1.	Ministry of Environment and Climate Change (MoECC)	National policy oversight on environment, climate change, and safeguards; custodian of the Environmental Protection and Management Act (2024) and EIA regulations.
2.	Ministry of Energy and Water Resources (MoEWR)	Oversees water policy, water quality standards, groundwater/water source protection, and wastewater regulation at national level
3.	Federal Member State Ministries (Galmudug)	Responsible for the implementation and coordination of water resource management and infrastructure development within the region.
4.	UNEP – Environment Program	Providing environmental expertise, coordinating water management, fostering integrated water resource management for resilience against drought and floods, and promoting nature-based solutions.
5.	UNICEF Somalia	Supports WASH programming in schools and health centres; often co-funds or provides technical support in sanitation projects
6.	AfDB	Project financier; requires compliance with 2023 ISS. Provides technical guidance, safeguard screening, and monitoring during project lifecycle

4.3 Key International Instruments Ratified or Acceded to by Somalia:

Federal government of Somalia has ratified below listed Conventions

(i) **Universal Declaration of Human Rights (UDHR) –** Affirms the equal rights of men and women and the right to non-discrimination, dignity, and freedom for all individuals. *Triggered through the right to health and a clean environment. The project complies by improving sanitation and reducing disease risks in schools and health centers.*

(ii) **Convention on the Rights of the Child (CRC) –** Ratified by Somalia in 2015, it emphasizes the protection of children's rights, including those of girls, and calls for the elimination of harmful practices like early marriage and FGM. *Triggered as the project targets schools and child health. Compliance is ensured by providing safe sanitation facilities that protect children's dignity and health.*

(iii) **Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) –** Somalia has **not yet ratified CEDAW**, which significantly limits formal international obligations on women's rights protection. However, civil society and international partners continue to advocate for its ratification and domestication. *Triggered through gender-sensitive sanitation needs. The project complies by providing separate, safe sanitation facilities for women and girls*.

(iv) **African Charter on Human and Peoples' Rights –** Somalia is a party to the Charter, which supports gender equality and women's rights within the African human rights system. *Triggered through the right to a healthy environment and protection from harmful waste. Compliance is achieved through ESIA, pollution control, and sustainable waste management*.

(v) **African Charter on the Rights and Welfare of the Child (ACRWC) –** Ratified by Somalia, reinforcing children's rights, including protection from early and forced marriage, discrimination, and abuse. *Triggered by the project's direct benefits to children in schools. Compliance is ensured by providing safe, accessible WASH services for children*.

(vi) **Sustainable Development Goals (SDGs) –** Somalia has committed to the 2030 Agenda, with SDG 5 specifically focusing on achieving gender equality and empowering all women and girls, especially in access to education, health, water and sanitation, and economic opportunities. *Triggered mainly SDG 6 (Clean Water & Sanitation), SDG 3 (Good Health), SDG 13 (Climate Action), and SDG 11 (Sustainable Cities). The project contributes by expanding access to improved sanitation and climate-resilient systems*.

(vii) **Kyoto Protocol (2005):** Aim at reducing greenhouse gas emissions and combat climate change by setting binding emission reduction targets for developed countries.

(viii) **Bamako Convention on (1991):** It ensures ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (1991).

(ix) **Basel Convention on the (1989):** It seeks to control Transboundary Movement of Hazardous Wastes and their Disposal.

(x) **Rotterdam Convention (1998):** It stipulates the prior informed consent procedure for certain hazardous chemicals and pesticides. *Triggered for chemicals and pesticides. Compliance is ensured by avoiding banned chemicals in construction/operation (e.g., avoiding asbestos pipes, toxic disinfectants).*

(xi) **Convention on Oil Pollution Preparedness, Response, and Co-operation (1990):** It aims to ensure that countries develop and maintain adequate measures for dealing with oil pollution incidents. *Triggered by construction machinery and fuel storage risks. Compliance includes site-specific spill prevention and emergency response plans.*

(xii) **International Energy Charter (2015):** It aims to enhance energy security, encourage open and competitive energy markets, support sustainable energy development, and promote energy efficiency and environmental protection among member states. *Triggered through the project's potential use of renewable/efficient energy for treatment plants. Compliance is achieved by integrating energy-efficient systems (solar pumping, low-energy treatment technologies).*

4.4 Relevant International Labour Organization (ILO) and Human Rights Instruments

- Convention concerning Safety in the use of Chemicals at Work (Entry into force: 04 Nov 1993) Adoption: Geneva, 77th ILC session (25 Jun 1990) - Status: Up-to-date instrument (Technical Convention); *Triggered during construction/operation where chemicals (e.g., disinfectants, treatment reagents, fuels) are handled.*
- Occupational Safety and Health Convention (1981) and its Protocol of (2002); *Triggered in ensuring safe working conditions at construction sites.*
- Promotional Framework for Occupational Safety and Health Convention, (2006) (No. 187); *Triggered in establishing a safety culture across the project.*
- Convention concerning the Prohibition and Immediate Action for the Elimination of the worst forms of Child Labour (2002); *Triggered due to risks of child labor in construction supply chains.*
- International Convention on the Elimination of All Forms of Racial Discrimination (CERD) (1976); *Triggered in hiring and community engagement.*
- Optional Protocol to the Convention on the Rights of Persons with Disabilities (2007); *Triggered by the need to ensure accessibility of all resources.*
- The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (1985); *Triggered in gender-sensitive WASH provision.*
- The Convention on the Rights of Persons with Disabilities (CRPD) (2012); *Triggered in ensuring equitable access to water and sanitation services.*
- The International Covenant on Civil and Political Rights (ICCPR) (2004); *Triggered by the project's obligation to respect community rights (participation, consultation, grievance redress.*
- The International Covenant on Economic, Social and Cultural Rights (ICESCR) (2004)

4.5 Regional Treaties Relevant to GBV, SEA, VAC and Persons Living with Disability (PLWD)

- African Charter on Human and Peoples' Rights (1981);
- Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (Maputo Protocol) (2003);
- Violence and Harassment Convention (2019) No.190;
- AU Disability Protocol (Protocol to the African Charter on Human and Peoples' Rights on the Rights of Persons with Disabilities in Africa) (2018);
- Economic Community of West African States (ECOWAS) Gender Policy (2005, revised 2020);
- COWAS Plan of Action to Address Gender-Based Violence (2020–2030);
- Convention Against Torture & other Cruel, Inhuman or Degrading Treatment or Punishment (CAT) (2001);
- Convention on the Rights of Persons with Disabilities (2007);
- The Convention on the Rights of the Child (CRC) (1990);
- The National Action Plan for the Implementation of United Nations Security Council Resolution 1325 (2009);
- The Protocol to the ACHPR on the Rights of Women in Africa (the "Maputo Protocol") (2007).

4.6 African Development Bank Integrated Safeguards System)

In 2013, the African Development Bank adopted an Integrated Safeguards System (ISS) (also referred to as the "2023 ISS"), which established the Bank Group's commitment to sustainable development, consolidating and building on the Environment (2004) and Involuntary Resettlement (2003) safeguard1 policies, as well as cross-cutting policies and strategies on gender (Gender Strategy for 2021–2025, "Investing in Africa's Women to Accelerate Inclusive Growth"), and then the Civil Society Engagement Framework (2012).

1. The updated ISS improves the consistency of the Bank's approach to key thematic issues, Environmental and Social Assessment (ESA), and stakeholder engagement activities through their 10nr Oss. The 10nr E&S OSs set out the requirements for Borrowers relating to the identification and assessment of E&S risks and impacts associated with operations supported by the Bank.
2. The ten E&S OSs establish the standards that Borrowers shall meet, as appropriate, in projects, activities, and initiatives supported through Bank financing throughout the life cycle of operations.
3. However, this particular proposed project triggers only 9 OSs as summarized in the table sub sections below.

Environmental and Social Operational Safeguard (OS) provisions and Applicability to the Project

Table 4.3: Social operation safeguards provision

#	OS	Provisions	Project Applicability
1	Environmental and Social Operational Safeguard 1: Assessment and Management of Environmental and Social Risk and Impact.	Environmental and Social Operational Safeguard 1: Assessment and Management of Environmental and Social Risk and Impact. The aim of this overarching Operational Safeguard (OS), together with the OSs that complement it, is to mainstream environmental and social (E&S) considerations, including those related to climate change vulnerability. into Bank operations and thereby contribute to sustainable development in the continent. The objectives of OS1 are to Identify and assess the E&S risks and impacts including those related to gender inequalities, climate change, and vulnerability of Bank lending, investment, and grant-supported operations, in their areas of influence in a manner consistent with the Oss among others	Conduct an Environment and Social Assessment (ESA) of the proposed project, including stakeholder engagement; Undertake stakeholder engagement and disclose appropriate information in accordance with OS10; Develop an Environmental and Social Plan (ESMP) and implement all measures and actions set out in the financing agreement including the ESMP; and Conduct monitoring and reporting on the E&S performance of the project against the OSs.
2	Environmental and Social Operational Safeguard 2: Labour and Working Conditions	The objectives of OS2 are as follows: To protect workers' rights., To promote safety and health in the workplace and to promote the fair treatment, non-discrimination, and equal opportunity of project workers among others. The categories of workers include; People employed or engaged through third parties to perform work related to the core functions109 of the project, regardless of location (contracted workers). People employed or engaged by the Borrower's primary suppliers110 (primary supply workers); People employed or engaged in providing community labour (community workers).	The borrowers shall under take below listed prior to implementation of the Project Labour Management Procedures (LMPs) that will detail Working conditions and management of worker relationships Preparation of Occupational Health and Safety Management Plan prior to commencement of works Registration with applicable occupational health and safety
3	Environmental and Social Operational Safeguard 3: Resources Efficiency and Pollution Prevention and Management	This Operational Safeguard (OS) recognizes that economic activities often cause air, water, and land pollution, and The OS provides that the Borrower shall implement technically and financially feasible measures for improving the efficient consumption of energy, water, and raw materials, as well as other resources. The Borrower shall apply pollution prevention and control measures consistent with national legislation and standards, applicable international conventions, and internationally recognized standards and good practice, particularly the Environment Health and Safety Guidelines (EHSGs)	The BORROWER at design Stage shall; Implement Resources efficiency technologies that supports efficient consumption of energy, water, and raw materials, as well as other resources Prepare Pollution Management Plans such as E-Waste Management Plan, Solid and Liquid Waste Management Plan
4	Environmental and	OS4 addresses the health, safety, and security risks to and impacts on project-	The BORROWER will prepare

	Social Operational Safeguard 4: Community Health, Safety and Security	affected communities and the corresponding responsibility of the Borrower to avoid or minimize them, with particular attention to people who, due to their particular circumstances, may be vulnerable. This OS addresses potential risks to and impacts on communities that may be affected by project activities. Occupational health and safety (OHS) requirements for project workers are set out in OS2, and measures to avoid or minimize impacts on human health and the environment due to existing or potential pollution are set out in OS3	Community health and safety Management Plan Ensure Worker Sign Code of Conduct Prepare and Implement Traffic Management Plan Prepare and implement labour Influx Management Plan Emergency preparedness and response Plan Prepare Security Management Plan
7	Environmental and Social Operational Safeguard 7: Vulnerable Groups	This OS recognizes that some cultural groups, due to their lifestyle, culture, and strong dependence on the natural environment, have identities and aspirations that are distinct from mainstream groups in national societies and are often disadvantaged by traditional models of development. In many instances, they are among the most economically marginalized and vulnerable segments of the population The objectives of OS7 is to ensure that vulnerable groups and individuals are identified as early as possible in Bank Group operations and that engagement is meaningful, taking into account individuals' and communities' specificities, and delivered in an appropriate form	If the cable interphase with such communities, the BORROWER will undertake below listed Early identification of vulnerable groups Social assessment Special considerations related to highly vulnerable rural minorities Adequate Public consultation and participation Vulnerable groups and broader development planning Timely address of Grievances from such communities
10	Environmental and Social Operational Safeguard 10: Stakeholder Engagement and Information Disclosure	The OS provides that Borrowers shall engage with stakeholders throughout the project life cycle, commencing as early as possible in the project development process and in a time frame that enables meaningful consultations with stakeholders on project design. The nature, scope, and frequency of stakeholder engagement will be proportionate to the nature and scale of the project, and its potential risks and impacts The objectives of OS10 is to establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders, and build and maintain a constructive relationship and channels of communication with them, in particular project-affected parties among other objectives	The OS requires below listed with respect to the Project Engagement during project preparation Preparation of The Stakeholder Engagement Plan Establishing a functioning Grievance mechanisms . Engagement during project implementation and external reporting Organizational capacity and commitment

4.7 Comparison between FSG and International Standards

Table 4.4 Comparison of the FGS Frameworks vs other international standards adopted in this project

Thematic Area	FGS Frameworks	AfDB ISS (2023) Safeguards	Other International Standards	Relevance to the Project
Environmental Protection & ESIA	Environmental Protection & Management Act (2024); EIA & Audit Regulations	**OS 1: Environmental & Social Assessment** – comprehensive ESIA required	Basel Convention (1989), Bamako Convention (1991)	Project requires ESIA approval, mitigation of impacts, and safe waste management.
Water & Sanitation	Water Resources Law; National Environmental Policy (2017)	**OS 4: Pollution Prevention and Control** – efficient resource use & pollution prevention	SDG 6 (Water & Sanitation), ICESCR (Right to Water)	Ensures sustainable water use, water quality standards, and safe sanitation facilities.
Health & Safety	Public Health Law; Somali Labor Code (1972)	**OS 5: Labour Conditions, Health and Safety** – safeguard workers & communities	ILO OHS Conventions (1981, 2006), WHO Guidelines	Protects construction workers and reduces disease risks in schools & health centers.
Climate Change & Resilience	Climate Change Policy (2020); NAP Framework	**OS 2: Climate Change** – low-carbon, climate-resilient development	Kyoto Protocol, Paris Agreement, SDG 13	Design integrates climate resilience (e.g., solar pumping, flood-resistant structures).
Land & Natural Resources	Constitution (2012) on land ownership; Land Tenure (customary + municipal laws)	**OS 3: Biodiversity & Ecosystem Services** – protect ecosystems	African Charter on Human & Peoples' Rights (Right to Environment)	Facility siting must respect land tenure, avoid riparian damage, and maintain project area ecology.

5. STAKEHOLDER CONSULTATIONS

The Stakeholder Engagement Strategy for this water and sanitation project is designed to ensure inclusive participation and ownership at all levels, particularly among those who are directly or indirectly affected by sub-project activities. It aims to identify and address stakeholder needs, expectations, concerns, and grievances through proactive engagement and feedback mechanisms. By doing so, the strategy seeks to promote transparency, collaboration, and accountability throughout the project's lifecycle, fostering trust between stakeholders and implementers. Ultimately, this approach will strengthen the social license to operate, helping to reduce the risks of resistance or conflict and ensuring smoother implementation and sustainable outcomes.

5.1 Identified stakeholders and their roles

The South Galkayo WASH Project involves a wide range of stakeholders drawn from government institutions, development partners, local authorities, traditional leaders, and community organizations, each playing a key role in ensuring the project's successful implementation and sustainability.

Government Ministries:
The Ministry of Energy, Minerals and Water Resources leads implementation, design approval, and supervision, while the Ministry of Environment, Agriculture and Climate Change oversees ESIA approval, compliance, and climate safeguards. The Ministry of Health ensures water quality, hygiene, and disease control.

Local Authorities:
South Galkayo Municipality and District Administration manage land allocation, permits, and community engagement. Community Water and Sanitation Committees oversee local water points, maintenance, and equitable access, while local elders mediate land issues and support social acceptance.

Development Partners:
UNICEF and AfDB (through AWF) provide financial and technical support, enforce safeguard standards, and strengthen institutional capacity. FAO (via SWALIM) offers hydrological data and groundwater monitoring. The Ministry of Planning ensures project alignment with national frameworks.

Private Sector and Beneficiaries:

Contractors and consultants handle design, construction, and rehabilitation under PMU supervision for quality and compliance. Local communities and IDPs participate in consultations and benefit from improved water access.

Civil Society and Security:
CSOs and NGOs promote hygiene, gender inclusion, and capacity building. Security agencies ensure safety at project sites and protect personnel and assets.

5.2 Stakeholder Engagement Methodology

Stakeholder engagement was conducted in the following ways;

a) **Key informant interviews (KIIs)** with local authorities, WASH service providers, women's groups, and elders. Focus was to establish for any existing UNICEF gender programmatic review (if one has been conducted), especially if WASH programming was reviewed.

b) **Focus group discussions (FGDs)** disaggregated by sex and age to capture diverse perspectives.

- ✓ The first FGD was held with a government official from the department of physical planning about the interventions they would require help with in terms of WASH from the project.
- ✓ Another discussion was held with the women at Hayaan Bacaadweyne IDP camp to understand their needs about sanitation and general hygiene
- ✓ The other FGD was held with CISP an NGO dealing with Gender issues in Somalia and specifically South Galkayo
- ✓ The last one was held at Galkayo Hospital with the General Manager to understand the gaps and challenges they face in terms of providing services especially with focus on WASH activities.

Table 5.1 Stakeholder Engagement Matrix

Stakeholder	Category / Level	Interest in Project	Influence	Roles and Responsibilities
Galmudug Ministry of Energy, Minerals & Water Resources (MoEMWR)	Government / Lead Implementing Agency	High – responsible for water sector policy, coordination, and infrastructure development	High	Lead implementing agency; oversight of design and construction; ensures project aligns with Puntland Water Policy and national WASH objectives.
Galmudug Ministry of Environment, Agriculture & Climate Change (MoEACC)	Government / Regulator	High – ensures environmental protection and sustainability	High	Reviews and approves ESIA; issues Environmental Compliance Certificates; monitors environmental safeguards and climate resilience measures.
Galmudug Ministry of Health (MoH)	Government / Health Authority	High – focuses on public health and sanitation outcomes	Medium	Oversees water quality monitoring and health risk management; coordinates with project on hygiene promotion and disease surveillance.
Galmudug Municipality / District Administration	Local Government	High – manages land, permits, and community coordination	High	Facilitates land allocation and construction permits; coordinates urban planning and community engagement; supports local conflict resolution.
Community Water and Sanitation Committees (CWSCs)	Community / Local Governance	High – directly manage and maintain water facilities	Medium	Oversee local water points and treatment plants; ensure equitable access and community participation in operation and maintenance.
Local Elders and Clan Leaders	Traditional Authority	High – influence social acceptance and land access	Medium–High	Confirm land ownership and boundaries; mediate disputes; facilitate community buy-in and peaceful coexistence.
UNICEF	Development Partner / Financier	High – provides funding and technical support	High	Finances and supports project implementation; ensures adherence to UNICEF Environmental and Social Standards (ESS); monitors social and gender impacts.
African Development Bank (AfDB) / African Water Facility (AWF)	Development Partner / Financier	High – co-funding and safeguard oversight	High	Provides financing, ensures compliance with AfDB Integrated Safeguards System (ISS), and monitors environmental and social performance.
FAO – Somalia Water and Land Information Management (SWALIM)	Technical Partner / Research Institution	Medium – supports data collection and water resource management	Medium	Provides hydrological data, groundwater monitoring, and technical inputs for sustainable water resource management.

Ministry of Planning, Investment, and Economic Development (MoPIED)	Government / Coordination	Medium – ensures national alignment and donor coordination	High	Ensures project aligns with national plans; coordinates with donors and oversees reporting.
Contractors and Consultants	Private Sector / Service Providers	High – responsible for design and construction	High	Execute construction, rehabilitation, and installation of water infrastructure; adhere to EHS standards; implement ESMP measures.
Supervising Engineer / Project Management Unit (PMU)	Technical Oversight	High – ensures quality and compliance	High	Supervises works, ensures adherence to specifications and safeguards, and prepares progress and compliance reports.
Local Communities and IDPs	Beneficiaries	Very High – direct users of improved WASH services	Low–Medium	Participate in consultations; provide local knowledge; benefit from improved access to safe water and sanitation.
Civil Society Organizations (CSOs) / NGOs	Development / Advocacy	Medium – promote community empowerment and inclusion	Medium	Support community sensitization, gender inclusion, hygiene promotion, and grievance redress.
Security Agencies (Police, Local Administration)	Public Safety / Law Enforcement	Medium – responsible for protection of assets and personnel	Medium–High	Provide site security, protect equipment and workers, and respond to safety or conflict incidents.

5.3 Stakeholder Consultations Summary

5.3.1 Consultation Actions and Methodology

A comprehensive and inclusive consultation strategy was implemented to engage a wide range of stakeholders. The methodology combined several participatory techniques to ensure that all groups, including the most vulnerable, had an opportunity to voice their opinions.

The primary actions taken included:

- **Public Meetings (Barazas):** Open community meetings were held in key neighborhoods and within the Internally Displaced Person (IDP) camps. These gatherings provided a platform to disseminate information about the project's objectives, scope, and potential impacts, and to receive direct feedback from the community at large.
- **Focus Group Discussions (FGDs):** Separate FGDs were conducted with specific demographic groups, such as **women**, **youth**, and **water vendors**. This approach allowed for a deeper exploration of group-specific issues, needs, and concerns in a more comfortable setting. The women's FGDs, for instance, focused heavily on issues of safety, privacy, and menstrual hygiene management related to WASH facilities.
- **Key Informant Interviews (KIIs):** In-depth interviews were held with key stakeholders possessing specialized knowledge or holding positions of influence. This group included local government officials, community elders, religious leaders, and staff from local NGOs active in the WASH sector.

All consultations were conducted in the Somali language by trained facilitators, ensuring clear communication and active participation.

5.3.2 Outcomes of the Consultation

The consultations were highly productive, yielding valuable insights that have directly informed the project design and the mitigation measures outlined in the Environmental and Social Management Plan (ESMP).

Key discussion points and outcomes are included in the Key Informant Interviews, Focus Groups Discussions and institutional visits detailed in this chapter.

Overall Outcome of Stakeholder Consultation

The stakeholder consultation process confirmed that there is universal and enthusiastic support for the project. The feedback received was overwhelmingly positive, with participants viewing the project as a critical and long-overdue intervention to address the severe water and sanitation crisis.

A total of 5 key informant interviews and 6 Focused Group Discussions (FGD) were conducted with representatives from the following sectors. Additionally, Public

participation forums were held from 3rd to 4th September, 2025 at the Five Star Hall Galkayo South.

5.3.3 Key Informant Interviews

A total of 5 KIIs have been conducted with representatives from the following sectors:

Table 5.2: Key Informant Interviews

Institution / Stakeholder	Date	Key Issues Discussed
Ministry of Women and Human Rights Development (MoWHRD) – Galmudug	May 31st 2025	Gender gaps in WASH policies, GBV referral pathways, FGM prevalence, and MHM needs
Ministry of Water and Energy – South Galkayo Office	May 30th 2025	Access to safe water, community water management, challenges in IDP settlements
Galkayo Local Authority (Municipal Office)	May 29th 2025	Urban sanitation, solid waste management, and community infrastructure needs
Ministry of Health – Galkayo Hospital	June 4th 2025	Public health and hygiene, links between WASH and maternal/child health
Representatives from Local NGOs (e.g., CISP)	June 4th 2025	Women's participation in service delivery, local, GBV issues, WASH interventions, community outreach

5.3.4 Focus Group Discussions

Table 5.3: Focus Group Discussions

Group Type	Date	Location	Key Issues Raised
Women-headed households (IDP camp)	June 1st 2025	Hayaan Bacaadweyne Camp	Long distances to water points, lack of latrines, MHM challenges, security concerns
Adolescent girls (ages 13–18)	May 31st 2025	Hayaan Bacaadweyne Camp	Lack of MHM materials, school attendance issues, privacy in sanitation facilities
Men (local leaders & elders)	May 30th 2025	Town Center	Community roles in infrastructure, traditional norms, support for water systems
Female youth (ages 18–30)	May 31st 2025	Town Center	Vocational needs, participation in water committees, menstrual stigma
Male youth	June 2nd 2025	South Galkayo Market	Livelihood challenges, involvement in hygiene promotion, water source

Group Type	Date	Location	Key Issues Raised
			maintenance
Women entrepreneurs	June 2nd 2025	South Galkayo Market	Access to microfinance, sanitation in market areas, female business participation

Table 5.4: Public Forums on 3rd to 4th September at Five Star Hall

#	Issue	Mitigation
1	The proposed site location is unsuitable due to its close proximity to critical social infrastructure (health center, mosque, residential homes) and newly established vulnerable IDP households.	To relocate current health centre, IDPs settlement and stop town growing towards this direction or to assign another location for this project
2	Despite the positive outcomes, the project may generate environmental and social risks. These include vegetation loss, soil degradation, and potential overuse or pollution of water resources.	To minimize risks, environmental impact assessment (EIA) recommendations and environmental management plans (EMPs) must be implemented
3	A labor influx management plan and community awareness programs on health, gender, and education are recommended.	Local labor should be prioritized, and contractors must follow fair labor standards
4	Health and safety risks can be mitigated by enforcing occupational safety standards, providing personal protective equipment (PPE), training workers regularly, and monitoring pollution levels with appropriate dust and noise control measures.	Continuous monitoring and evaluation (M&E) will allow timely corrective actions, while a grievance redress mechanism will ensure community concerns are addressed. Alignment with Somalia's National Environmental Policy (2020) will further strengthen transparency, inclusivity, and sustainability in project implementation.

5.3.5 Meetings Outcome

1. **Limited access to water (long distances to water points)**
    - **Outcome:** Heavy burden on women/children, reliance on unsafe sources.
    - **Measures:** Construct water points closer to communities and schools; install storage tanks and pipelines to reduce walking distance.
2. **Unsafe and inadequate sanitation (lack of privacy/safety at latrines, poor school sanitation, stigma around menstruation)**
    - **Outcome:** Protection risks, open defecation, school absenteeism for girls, spread of diseases.
    - **Measures:** Build gender-segregated and disability-friendly latrines with lighting and privacy; provide menstrual hygiene facilities and supplies; improve sanitation in schools and health centers.

3. **Low awareness and limited inclusion in WASH (gender-specific needs not considered, stigma, weak capacity)**
    - **Outcome:** Exclusion of women and vulnerable groups, poor hygiene practices, weak facility maintenance.
    - **Measures:** Conduct inclusive WASH education, hygiene promotion campaigns, and menstrual hygiene awareness; ensure women and vulnerable groups participate in decision-making; strengthen capacity of WASH committees, teachers, and health staff.
4. **Poor waste management (need for recycling facilities and hygiene support)**
    - **Outcome:** Solid waste buildup, environmental pollution, increased disease risks.
    - **Measures:** Establish recycling and waste segregation systems; promote composting/reuse; support community hygiene programs led by local champions.
5. **Underutilized institutions (schools and health centers not fully engaged in WASH promotion)**
    - **Outcome:** Lost opportunity for behavior change and sustained hygiene improvement.
    - **Measures:** Equip schools and health centers with adequate WASH facilities; use them as platforms for hygiene education, awareness campaigns, and training.

5.4 Government and Institutional Visits

In addition to interviews, visits were made to:

- District Administration Office: Discussed governance and coordination of basic services.
- Water Service providers and Boreholes: Observed operation, tariff practices, and community usage patterns.
- Health Centers and IDP Camps: Inspected hygiene facilities, water availability, and MHM provisions.
- Women's Centers and Safe Spaces: Engaged with service providers supporting GBV survivors and awareness programs.

5.4.1 Stakeholder Meetings Outcome

1. **District Administration Office**
    - Gained insights into the governance structures responsible for coordination of water, sanitation, and hygiene (WASH) services.

- Identified gaps in capacity and resources, highlighting the need for stronger institutional support and better alignment between district authorities and service providers.
- Confirmed willingness of the administration to collaborate with development partners on WASH infrastructure and service delivery.

2. **Water Service Providers and Boreholes**
   - Observed that operations are functional but constrained by aging equipment, high maintenance costs, and irregular supply.
   - Tariff practices revealed inconsistencies, with affordability challenges for vulnerable households.
   - Community reliance on boreholes underscored the urgency of upgrading infrastructure and ensuring fair pricing mechanisms.
3. **Health Centers and IDP Camps**
   - Inspections showed inadequate hygiene and sanitation facilities, with limited or intermittent water availability.
   - Menstrual hygiene management (MHM) materials and private facilities were insufficient, contributing to reduced dignity and poor health outcomes, especially for women and girls.
   - The findings emphasized the need to integrate WASH improvements into health centers and IDP settlements to reduce disease risks and improve well-being.
4. **Women's Centers and Safe Spaces**
   - Discussions revealed ongoing support for gender-based violence (GBV) survivors, but facilities were under-resourced.
   - Awareness and advocacy programs were ongoing, yet limited in reach due to funding and staffing constraints.
   - Consultations highlighted the importance of embedding gender-sensitive WASH solutions and linking them with GBV awareness initiatives to strengthen protection and empowerment.

5.5 Planned Stakeholder Engagement Activities

5.5.1 Stakeholder Engagement Plan (SEP)

1. Introduction

The SEP outlines how stakeholders will be identified, consulted, informed, and engaged throughout the project lifecycle. It ensures compliance with AfDB ISS Guidance Note 10 and Somali regulatory frameworks on community engagement.

2. Objectives of the SEP

- Identify and analyze stakeholders (interest, influence, and vulnerability).
- Provide a framework for transparent and culturally appropriate engagement.
- Ensure timely disclosure of information to all stakeholders.
- Establish a functional grievance redress mechanism (GRM).
- Build ownership and support for sustainable project operation.

Stakeholder Identification and Analysis

Table 5.5 Stakeholder Mapping Matrix

Category	Stakeholder	Interest/Concerns	Influence/Power	Engagement Approach
Primary (Directly Affected)	School students & teachers	Safe, hygienic sanitation facilities	Medium	Awareness sessions, school committees
	Health centre staff & patients	Reduced disease risks, safe wastewater handling	Medium	Workshops, staff training, noticeboards
	Local communities (adjacent households)	Odour, safety, local employment	Medium	Community meetings, flyers, grievance desk
Secondary (Indirectly Affected)	Traditional elders & religious leaders	Land access, social acceptance	High	Consultative forums, inclusion in GRM
	Women's groups	Safety, menstrual hygiene management	Medium	Gender-focused consultations
	Youth groups	Local jobs, training opportunities	Low	Public consultations, skills programs
Institutional Stakeholders	Ministry of Environment & Climate Change	ESIA approval, monitoring	High	Formal meetings, compliance reporting
	Ministry of Health	Sanitation-health linkages	High	Joint inspections, technical coordination
	South Galkayo Municipality	Land allocation, service delivery	High	Regular coordination meetings

Development Partners Private Sector	AfDB	Safeguards compliance, financing	Very High	Formal reporting, AfDB missions
	UNICEF Somalia	Technical standards for WASH	High	Coordination workshops, joint monitoring
	Local contractors	Project delivery, safety	Medium	Contractor agreements, OHS monitoring
	Waste service providers	Sludge management, O&M	Medium	Partnership agreements

4. Stakeholder Engagement Activities

- **Preparation & Design Phase:** Public consultations, ESIA disclosure, validation of site selection.
- **Construction Phase:** Continuous community updates, safety briefings, OHS monitoring, job opportunities.
- **Operation Phase:** Hygiene promotion, capacity building of school/health staff, periodic community outreach.

5. Information Disclosure

- **What:** ESIA/ESMP summaries, project timelines, OHS measures, GRM procedures.
- **How:** Flyers in Somali language, public noticeboards at schools'/health centers, radio programs, AfDB website.
- **Principle:** Timely, accessible, culturally sensitive disclosure.

6. Grievance Redress Mechanism (GRM)

- **Community-level complaint desks** at schools and health centers.
- **Escalation** to Ministry.
- **Final appeal** through AfDB safeguard focal points.
- Free, accessible, and inclusive for all groups, including women and children.

7. Feedback Mechanisms

- Biannual community meetings to share project updates.
- Publicly displayed summaries of resolved grievances.
- AfDB and state government disclosure of monitoring results.

8. Budget for SEP Implementation

Table 5.6 SEP implementation budget

Activity	**Estimated Cost (USD)**
Consultations & Meetings	2,500
Information Disclosure (media, flyers, translation)	2,500
Grievance Mechanism (training, staff, desks)	3,000
Monitoring & Reporting	1,500
Contingency	500
➞ Total Estimated SEP Budget:	**10,000 USD**

9. Monitoring and Reporting

- **Indicators:** Number of consultations held, % of vulnerable groups consulted, grievances resolved, community satisfaction rate.

- **Frequency**: Quarterly monitoring reports; annual review with AfDB.

5.5.2 Project implementation phase

OS 10 (Stakeholder Engagement and Information Disclosure) ensures that the SEP will remain fully operational throughout construction. During the construction Phase the stakeholders will be engaged and key activities will include:

- ✓ Regular information updates to communities on construction schedules, traffic management, safety protocols, and anticipated disruptions, to mitigate rumours and opposition.
- ✓ Real-time impact monitoring through community feedback channels to track and adaptively manage dust, noise, labour influx, and other construction-related effect.
- ✓ Ongoing grievance-redress support, ensuring new or evolving concerns particularly those affecting local livelihoods are addressed before escalation.

5.5.3 Project closure phase

During the completion stage the stakeholders will be involved in activities encompassing final inspections, ex-post RAP evaluation, and commissioning. The following engagement activities will be conducted to secure sustainable handover-

- ✓ Validation of compensation and restoration outcomes, co-verified with affected persons to confirm delivery of agreed entitlements
- ✓ Lessons-learned workshops with stakeholders to capture effective practices and areas for improvement, informing future projects.
- ✓ Transition planning sessions with communities and local authorities to formalize long term monitoring and maintenance responsibilities.

Table 5.7: Summary of planned stakeholder engagement in project implementation phase

Engagement Type	Purpose	Number of Meetings
Pre-Construction Sensitization	Meetings Ensures early disclosure of construction plans, timelines, and risks to promote informed stakeholder participation.	5
Construction Kick-Off Meeting	Promotes coordination and clear communication of roles/responsibilities, aligned with inclusive engagement principles.	1
Monthly Community Feedback	Forums Fulfils OS 10's requirement for continuous consultation to manage emerging issues and maintain social license.	20
Grievance Redress Meetings	Provides access to an effective GRM as required by OS 10 to address construction-related complaints in real-time.	8
Environmental & Social Risk	Monitoring Sessions Ensures that construction risks (dust, waste, labour influx) are monitored with stakeholder involvement, as required.	8
Labour Engagement Meetings	Promotes non-discriminatory employment practices, working conditions, and grievance channels for workers.	4
Traffic and Public Safety Meetings	Informs stakeholders of potential access disruptions and ensures inclusion of vulnerable road users (per OS 10)	8
Women and Vulnerable Group	Dialogues Supports equitable participation, safeguards vulnerable populations, and captures gender-specific concerns.	2
Emergency Response and	Preparedness Meetings Ensures communities are informed and prepared to respond to construction-related incidents or health risks.	4
Decommissioning meeting	A decommissioning meeting will be convened to formally mark the closure of project activities and to ensure a transparent, inclusive, and accountable handover process. The meeting will bring together key stakeholders, including representatives from the implementing agency, local government officials, community leaders, project-affected persons (PAPs), and the project team.	1

5.5.4 Process to be followed for arranging engagement activities

a) **Engagement planning & scheduling:** This will involve drafting of an engagement calendar aligned with project timelines, selection of venues based on accessibility and security considerations.

b) **Notification & mobilization:** This will involve issuing of formal invitations or public notices (radio, posters, local leaders), and mobilization at least 5 working days in advance.

c) **Logistics and resource preparation:** This will include securing venues, arranging refreshments, transport support for vulnerable group, prepare communication materials (presentations, banners, feedback forms), setting up the venue etc.

d) **Conduct of engagements:** This will be the recording of proceedings and gathering feedback systematically.

e) **Post-engagement follow-up:** This will involve compiling of meeting minutes and sharing with participants, integration of feedback into project planning.

5.5.5 Engagement protocols

During engagement, the following protocols shall be applied; -

- Respect and Inclusivity: Ensure respectful, inclusive participation with attention to gender, age, and disability considerations.
- Free, Prior and Informed Consent (FPIC): Engagements must be voluntary, based on complete and timely information.
- Language and Communication: Use local languages and culturally appropriate methods to ensure understanding.
- Documentation and Transparency: Maintain detailed minutes, attendance records, and audio/visual documentation (if permitted).
- Feedback and Grievance Mechanism: Inform stakeholders of grievance procedures and encourage constructive feedback.
- Security and Ethics: Ensure safe environments and adhere to ethical standards of engagement.

6. ANALYSIS OF ALTERNATIVES

6.1 Waste Water Treatment Options

Wastewater treatment processes are commonly classified as either aerobic or anaerobic systems. In accordance with best practices for each case and considering local environmental and climatic conditions, appropriate measures will be implemented to design the works, ensuring compliance with the effluent standards outlined by the Ministry of Energy and Water Resource (MoEWR). For each system, the treatment plants will incorporate primary treatment, which includes screen and grit removal units as prerequisites. Secondary and Tertiary treatment will be incorporated where necessary. The following wastewater treatment processes are applicable in Somalia urban areas including technologies that may not have been used before:

- Waste Stabilization Ponds (WSPs)
- Trickling Filters
- Oxidation Ditches
- Sequencing Batch Reactors (SBR)
- Rotating Biological Contactor (RBC)
- Moving Bed Biofilm Reactor (MBBR)
- Membrane Bio Reactor (MBR)
- Onsite Sanitation
- Sludge Handling Facilities
- Nascent Technologies (i) On-Site Sludge Treatment and Dewatering System and (ii) Lime Mixer

All the above Wastewater Treatment Technologies are preceded by Preliminary Treatment of wastewater which entails the removal of screens and grit to be detailed in the design report.

6.2 Wastewater treatment material alternatives

1. Collection and Containment (Septic Tanks, Latrines)

- Concrete (cast-in-place or precast) → durable, locally available, good for lined pits and septic tanks.
- Ferrocement (thin reinforced concrete) → cheaper, lighter alternative for tanks and covers.
- Bricks or masonry blocks → for lining pit latrines, available locally.
- Plastic/HDPE prefabricated tanks → lightweight, easy to install, but may be costly to import.

- Oil drums or repurposed containers → can be adapted for small holding tanks (temporary/low-scale).

2. Piping and Conveyance

- PVC / uPVC pipes → affordable, corrosion-resistant, widely used in Somalia for water and wastewater distribution.
- HDPE pipes → flexible, durable under high pressure, but more expensive.
- Clay pipes (traditional) → sustainable but heavier and harder to install/maintain.
- Galvanized steel pipes → strong but prone to rust, less ideal for wastewater.

3. Treatment Structures (Septic Tanks, Wetlands, Ponds)

- Reinforced concrete → best for permanent septic tanks, anaerobic baffled reactors, and stabilization ponds.
- Earth-lined ponds with clay or geomembrane liners → cost-effective for stabilization ponds, but need proper sealing to prevent leakage.
- Bricks/stone masonry → for walls of small treatment units.
- Plastic liners (HDPE, LDPE, geomembranes) → to line ponds or wetlands where clay is not available.

4. Filtration Media

- Gravel and sand → for constructed wetlands, slow sand filters, soak pits.
- Charcoal/biochar → low-cost local adsorbent to improve removal of organics and odor.
- Crushed stone or recycled concrete → substitute for gravel in filters.

5. Plant-based Natural Systems

- Local reeds (e.g., Phragmites, Typha) → used in constructed wetlands to uptake nutrients.
- Vetiver grass → strong root system, good for erosion control and polishing effluent.
- Papyrus → available in wet areas, can be used in wetlands or greywater polishing.

6. Disinfection & Reuse

- Chlorine (calcium hypochlorite or sodium hypochlorite) → commonly available in Somalia for water disinfection.
- Solar disinfection (SODIS) → transparent plastic/ glass containers + sunlight for greywater.
- Sand + gravel polishing units → simple and cheap for final filtration before reuse in irrigation.

In summary:
For South Galkayo, the best wastewater treatment material alternatives would combine locally sourced materials (concrete, bricks, gravel, reeds) with affordable imports (PVC pipes, plastic liners) to create septic tanks, soak pits, wetlands, and ponds. This balances cost, availability, and sustainability while ensuring systems can be built and maintained by local masons and technicians.

6.3 Design Alternatives

The document outlines multiple technology choices for each stage of the treatment process, allowing for different design configurations based on cost, space, and treatment goals.

- Sludge Stabilization Technology: The project could choose between:
    - Anaerobic Baffled Reactors (ABR): A multi-chambered system for enhanced sedimentation and digestion of organic matter.
    - Bio digesters: Closed tanks that also perform anaerobic digestion but are specifically highlighted for their potential to produce biogas.
- Sludge Dewatering and Drying Method: Alternatives for drying the processed sludge include:
    - Unplanted Drying Beds: Simple sand and gravel beds that use sun and evaporation to dry sludge.
    - Planted Drying Beds: A similar design that incorporates vegetation like reeds to improve drainage and evapotranspiration.
- Effluent (Liquid) Treatment: For the final polishing of treated water, the design could incorporate:
    - Constructed Wetlands: Engineered systems with vegetation to naturally treat the effluent.
    - Soak away Pits or Infiltration Trenches: Structures designed for the safe infiltration of treated liquid into the soil.
    - Maturation Ponds: Shallow ponds that use sunlight and natural processes to reduce pathogens.
- Sanitation Facilities in Flood-Prone Areas: Instead of conventional latrines that can overflow or collapse in floods, the project alternative is to construct Raised Emergency Toilets with Lined Holding Tanks. These are built above ground and have watertight tanks to prevent contamination during floods.

6.4 Location Alternatives

While there are no specific alternative sites, there is clear criteria for selecting a location. The alternatives would consist of evaluating different land parcels against these requirements.

- Proximity to Served Area: A DTF is a localized system, so alternative sites should be evaluated based on their strategic proximity to the urban neighborhoods, informal settlements, or institutions they are intended to serve.
- Setback Requirements: Any proposed location must be assessed against setback standards. The chosen site must be at least 100–200 meters away from residences and water bodies to minimize potential nuisance and health risks.
- Land Size: Alternative sites must have adequate space. For a medium town, a facility

would require between 0.5 and 1.5 hectares, depending on the chosen technologies.

6.5 Operating Condition Alternatives

The primary operational alternative is the choice between a basic disposal model and a model focused on resource recovery.

- Alternative 1: Basic Disposal Operation: In this model, the DTF would focus solely on treating sludge and effluent for safe disposal. Solids would be processed into bio solids for disposal, and treated water would be discharged into soak ways.
- Alternative 2: Resource Recovery Operation: This model operates the DTF as a circular economy system. This would involve:
    - Biogas Recovery: Capturing methane from bio digesters for use in cooking or electricity generation.
    - Bio solid Composting: Co-composting the dried sludge with organic waste to create fertilizer for agricultural use.
    - Effluent Reuse: Using the nutrient-rich treated water for controlled agriculture.
- Sludge Collection Method: The operational plan could choose between using mechanized exhauster trucks or employing manual empties to collect sludge from homes and institutions.

6.6 The 'No-Action' Alternative

The 'no-action' alternative is a scenario where the DTF and raised toilet project is not implemented. The consequences of this option are the continuation of the existing sanitation problems.

- Continued Groundwater Contamination: Without a DTF to safely receive and treat waste, the reliance on unlined pit latrines and overflowing septic tanks would continue, leading to ongoing fecal seepage into groundwater.
- Health Risks from Overflowing Latrines: The problem of overflowing latrines, particularly in dense IDP camps, would persist, posing significant public health risks.
- Increased Flood-Related Contamination: In flood-prone areas, the failure to build raised toilets would mean that standard pit latrines will continue to overflow or collapse during floods, contaminating floodwaters and spreading disease.

7. ASSESSMENT OF ENVIRONMENT AND SOCIAL IMPACTS

7.1 Introduction

This chapter identifies the potential environmental impacts resulting from the proposed project activities. The nature of impacts on the identified resources and receptors are categorized as either positive or negative, direct or indirect, long term or short term. The purpose of this assessment is to identify the significant impacts and to determine the appropriate measures to mitigate the negative impacts and to enhance the positive impacts. Significant impacts are defined as being those that:

- Relate to protected areas or to historically and culturally important areas
- Area of public concern and importance
- Trigger subsequent secondary impacts
- Elevate the risk of life-threatening situations

7.2 Project Positive Impacts

Project positive impacts during construction phase are summarized below.

- **Employment Creation:** At construction stage workers will be deployed to help in construction and land preparation activities. This will include both skilled and unskilled personnel especially from the local population with approximately 100 direct and indirect jobs.
- **Income/Revenue to Government:** Income to government will be realized in terms of taxes generated during the acquisition of relevant statutory licenses which include but are not limited to Water Services License, EIA License, Business permit, Operators permit among others. Materials to be used during construction will also be taxable. Through revenues generated, the government will be capable of financing its responsibility to her citizens.
- **Income to Other Businesses:** During implementation of the project, there will be need for transporters, suppliers of raw materials and other service providers, who will benefit from the proposed development.

7.2.1 Sanitation Interventions - Operation phase positive impacts

The main objective of the Project is to improve the quality of life of people within Galkayo municipality through provision of improved sanitation services. The positive impacts associated with the Project operation phase include:

- Reduced pollution of natural hydrological systems.
- Reduced cases of water borne diseases associated with pollution of water resources by raw sewage.
- Improve aesthetic outlook of Galkayo Municipality that is currently comprised by raw sewer flowing in storm drains

- Trigger development of modern infrastructure within Galkayo town due to availability of adequate sewer infrastructure.
- Reduce distances covered by exhausters to sludge discharge points (reduced costs)
- Residents will decommission pit latrines which are expensive to construct and unsustainable in the long run due to short fill-up duration. This will reduce contamination of ground water.

7.3 Construction Phase Negative Impacts

A summary of negative impacts of the proposed project include;

- Impact on water resources
- Impact on soil resources
- Impact on air quality
- Impact on noise and vibration
- Impact on flora and fauna

7.3.1 Impacts on Water Resources

Galkayo municipality, located within Galmudug state which has mainly groundwater-fed boreholes and shallow wells. The Project activities will either indirectly or directly interact with these water reservoirs through sedimentation and possible pollution.

Potential Impacts

Project activities on water lines listed above will interact with water resources within the Project area highlighted above in the following ways.

- Site activities such as trench excavations could result to loosening of soils that could result to sedimentation and siltation that in turn affect the water reservoirs.
- There will be direct interaction from the abstraction of water from surface water bodies for construction (e.g. for dust control).
- Un-serviced plant and equipment on site could result to oils and fuels leaks that could contaminate water resources.
- The nature of the construction activities of the proposed water lines will render the soils susceptible to agents of erosion subsequent siltation of rivers and stream along the Water alignment. The small magnitude of this impact on surface water quality and the low sensitivity of the rivers to increased turbidity means the significance of this impact is assessed as minor.

Pre- Mitigation Impact Assessment is presented in the table below

Table 7.1: Pre-Mitigation Impact Assessment

Impact	**Siltation and pollution of Surface Waters Resources**

Nature of Impact	Negative		Positive		Neutral
	Eroded soil and leaked oils and fuels entering groundwater-fed boreholes and shallow wells				
Type of Impact	Direct		Indirect		Induced
	Impact is a result as a direct interaction between Project activities and the environment along the footprint of the water alignments.				
Duration of Impact	Temporal	Short term		Long term	Permanent
	The impact is expected to be short term, however in the case of serious erosion the impacts of siltation of surface water may be experienced long term (into the operational phase).				
Impact Extend	Local		Regional		International
	The impact will be limited to the footprint of the Water alignment and immediate surrounds. The dilution of sediments in the river will render this impact negligible at the regional scale				
Impact scale	The impact is considered as small (local) scale.				
Frequency	Continuous				
Livelihood	Possible				
Impact magnitude	Positive	Negligible	Small	Medium	Large
	Based on the above the impact magnitude is considered small.				
Resource / receptor sensitivity	Low		Medium		High
	The sensitivity of the rivers along the proposed Water Lines to Siltation and pollution is considered to be medium to low.				
Impact significance	Negligible	Minor		Moderate	Major
	Considering the impact magnitude is small and the sensitivity is medium to low, the overall significance is considered to be minor				

Mitigation

The following mitigation measures will be implemented to minimize the potential for siltation and sedimentation of surface water by soils eroded from construction sites

- Activities shall be conducted > 100 m away from water bodies, except where crossings are required.
- All waste water which may be contaminated with oily substances must be managed in accordance with an appropriate Waste Management Plan (WMP).
- No hydrocarbon-contaminated water may be discharged to the environment.
- At construction stage, the contractor will prepare Specific Construction Environment and Social Management Plan (C-ESMP) which included among other; *Soil and Sedimentation Control Plan, Spoil Management Control Plan and Waste Management Plan.*

Residual Impact

The implementation of the proposed mitigation measures reduces the significance of the residual impact to negligible from minor within water bodies identified. The table below

presents residual impact significance following mitigation measures.

Table 7.2: Residual Impact Significance

Impact	Project Phase	Significance (Pre-mitigation)	Residual Impact Significance (Post-mitigation)
Availability and Quality of Water Resources (groundwater-fed boreholes and shallow wells)	Construction	Minor	Negligible

7.3.2 Impacts on Soil Resources

Baseline

The dominant soil type in Galkayo is shallow sandy and/or stony soils and deeper calcareous soils, with the central part of Somalia also having moderately deep loamy soils high in calcium carbonate or gypsum. The region features Vertisols on clay plains and is subject to moisture stress, low fertility, and potential salinity

Potential Impacts

The excavation of soil for the construction of water lines will disrupt the soil cohesion and also may result in surplus soil due to the installation of water pipes within the same excavated trenches. If not properly restored or managed, such soils may be eroded off. Temporary soil stockpiles established during construction of infrastructure will be at risk of erosion from wind and rainfall. Soil contamination as a result of possible oil and fuel leaks from un-services plant and equipment on site is also a potential impact.

Impact Assessment

The table presents Pre- Mitigation Impact Assessment.

Table 7.3: Pre-Mitigation Impact Assessment

Impact	**Soil Erosion during Construction**			
Nature of Impact	Negative	Positive	Neutral	
	Loss of soil cohesion contributing to erosion.			
Type of Impact	Direct	Indirect	Induced	
	Impact is a result as a direct interaction between project activities and the environment along the footprint of the project.			
Duration of Impact	Temporal	Short term	Long term	Permanent
	The impact is expected to be short term, however in the case of serious erosion the impacts may be experienced long term.			

Impact Extend	Local	Regional	International		
	The impact will be limited to the footprint of the project and immediate surrounds.				
Impact scale	The impact is considered as small (local) scale.				
Frequency	Continuous				
Livelihood	Possible				
Impact magnitude	Positive	Negligible	Small	Medium	Large
	Based on the above the impact magnitude is considered small.				
Resource / receptor sensitivity	Low	Medium	High		
	The sensitivity of the rivers along the proposed WWTP to erosion is considered to be medium to low.				
Impact significance	Negligible	Minor	Moderate	Major	
	Considering the impact magnitude is small and the sensitivity is medium to low, the overall significance is considered to be minor				

Mitigation

The following mitigation measures will be implemented to minimize the potential for soil erosion:

- Vegetation clearing and topsoil disturbance will be minimised.
- Contour temporary and permanent access roads / laydown areas so as to minimise surface water runoff and erosion.
- Sheet and rill erosion of soil shall be prevented where necessary through the use of sand bags, diversion berms, culverts, or other physical means.
- Topsoil shall be stockpiled separate from subsoil. Stockpiles shall not exceed 2 m height, shall be located away from drainage lines, shall be protected from rain and wind erosion, and shall not be contaminated.
- Wherever possible construction work will take place during the dry season.
- Topsoil shall be evenly spread across the cleared areas when reinstated.
- Accelerated erosion from storm events during construction shall be minimised through managing storm water runoff (e.g. velocity control measures).
- Soil backfilled into excavations shall be replaced in the order of removal in order to preserve the soil profile.
- Spread mulch generated from indigenous cleared vegetation across exposed soils after construction
- At construction stage, the contractor will prepare Specific Construction Environment and Social Management Plan (C-ESMP) which included among other; *Soil and Sedimentation Control Plan, Spoil Management Control Plan and Waste Management Plan.*

Residual Impact

The implementation of the proposed mitigation measures reduces the significance of the

residual impact to negligible from minor along the entire water lines alignment. The table below presents residual impact significance following mitigation measures

Table 7.4: Residual Impact Significance

Impact	Project Phase	Significance (Pre-mitigation)	Residual Impact Significance (Post-mitigation)
Loss of soil resources due to erosion	Construction	Minor	Negligible

7.3.3 Impact on Air quality within the Air – Shed.

Baseline

As provided by Air quality index (AQI+) and PM2.5 air pollution in Somalia, the ambient air quality status of South Galkayo is summarized in **Tables 7.5 and 7.6** below.

Table 7.5: Ambient Particulate Matter ($PM_{2.5}$ and PM_{10})

Peri Urban Centers in Somalia	Parameter	Concentration (µg/m³)	Guideline (µg/m³)[1]
	Particulate matter ≤2.5 ($pm_{2.5}$)	15 to 20	35
	Particulate matter ≤10 (pm_{10})	20 to 35	100

Table 7.6: Ambient NOx SOx, CO2 and O3

Peri Urban Centers in Somalia	NO_2		SO_2		CO		0_3	
	Conc. (ppm)	EMC AQR guide 2014 (ppm)	Conc. (ppm)	EMC AQR guide 2014 (ppm)	Conc. (mg/m³)	EMC AQR guide 2014 (mg/m³)	Conc. (ppm)	EMC AQR guide 2014 (ppm)
	<0.01	0.5	0.011	0.191	0.07	10.0	0.015	0.12

Activities associated with the Project including machineries and equipment's are not anticipated to generate significant volumes of gases emissions to warrant this impact assessed as significant

Potential Impacts

The following would be expected during construction.

- Emissions of oxides of nitrogen (NO_2 in particular) mainly from construction-related vehicles (and to a lesser degree from construction generators and other hydrocarbon powered equipment); and

[1] Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQS)

- Dust and particulate matter (as PM_{10}) created by construction-related vehicle traffic on unpaved roads.

Impact Assessment

The assessment identified a list of receptors including churches, schools, markets and health facilities that could be affected by polluted air as a result of Project Activities that release SOx, NOx Co and O_3 and PM_{10} and $PM_{2.5}$

Pre- Mitigation Impact Assessment in **Table 7-7 below.**

Table 7.7: Pre-Mitigation Impact Assessment

Impact	**Degradation of the Air-shed during Construction**				
Nature of Impact	Negative		Positive		Neutral
	Increase in airborne pollution.				
Type of Impact	Direct		Indirect		Induced
	Impact is a result as a direct interaction between project activities				
Duration of Impact	Temporal	Short term		Long term	Permanent
	The impact is expected to be temporary as emissions arise throughout the construction phase.				
Impact Extend	Local		Regional		International
	The impact will be limited to the footprint of the project and immediate surrounds.				
Impact scale	The impact is considered as small (local) scale.				
Frequency	Intermittent – impacts will typically only arise during working hours				
Livelihood	Inevitable				
Impact magnitude	Positive	Negligible	Small	Medium	Large
	Based on the above the impact magnitude is considered medium.				
Resource / receptor sensitivity	Low		Medium		High
	The sensitivity of human receptors is Medium in dwellings and settlements				
Impact significance	Negligible	Minor		Moderate	Major
	Dust emissions have the potentially to have Moderate significant impacts at nearby sensitive human receptors.				

Mitigation

As general measures for all locations:

- Regular dust suppression through water spraying on dusty roads and worksites
- Undertake monitoring close to dusty activities, noting that this may be daily visual inspections, or passive/active monitoring as parameter
- Undertake inspections to ensure compliance with the Dust Management Plan;
- Plan potentially dusty activities so that these are located as far from receptors as feasible;

- Erect solid screens if feasible around stockpiles and concrete batching;
- Avoid run off of mud and water and maintain drains in a clean state;
- Remove dusty materials form site as soon as possible if not being re-used. If being re-used, cover or vegetate if possible;
- Impose speed limits on haul routes and in construction compounds to reduce dust generation;
- Minimise drop heights when loading stockpiles or transferring materials; and
- Expose the minimum area required for the works, and undertake; and exposure on a staged basis to minimise dust blow.

Residual Impact

With the implementation of suitable mitigation and with adequate monitoring, residual impacts associated with dust and PM_{10} from construction activities are **Negligible** as presented in the table below

Table 7.8: Residual Impact Significance

Impact	**Project Phase**	**Significance (Pre-mitigation)**	**Residual Impact Significance (Post-mitigation)**
Road Traffic Exhaust Emissions	Construction	Negligible	Negligible
Dust and PM from construction activities	Construction	Moderate	Negligible

7.3.4 Impacts related to Noise and Vibration

Baseline

World Bank Group General EHS Guidelines provide guidance on acceptable noise levels based on WHO standards and these are set out in **Table 7-8** below.

Table 7.9. World Bank Group Noise Level Guidelines

	Maximum Allowable Ambient Noise Levels, LAeq,1hr, dBA Free field	
	Daytime	**Night-time**
	07:00 – 22:00	22:00 – 07:00
Residential, institutional, educational	55	45
Industrial, commercial	70	70

Impact Assessment

Potential Impact

The assessment identified a list of receptors including churches, schools, markets and health facilities that could be affected by excessive noise beyond recommended World Bank Group Guidelines.

Pre mitigation Impact Assessment is presented in **Table 7-10**.

Table 7.10: Pre-Mitigation Impact Assessment

Impact	**Noise during Construction**				
Nature of Impact	Negative	Positive	Neutral		
	Elevated noise levels from operation of construction equipment.				
Type of Impact	Direct	Indirect	Induced		
	Impact is a result of noise generated by construction activities.				
Duration of Impact	Temporal	Short term	Long term	Permanent	
	Impacts are expected to be short term (up to one month) at any individual water line within each of the target drainage area.				
Impact Extend	Local	Regional	International		
	The impact will be limited to the footprint of the project and immediate surrounds.				
Impact scale	The impact is considered as small (local) scale.				
Frequency	Impacts may occur during daytime periods over a short-term duration at each water line alignment.				
Livelihood	Inevitable				
Impact magnitude	Positive	Negligible	Small	Medium	Large
	Based on the above the impact magnitude is considered negligible to small.				
Resource / receptor sensitivity	Low	Medium	High		
	Dwellings are considered to have a high sensitivity to noise				
Impact significance	Negligible	Minor	Moderate	Major	
	Considering the impact magnitude is small to negligible and the sensitivity is high, the overall significance is considered to be minor				

Mitigation

The following standard mitigation measures will be employed

- Siting noisy plant and equipment as far away as possible from human settlement, and use of barriers (e.g. site huts, acoustic sheds or partitions) to reduce the level of construction noise at receptors wherever practicable;
- Where practicable noisy equipment will be orientated to face away from the nearest Human settlement and other receptors;
- Working hours for significant noise generating construction work (including works required to upgrade existing access roads or create new ones), will be daytime only;
- Alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric-

controlled units, will be used, where practicable;

- Where practicable, stationary equipment will be located in an acoustically treated enclosure;
- For machines with fitted enclosures, doors and door seals will be checked to ensure they are in good working order; also, that the doors close properly against the seals;
- Throttle settings will be reduced and equipment and plant turned off, when not being used;
- Equipment will be regularly inspected and maintained to ensure it is in good working order. The condition of mufflers will also be checked; and fitting of mufflers or silencers of the type recommended by manufacturers.

Residual Impact

Residual Impact Significance is presented in **Table 7-11** below.

Table 7.11: Residual Impact Significance

Impact	Project Phase	Significance (Pre-mitigation)	Residual Impact Significance (Post-mitigation)
Noise from construction activities affecting nearby dwellings	Construction	Minor	Negligible

7.3.5 Impacts on Flora

Baseline

Galkayo Somalia falls within Arid and Semi-Arid (ASALs) zone within ecological zone V-VI. Zone V receives rainfall between 300mm-600mm annually and is characterized by low trees, grass and shrubs while zone VI receives annual rainfall of 200mm to 400mm. The Project area, which is estimated to cover a minimum of ¼ acre, receives an average of 240mm of rainfall per year, the rainfall is erratic and short making it unfavorable for vegetation growth. However, the area was once covered exhibits arid characterizes with dominant species noted as cactus family and Acacia sp including; Acacia species (*A. mellifera*, *A. tortilis*), Commiphora spp., Dobera glabra, Boscia coriacea.

Potential Impact

There are **not** protected vegetation cover within the Waste Water Treatment Plant project area that is considered a fragile ecosystem, sensitive to changes to its components. Pre-mitigation Impact Assessment is presented in **Table 7-13 below**.

Table 7.12: Pre-Mitigation Impact Assessment

Impact	**Flora and Vegetation during Construction**		
Nature of Impact	Negative	Positive	Neutral
	Disturbance to vegetation cover around the WWTP.		
Type of Impact	Direct	Indirect	Induced
	Impact is as a result of a direct interaction between the project (i.e. Construction activities) and the existing vegetation along the water and		

	sewer lines				
Duration of Impact	Temporal	Short term	Long term	Permanent	
	The effect is considered permanent as the areas where vegetation will be removed for the construction of the line will have to be permanently kept with vegetation for maintenance purposes during the operational phase				
Impact Extend	Local	Regional	International		
	The impact will be limited to the footprint of the project and immediate surrounds.				
Impact scale	The impact is considered as small (local) scale.				
Frequency	Once off				
Livelihood	Inevitable				
Impact magnitude	Positive	Negligible	Small	Medium	Large
	Based on the above the impact magnitude is considered negligible				
Resource / receptor sensitivity	Low	Medium	High		
	The Water Lines will be constructed with disturbed or modified environment therefore the sensitivity is considered low.				
Impact significance	Negligible	Minor	Moderate	Major	
	Considering the impact magnitude is negligible and the sensitivity is low, the overall significance is considered to be negligible				

Mitigation

The following standard mitigation measures will be employed

- Avoidance of impacts should be prioritised. However, if not possible then compensatory planting of trees that will be cut by the contractor during excavation of water pipeline trenches will be undertaken.
- Vegetation shall only be cleared along the Water alignment only if the vegetation and will interfere with Project construction and/or present a hazard.
- Areas to be cleared shall be agreed and demarcated before the start of the clearing operations to minimize exposure.
- Stage vegetation clearance is also recommended so as not to clear the entire corridor all at once.
- The use of existing cleared or disturbed areas for the Contractor's Camp, stockpiling of materials etc. shall be encouraged.
- Whenever possible, all damaged areas shall be reinstated and rehabilitated upon completion of the contract to as near pre-construction conditions as possible.
- Rehabilitation of temporary construction sites and pioneer camps (if needed) should be done as swiftly as possible and always with suitable native grasses and other plants

Residual Impact

Residual Impact Significance is presented in the table below

Table 7.13: Residual Impact Significance

Impact	Project Phase	Significance (Pre-mitigation)	Residual Impact Significance

			(Post-mitigation)
Disturbance to vegetation cover	Construction	Negligible to Minor	Negligible

7.4 Waste Management on Site

Wastes on Site will include both liquid and solid wastes,

Liquid Wastes

- Storm water runoff containing sediments and construction debris.
- Dewatering discharge from excavations.
- Treated effluent from DEWATS units.
- Cleaning and maintenance water from tanks, pumps, and filters.
- Minor spills of fuels, oils, and lubricants from equipment during construction.

Solid Wastes

- Sludge from DEWATS treatment units.
- Screenings (rags, plastics, sticks) from preliminary treatment.
- Excavated soil, sand, gravel, and debris from construction.
- Packaging materials (plastic, cardboard) and construction offcuts.
- Used chemicals containers and bags.
- Minor metal scraps and broken tools.
- Worn out mechanical parts and equipment

Such wastes will be managed as summarized below

- The contractor shall develop a comprehensive Waste Management Plan (WMP) prior to commencement of works
- Properly labelled and strategically placed waste disposal containers shall be provided at all places of work
- Litter bins should have secured lids to prevent animals and birds from scavenging
- All personnel shall be instructed to dispose of all waste in a proper manner
- Recycling of construction material shall be practiced where feasible e.g. containers and cartons
- Earth spoils shall be disposed of in pre identified sites
-
- Water containing pollutants such as concrete or chemicals should be directed to a conservancy tank for removal from the site where applicable
- Potential pollutants of any kind and form shall be kept, stored and used in a manner that ensures no escape
- In case of any form of pollution, the contractor should notify the Resident Engineer (RE)
- Wash areas shall be placed and constructed in a manner that ensures the surrounding areas including groundwater are not polluted

7.5 Social Resources and Receptors

7.5.1 Workers, Community Health Safety and Security

Baseline

The Assessment recorded receptors that could be exposed due to Project activities. The risks will be to both; (i) Project Workers, (ii) School Children and Students and (iii) General Community Members

Some of the receptors recorded included;

- Gaheyr Primary
- Dalsan Hospital
- Offices
- Mosque

The proposed waste water treatment plant would be in close proximity to above receptors with an average radius of 300m.

Potential Impact

The presence of the Project could affect the health, safety and wellbeing of the communities along the proposed water alignment routes including increased project-related traffic during site preparation including site clearance and excavation works and inappropriate waste handling or disposal, and accidental leaks and spills could result to be below listed risks.

- Accidents associated with plant and equipment movement around the project area or open unbarricaded trenches or without warning tapes.
- Air pollution beyond thresholds provided by national legislations
- Noise and excessive vibrations beyond the levels provided by national legislations
- Drowning risks to school children and community Members who might trip and fall into trenches that have percolated runoff water.
- Cave-Ins- The greatest danger in trenching and excavation is cave-ins. Unstable soil and inadequate shoring or sloping can lead to sudden collapses, burying workers and causing serious injuries or fatalities to workers
- Falls and Falling Loads: Workers or equipment near the edge of a trench can fall in, leading to injuries. Additionally, tools, machinery, or materials can fall into the trench, posing risks to those working inside.
- Utility Strikes; Contact with underground utilities, such as electrical cables, internet, or water mains, can cause severe injuries or disrupt services leading to community unrest and grievances
- Equipment-Related Accidents, heavy machinery used for digging or transporting materials can create additional risks, such as accidental contact with workers or trench edges

Impact Assessment

Pre mitigation Impact Assessment is presented in **Table 7-15 below**.

Table 7.14: Pre-Mitigation Impact Assessment

Impact	**Community Safety and Environment Health**		
Nature of Impact	Negative	Positive	Neutral

	ESHS risks to Community and Workers				
Type of Impact	Direct		Indirect		Induced
	Impact that result from a direct interaction between the Project (i.e. increased plant and equipment traffic) and the local population along the water and sewer lines.				
Duration of Impact	Temporal	Short term		Long term	Permanent
	The increased traffic effect and risks to injuries is temporary, as construction activities will take place in a sequential manner during the length of the construction period				
Impact Extend	Local		Regional		International
	The impact will be limited to the footprint of the project and immediate surrounds.				
Impact scale	The impact is considered as small (local) scale.				
Frequency	The frequency is considered to be occasional or one time at each temporary along the Water Lines over the duration of the construction phase.				
Livelihood	Inevitable				
Impact magnitude	Positive	Negligible	Small	Medium	Large
	Based on the above the impact magnitude is considered negligible to small.				
Resource / receptor sensitivity	Low		Medium		High
	The sensitivity of the receptors (local population along the Water Lines and road users including vehicle users, pedestrians and cyclists) is considered medium.				
Impact significance	Negligible	Minor		Moderate	Major
	Considering the magnitude and sensitivity are medium, the impact on the community safety during construction activities is considered to be of moderate significance.				

Mitigation

- Conduct a Pre-Work Assessment, assess the soil type, weather conditions, and proximity to structures or utilities. Identify potential hazards and plan the excavation accordingly.
- Use Protective Systems, implement appropriate protective systems, such as: (i) Shoring: Positioning supports to prevent soil movement. (ii) Shielding: Creating interior trench boxes to protect workers and (iii) Sloping: Cutting back trench walls at an angle to reduce collapse risk.
- Inspect Trenches Daily, a competent person should inspect trenches daily and after events like rainstorms or vibrations to ensure continued stability.
- Maintain Safe Access and Egress, rovide ladders, ramps, or other safe means of entry and exit in trenches that are four feet or deeper. Always place these within twenty-five feet of workers, for deep cut provide reinforced cage for workers.
- Stay Aware of Utility Locations: Use "Call Before You Dig" services to locate and mark underground utilities before excavation begins.
- Monitor Hazardous Atmosphere, test the air quality inside trenches over four feet deep for oxygen levels, toxic gases, and flammable atmospheres. Use ventilation if necessary.
- Control Water Accumulation, use pumps or diversion systems to keep water out of the

trench. Avoid working in trenches with standing water unless proper precautions are taken.

- Secure the Site, keep heavy equipment and materials away from trench edges. Install barriers and warning signs to protect workers and prevent accidental falls.
- Train Workers, ensure all workers are trained in trench safety, recognizing hazards, and responding to emergencies.
- Ensure that work sites are fenced and that signs are put up around work fronts and construction sites advising people of the risks associated with trespass. When work fronts are less than 10 metres from a community or house, employ security guards from the local community to prevent trespass.

Residual Impact

The significance of the residual impacts on community health and safety after the implementation of mitigation measures is presented in **Table 7-19** below.

Table 7.15: Residual Impact Significance

Impact	Project Phase	Significance (Pre-mitigation)	Residual Impact Significance (Post-mitigation)
ESHS risks to Community and Workers	Construction	Moderate	Minor

7.5.2 Children Protection

The possibility of contractor children abuse is through hiring of child labour, also labour force on site might abuse children within the Project area through sexual advances that could lead to early pregnancies and school dropout, including exposure to communicable diseases such as HIV and AIDS. The contractor will undertake the below listed mitigation measures.

Mitigation Measures

- The contractor will develop and implement a Children Protection Strategy that will ensures minors are protected against negative impacts associated by the Project including SEA.
- All staff of the contractor must sign, committing themselves towards protecting children, which clearly defines what is and is not acceptable behaviour
- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children to workers' home, unless they are at immediate risk of injury or in physical danger.
- Refrain from physical punishment or discipline of children
- Refrain from hiring children for domestic or other labor, which is inappropriate given their age, or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
- Comply with all relevant local legislation, including labor laws in relation to child labor specifically provisions of Somalia's Employment Act Cap 226 of 2007 Part VII on protection of children against exploitation

7.5.3 Sexual Exploitation and Abuse (SEA)

This impact refers to sexual exploitation and abuse committed by Project staff against communities and represents a risk at all stages of the Project, especially when employees and community members are not clear about prohibitions against SEA in the Project.

Mitigation Measures

- Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan will follow guidance on the World Bank's Good Practice Note for Addressing Gender-based Violence in Investment Project Financing involving Major Civil Works (Sept 2018).
- Prevention of SEA: including COCs and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials;
- Response to SEA: including survivor-cantered coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures SOP; staff reporting mechanisms; written procedures related to case oversight, investigation and disciplinary procedures at the project level, including confidential data management;
- Engagement with the community: including development of confidential community-based complaints mechanisms discrete from the standard GRM; mainstreaming of Sexual Exploitation and Abuse (SEA) awareness-raising in all community engagement activities; community-level IEC materials; regular community outreach to women and girls about social risks and their SEA-related rights;
- Management and Coordination: including integration of SEA in job descriptions, employments contracts, performance appraisal systems, etc.; development of contract policies related to SEA, including whistle-blower protection and investigation and disciplinary procedures; training for all project management; management of coordination mechanism for case oversight, investigations and disciplinary procedures; supervision of dedicated PSEA focal points in the project and trained community liaison officers.

7.6 Operation Phases Negative Impacts

7.6.1 Sanitation Works Operation Impacts

Environment and social Impacts during operation phase of the proposed Sanitation Works is presented in sub sections below

Water Pollution by Raw Sewerage

Water sources in the area are mainly shallow wells, dams, seasonal rivers and ground water aquifers. Poorly maintained and designed sewers can lead to spillage of raw sewage particularly at manholes and burst areas into the environment which eventually seeps in water sources. These can cause outbreaks of water borne related diseases like cholera and

typhoid.

Mitigation Measures

- The water and sanitation departments will ensure proper and periodic maintenance of sewers and treatment plants
- The water and sanitation departments will activate a community watch group for information sharing on the status of the sewers
- Regular cleaning of grit chambers and sewers to remove grease, grit, and other debris that may lead to sewer backups
- Development of an inventory of system components, with information including age, construction materials, and drainage areas served
- Design manhole covers to withstand anticipated loads and ensure that the covers can be readily replaced if broken to minimize entry of garbage and silt into the sewer system
- Ensure sufficient hydraulic capacity to accommodate peak flows and adequate slope in gravity mains to prevent build-up of solids and hydrogen sulphide generation
- Regular inspection of the system to ensure performance is maintained at high levels
- Blockages should be detected and promptly replaced
- Regular monitoring and sampling of the wastewater at influent and effluent points as well as in the receiving water bodies
- Communities living within the river basins where the trunk sewers will be constructed should be enlightened on dangers of using raw sewerage to irrigate farmlands.

Oduor Menace

The process of wastewater collection, conveying or treatment has the potential to generate and release odors to the surrounding area. Most odor problems occur in the collection system, in primary treatment facilities and in solid handling facilities as well as the sludge drying beds. The most frequently reported symptoms attributed to odors from treatment plants include headache, nausea, hoarseness, cough, nasal congestion, palpitations shortness of breath, stress, drowsiness, alterations in mood, and eye, nose, and throat irritation. Hydrogen Sulphide (H_2S) is the most prevalent gas associated with domestic wastewater collection and treatment.

The conditions leading to Hydrogen Sulphide formation usually favor the production of other odorous gases such as ammonia which may have considerably higher undetectable odor thresholds, and consequently H_2S may be an indicator of their presence. Exposure of receptors to levels of hydrogen sulphide above 5ppb can lead to odor nuisance.

Mitigation to odor menace

- The water and sanitation departments will ensure appropriate covering/ventilation of the pre-treatment unit
- The water and sanitation departments will ensure appropriate handling and removal of grit/grease
- The water and sanitation departments will ensure scum is appropriately disposed of or properly stabilized
- The water and sanitation departments will ensure that the pond series have adequate water flow and aeration to reduce the potential of odour formation
- The perimeter of the proposed site should be vegetated with trees and plants of varying heights thereby forming windbreaker and reduce dispersion of odour
- Repairing dilapidated roofs of the sludge drying beds to ensure quick drying of sludge and appropriate disposal to reduce odour emanating from wet sludge.

Risks Associated with Sludge

Wastewater Treatment Plants often require sludge removal overtime in order to guarantee efficient operation of the plant. However, if sludge is not management properly it can pose significant health hazards to workers, community and water quality from the de-sludging exercise.

Also, if sludge on site is not properly managed, it leads to significant land and soil contamination at the disposal site and eventually pollution water resources when leachate from the sludge flows into water resources. Therefore, mitigation measures for sludge associated risks are presented below.

Mitigation Measures

- The water and sanitation departments will dry sludge on the drying beds before disposing it off
- Dried sludge could be used to make briquettes as a charcoal substitute or be sold to farmers as fertilizers
- Excess sludge can be disposed in a designated landfill which shall only be for disposing dry odourless sludge.
- Preparation and enforcement of operational guidelines for sludge management by the local County Government

Solid Wastes Impacts at Waste Water Screens

Wastewater trunk and secondary sewers are often used illegally as dumping sites at open manholes. Therefore, solid wastes which include plastic bottles, wood, cloths and debris are often screened and disposed of at screening chambers at inlet works of the sanitation works.

Mitigation Measures

- The water and sanitation departments will develop a comprehensive Waste Management Plan (WMP) for management of solid wastes from screen chambers
- The water and sanitation departments will employ personnel who will be in charge of maintaining hygiene and cleanliness of the WWTP including removal of solid wastes from screen chambers
- Properly labelled and strategically placed waste disposal containers shall be provided at all places within the WWTP

Solid wastes once removed from screens shall be collected and disposed appropriately as required by waste Management Regulations.

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLAN (ESMP)

8.1 C-ESMPs and Sub Plans

The contractor upon signing of civil works contract will prepare Construction Environmental and Social Management Plans (C-ESMPs) and Sub Plans for review and approval. **Table 8-1** below presents details of Sub plans

Table 8.1: C-ESMPs and Subplans

#	C-ESMPs and Sub Plans	Preparation Stage	Responsibility	Estimated Cost (USD)
1	C-ESMP	After signing of Works Contract	Contractor	
2	GBV/SH/SEA	After signing of Works Contract	Contractor	
3	Campsites Management Plan	After signing of Works Contract	Contractor	
4	Labor Management Plan	After signing of Works Contract	Contractor	
5	Labor Influx Management Plan	After signing of Works Contract	Contractor	
6	Water Resources Protection Plan	After signing of Works Contract	Contractor	
7	Waste Management Plan	After signing of Works Contract	Contractor	
8	Traffic Management Plan	After signing of Works Contract	Contractor	
9	Drug Abuse and Substance Awareness Plan	After signing of Works Contract	Contractor	
#	**Approximate Cost**			**1500**

8.2 Licenses and Permits (Occupational Health and Safety Related)

The contractor will be required to comply to below listed provisions as required by Occupational Health and safety provisions as detailed in the table below

Table 8.2: Permits and Licenses

#	Permits and Licenses	Preparation Stage	Responsibility	Estimated Cost (USD)
1	Workplace registration certificates from DOSH	After signing of Works Contract	Contractor	
2	Fire clearance certificates from DOSH – Ministry of Labor and Social Services	After signing of Works Contract	Contractor	

	Somalia			
3	Additional Statutory requirements, as per OSHA Act • Risk Assessment • Safety and Health Audit • Fire Safety Audit	Within the 1st Quarter of Works	Contractor	
4	Development and implementation of Polices required at the Work place • Safety & Health Policy • Fire Safety Policy • Environment Policy	Within the 1st Quarter of Works	Contractor	
5	Personnel Trainings Required • Fire marshal training • Statutory: First Aid Training • Statutory: Safety and Health Committee	After signing of Works Contract	Contractor	
6	Occupational Health Programmes at Workplace •Statutory Medical Examinations. • Pre-employment • Periodical • post-employment (exit medical checkup)	After signing of Works Contract	Contractor	
7	Operations Safety: • All plants, lifting equipment and machinery inspected • Inspection of ladders / scaffoldings	Monthly	Contractor	
8	Permit to Works (PTW) are required for non-routine hazardous work.	Whenever required	Contractor	
9	Fire Safety Requirements: • Fire drill • firefighting equipment • Fire escapes	Bi Annually	Contractor	
10	Emergency Response Plan Required: • Injury emergency response; • Non entry rescue mission to persons in confined space; • Fire emergency response;	One off	Contractor	
	Approximate Cost			**2000**

8.3 Purpose and Objectives of ESMP

The specific objectives of the ESMP are to:

- Serve as a guiding document for the environmental, health and safety monitoring activities during construction and operation of the Water Lines.

- Provide detailed specifications for the management and mitigation of activities that have the potential to impact negatively on the environment, health and safety of workers and community.
- Provide instructions to relevant personnel regarding procedures for protecting the environment and minimizing environmental effects, thereby supporting the operator's goal of minimal or zero incidents.

The Environmental, Social Management and Monitoring Plan (ESMP) is summarized in the table below

Table 8.3: Environment and Social Management Monitoring Plan – Construction Phase – Waste Water Treatment Plant Works

Environmental Aspect	Anticipated Impact	Mitigation Measures	Responsibility	Monitoring Parameter	Budget (USD)
1. Air Quality					
Dust (Particulate Matter) from excavation, vehicle movement, and stockpiles.	- Respiratory health issues for workers, students. - Nuisance and reduced visibility.	- Spray water on unpaved roads and active work areas. - Cover trucks transporting soil/materials. - Enforce low speed limits (15 km/h) on-site.	Contractor	- Daily visual inspection of dust levels. - Weekly checklist confirming dust control actions.	3,500
2. Noise & Vibration					
Noise from excavators, concrete mixers, and vehicles.	- Disruption of classes at the school and operations at the airport. - Hearing damage risk for workers.	- Restrict noisy construction activities to non-school hours (e.g., afternoons) at the school site. - Ensure all machinery is well-maintained with functional mufflers. - Provide workers with appropriate PPE (earmuffs).	Contractor	- Weekly verification of work schedule adherence. - Spot checks for worker PPE usage. - Community complaints log.	2,000
3. Water & Soil Resources					
Contamination of soil and groundwater from fuel, oil, or chemical spills.	- Pollution of the local environment. - Potential long-term contamination of the underlying aquifer.	- Designate a lined, secure area for fuel storage and vehicle maintenance, away from drains. - Keep spill kits readily available on-site. - Prohibit discharge of cement washout onto bare ground.	Contractor	- Weekly inspection of fuel/chemical storage areas. - Records of any spills and cleanup actions taken.	2,500
4. Waste Management					
Improper disposal of solid and liquid construction waste.	- Land pollution, attraction of pests, and public health hazards.	- Segregate waste on-site (excavated soil, rubble, packaging). - Provide clearly marked bins for different waste types. - Dispose of all waste at a government-approved disposal site.	Contractor	- Daily visual inspection of site housekeeping. - Waste disposal receipts and records.	4,000
5. Occupational Health & Safety (OHS)					
Accidents and physical injuries to workers (e.g., falls,	- Serious injury, disability, or fatality. - Work stoppages and project	- Mandatory use of appropriate PPE for all workers. - Conduct daily "toolbox talk" safety briefings. - Ensure excavations are shored or sloped; provide safe	Contractor / PIU E&S Officer	- Daily checks for PPE compliance. - Records of safety briefings.	10,000

trench collapse).	delays.	access. - Keep a fully stocked first aid kit and trained personnel on-site.		- Site accident and incident logbook.	
6. Community Health & Safety					
Accidents involving the public (students, airport users, pastoralists).	- Injury to community members from open trenches, vehicle movement, or unsecured materials.	- Securely fence the entire construction site with controlled access points. - Install clear warning signs at the site perimeter. - Cover or secure all open excavations at the end of each workday.	Contractor	- Daily inspection of fencing, gates, and signage. - Log of any community safety complaints.	6,000
7. Vegetation & Soil Management					
Unnecessary clearing of vegetation and topsoil loss.	- Loss of natural scrubland habitat - Soil erosion and increased dust generation.	- Clearly demarcate and minimize the construction footprint before work begins. - Preserve mature trees where possible (school site). - Stockpile cleared topsoil for later use in site landscaping/restoration.	Contractor	- Pre-construction survey to demarcate clearing limits. - Visual check to ensure topsoil is stored separately.	1,500
8. Socio-Economic					
Social friction from labor practices or community interactions.	- Disputes over job opportunities. - Conflict between construction workers and the local community.	- Prioritize hiring of unskilled labor from local communities through a transparent process. - Implement and enforce a worker Code of Conduct (respecting local culture, no harassment).	Contractor / PIU	- Review of employment records to verify local hiring. - Monitor community complaints regarding worker behavior.	1,000
TOTAL ESTIMATED BUDGET					$30,500

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Table 8.4: Environment and Social Management Monitoring Plan – Operation of Sanitation Related Works

Issue	Action required	Responsibility	Provisional Budget
Odour Menace from Wastewater Treatment Works	• Galwaaq Water Company will ensure appropriate covering/ventilation of the pre-treatment unit • Galwaaq Water Company will ensure appropriate handling and removal of grit/grease • Galwaaq Water Company will ensure scum is appropriately disposed of or properly stabilized • Galwaaq Water Company will ensure that the pond series have adequate water flow and aeration to reduce the potential of odour formation • The perimeter of the proposed site should be vegetated with trees and plants of varying heights thereby forming windbreaker and reduce dispersion of odour • Repairing of dilapidated the roofs of the sludge drying beds to ensure quick drying of sludge and appropriate disposal to reduce odour emanating from wet sludge.	Galwaaq Water Company	To be established at Operation Phase and included in the operation of the Project
Risks Associated with Sludge from the Waste Water treatment sites	• Galwaaq Water Company will dry sludge on the drying beds before disposing it off • Dried sludge could be used to make briquettes as a charcoal substitute or be sold to farmers as fertilizers • Excess sludge can be disposed in a designated landfill which shall only be for disposing dry doorless sludge. • Preparation and enforcement of operational guidelines for sludge management	Galwaaq Water Company	To be established at Operation Phase and included in the operation of the Project
Solid Wastes Impacts at sludge	• Galwaaq Water Company will develop a comprehensive Waste Management Plan (WMP) for management of solid wastes from screen chambers	Galwaaq Water Company	To be established at Operation Phase

Issue	Action required	Responsibility	Provisional Budget
treatment sites	• Galwaaq Water Company will employ personnel who will be in charge of maintaining hygiene and cleanliness of the WWTP including removal of solid wastes from screen chambers • Properly labelled and strategically placed waste disposal containers shall be provided at all places within the WWTP • Solid wastes once removed from screens shall be collected and disposed of appropriately as required by city by laws		and included in the operation of the Project

8.4 Decommissioning Plan

The Project has been designed to operate effectively for over 30 years. In the event that the infrastructure will be required to be overhauled, then the following steps should be considered in order to undertake the procedure in a structured manner with minimum impact to both human and natural environment.

Table 8.5: Decommissioning Flow Chart

#	Action	Actor
Step 1	**Initiation** Development of an Objective Worksheet and checklist incorporating references, legal, stakeholder engagement and policies Undertake decommissioning audit	**Proponent**
Step 2	**Prepare Road Map for Decommissioning Design** Conduct design review to validate elements of the design and ensure design features are incorporated in the decommissioning design. Public consultations	**Proponent**
Step 3	**Prepare and Award Contract** Prepare a contract that incorporates validated project information and award to a contractor as per the Procurement rules.	**Proponent**
Step 4	**Execute Decommission Works** Implement design elements and criteria on the Project in accordance with specifications and drawings. Inspect during decommissioning and at Project completion to ensure that all design elements are implemented according to design specifications.	**Contractor**
Step 5	**Non-Conformance, Corrective/Preventive Action** Determine root cause Propose corrective measures Propose future preventive measures	**Proponent**

8.5 Monitoring Plan

The final stage in the impact assessment process is the development of a Management Plan for implementing controls and mitigation and monitoring the effectiveness. Monitoring is done to verify that: a) impacts or their associated Project components remain in conformance with applicable standards; and b) mitigation measures are effectively addressing impacts and compensatory measures and offsets are reducing effects to the extent predicted.

All the activities to be financed under the Project will follow the AfDB ISS, Ministry of water and Environment will make sure that all bid documents and contracts include the ESMP and require compliance with it. Environmental and social monitoring seeks to check the effectiveness and relevance of mitigation measures through the implementation/operation phase. Environment and Social focal points shall monitor Project activities as detailed in the table below

Table 8.6: Monitoring Plan – During Construction Phase

MATERIAL MEASURES AND ACTIONS		TIMEFRAME	RESPONSIBLE ENTITY
MONITORING AND REPORTING			
A	**REGULAR REPORTING** Prepare and submit to AfDB regular monitoring reports on the environmental, social, health and safety (ESHS) performance of the Project, status of preparation and implementation of E&S instruments required, stakeholder engagement activities, and functioning of the grievance mechanisms.	Submit quarterly E&S reports to the AfDB throughout the first year of Project implementation commencing after the Effective Date and biannually thereafter throughout Project implementation.	Galwaaq Water Company
B	**INCIDENTS AND ACCIDENTS** Promptly notify the AfDB of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers, including, inter alia, cases of sexual exploitation and abuse (SEA), sexual harassment (SH), and accidents that result in death, serious or multiple injuries. Provide sufficient details regarding the scope, severity, and possible causes of the incident or accident, indicating immediate measures taken or that are planned to be taken to address it, and any information provided by any contractor and/or supervising entity, as appropriate	Notify the Association within 48 hours after learning of the incident or accident using such reporting formats as the Association may specify. A detailed report of the incident shall be provided within fifteen (15) days of notifying the Association of the incident or accident, unless a different timeline is agreed with the Association.	Galwaaq Water Company
C	**CONTRACTORS MONTHLY REPORTS** Require contractors and supervising firms to provide monthly monitoring reports on ESHS performance in accordance with the metrics specified in the respective bidding documents and contracts and submit such reports to the Association.	Submit the monthly reports to the Association as annexes to the reports to be submitted under action A above.	Contractor and Supervising Engineer

ESS 1: ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS			
1.1	**ORGANIZATIONAL STRUCTURE** Establish and maintain an organizational structure within the MOECC with qualified staff and resources to support management of ESHS risks and impacts of the Project including one full-time environmental and social specialist.	Establish and maintain E&S staff no later than four weeks after the Effective Date and maintain throughout Project implementation.	Galwaaq Water Company
1.2	**ENVIRONMENTAL AND SOCIAL INSTRUMENTS** Prepare, disclose, consult upon, adopt Stakeholder Engagement Plan (SEP) Prepare, disclose, consult upon, adopt and implement site-specific Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plans (ESMPs)	ESIA and SEP shall be prepared, disclosed, consulted upon and adopted before Effective Date, and thereafter implemented throughout Project implementation.	Galwaaq Water Company
ESS 2: LABOUR AND WORKING CONDITIONS			
2.2	**GRIEVANCE MECHANISM FOR PROJECT WORKERS** Establish, maintain, and operate a grievance mechanism for Project workers, as described in the LMP and consistent with OS 10.	Establish grievance mechanism prior to engaging Project workers, and thereafter maintain and operate it throughout Project implementation.	Galwaaq Water Company
2.3	**OCCUPATIONAL HEALTH AND SAFETY (OHS) MEASURES** Develop and implement occupational, health and safety (OHS) measures, based on World Bank EHS Guidelines, and ESMPs including through, *inter alia*, implementing adequate OHS measures and incorporating LMP and SEA/SH requirements into the ESHS specifications of the procurement documents and contracts with contractors and supervising firms.	Measures to be operational prior to engaging Project workers.	Galwaaq Water Company

ESS 3: RESOURCE EFFICIENCY AND POLLUTION PREVENTION AND MANAGEMENT			
3.2	**RESOURCE EFFICIENCY AND POLLUTION PREVENTION AND MANAGEMENT** Resource efficiency and pollution prevention and management measures shall be incorporated in the ESMPs to be prepared under the project	Prepare Construction Specific Environmental and Social Management Plans	Contractor
ESS 4: COMMUNITY HEALTH AND SAFETY			
4.1	**TRAFFIC AND ROAD SAFETY** Incorporate measures to manage traffic and road safety risks as required in the ESMPs to be prepared	Prior to commencement of civil works	Contractor
4.2	**COMMUNITY HEALTH AND SAFETY** Assess and manage specific risks and impacts to the community arising from Project activities [, including, inter alia,] [specify any areas of risks that may require emphasis, e.g., behaviour of Project workers, risks of labor influx, response to emergency situations], and include mitigation measures in the ESMPs	Prior to commencement of civil works	Contractor
4.3	**SEA AND SH RISKS** Adopt and implement a SEA/SH as part of the C-ESMP, to assess and manage the risks of SEA and SH.	Prior to commencement of Project Activities	Contractor
ESS 8: CULTURAL HERITAGE			
8.1	**CHANCE FINDS** Describe and implement the requirements including Chance Finds procedures and site-specific ESMPs. This procedure shall be followed if cultural heritage is encountered during Project activities. Ensure relevant workers shall be trained in the requirements of the procedure prior to ground disturbance during actual construction work.	Prior to commencement of Project Activities	Contractor
ESS 10: STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE			

10.1	**STAKEHOLDER ENGAGEMENT PLAN (SEP) PREPARATION AND IMPLEMENTATION** Prepare a Stakeholder Engagement Plan (SEP) for the Project, consistent with OS 10, which includes measures to, inter alia, provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation. The Recipient shall conduct additional stakeholder consultations targeting communities and other disadvantaged groups and update the SEP and thereafter implement the SEP throughout project implementation.	SEP prepared, disclosed, and adopted. .	Galwaaq Water Company

9. GRIEVANCE REDRESS MECHANISM

9.1 Purpose of GRM

9.1.1 Purpose of Grievance Redress Mechanism (GRM)

The purpose of the Greivance Redress Mechanms (GRM) is to offer project stakeholders an opportunity to seek and receive grievance redress and strengthen project's team to identify, track, resolve and refer eligible grievances thereby enhancing project's efficiency and development results and outcomes. The GRM further provides guidance, guidelines and modalities for managing and addressing grievances that may emerge from SERP implementation process. The GRM framework provides modalities for raising awareness,visibility, and understanding of the project interventions and providing feedback on its implementation

The AfDB Integrated Safeguards System (ISS) require that bank supported projects facilitate mechanisms that address concerns and grievances that arise in connection with a project. The ISS 10 (Stakeholder Engagement and Information Disclosure) provides under one of the objectives that project-affected parties are provided with accessible and inclusive means to raise issues and grievances, and allow borrowers to respond and manage such grievances.

As good practices, this GRM makes the following distinctions:

- **Project-related complaints and grievances**: it focuses on Project-related complaints and grievances and defines the different steps of handling such;
- **GBV/SEA/SH related complaints and grievances**: complaints and grievances relating to Gender-Based Violence (GBV) / Sexual Exploitation and Abuse (SEA) / Sexual Harassment (SH), given their sensitivities and considerations related to a survivor-based approach, are reported to the available GRM grievance recipients, but the grievances follow a different process.
- **Labor-related complaints and grievances:** Complaints from project workers raising workplace concerns, terms of employment and other related concerns will be registered through the Workers' GRM, which is a separate GRM elaborated in this document;
- **Second tier / escalated complaints and grievances:** This concerns complaints and grievances that cannot be solved by the first tiers (Project-wide and workers' complaints and grievances) or have been escalated by users dissatisfied with the resolutions from the first tiers. This GRM describes procedures how these grievances shall be addressed through an appeals mechanism.

9.2 Objectives of GRM

The primary purpose of the GRM is to ensure the collect and address the complaints or the concerns of aggrieved parties to a fair extent and on time. Dissatisfaction can cause an aggrieved party to act beyond expectations, which would culminate in some unforeseen repercussions that would negatively affect project implementations and stall project progression. Consequently, the Project's GRM will seek to achieve the following objectives:

- Encourage registration, acknowledgment, and recording of all concerns or issues raised by aggrieved;
- Ensure that complaints are properly registered, tracked and documented, with due regard for confidentiality;
- Address the composition of a committee that would handle all grievances; Inform people of the public information center establishment and access;
- Establish procedures for the GRM to enhance easy access, transparency and accountability, and tackle escalation of grievances beyond expectations;
- Manage the concerns raised by aggrieved parties to achieve a win-win situation within a reasonable time frame that would comply with national and international best practices; and
- Record all resolutions agreed upon by all parties involved and ensure that aggrieved persons are satisfied with every outcome of remedial resolution to foster harmony during project implementation.

The GRM is expected to contribute to continuous improvement in performance of the SERP through an analysis of trends and lessons learned. The GRM does not prevent access to judicial and administrative remedies. It is designed in a culturally appropriate way and is able to respond to all needs and concerns of project-affected parties

9.3 GRM Core Principles

The GRM is based on six core principles summarized below:

- **Fairness:** Grievances are treated confidentially, assessed impartially, and handled transparently.
- **Objectiveness and independence:** The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment in each case. GRM officials have adequate means and powers to investigate grievances (e.g., interview witnesses, access records).
- **Simplicity and accessibility:** Procedures to file grievances and seek action are simple enough that PAPs can easily understand them. Project PAPs have a range of contact

options including, at a minimum, a telephone number. The GRM is accessible to all stakeholders, irrespective of the remoteness of the area they live in, and their level of education or income. The GRM does not use complex processes that create confusion or anxiety.

- **Responsiveness and efficiency:** The GRM is designed to be responsive to the needs of all complainants. Accordingly, staff handling grievances are trained to take effective action, and respond quickly to grievances and suggestions.
- **Speed and proportionality:** All grievances, simple or complex, are addressed and resolved as quickly as possible. The action taken is swift, decisive, and constructive.
- **Participation and social inclusion:** A wide range of PAPs, including community members, members of vulnerable groups, project implementers, civil society, and the media, are encouraged to bring grievances and comments to the attention of the Project staff. Special attention is given to ensure that marginalized or vulnerable groups, including those with special needs, are able to access the GRM

9.4 GRM Framework

9.4.1 Grievance Category

Grievances will be categorized using the guidance summarized below, including basic information communication; public administration ethics and conduct; governance; human rights; environmental compliance; corruption and economic crimes. Grievances outside the SERP mandate will be referred to the appropriate statutory institution. The table below summarized

Table 8.7 Categories of Grievances

#	Categories of Grievances	Federal Republic of Somalia Provisional Constitution 2012 Provisions
1	**Basic information**	Article 32
	Access to information	
2	E**thics and conduct**	Article 115 to 119
	Government entities and staff	
	Implementing Partner staff	
3	**Violation and breach of codes of ethics**	Article 115 to 119
	Violation of codes of ethics;	
4	**Breach of the code of ethics by government officers:**	Article 115 to 119
	Breach of Code of Conduct and Ethics by staff of Implementing Partners	

5	**Violation of human rights and fundamental freedoms**	Article 111B
	Gender equality and general equality matters.	
	Equality and freedom from discrimination (Equality -every person; Equality of men and women to opportunities in political, economic, cultural and social)	
	Economic and Social Rights (health, sanitation, freedom from hunger, adequate and quality food, clean safe and adequate water, social security, education, emergency medical treatment)	
	Non-discrimination of special needs groups	
6	**Corruption and Economic crimes**	Article 111C
	Unethical conduct	
7	**Labor and working conditions**	Article 24
	Termination/Summary Dismissal,	
	Breach of Employment Contract Terms	
	Conflicts with Trade Unions	
	Work Injury	
	Discrimination	
	Sexual Harassment	

Figure 8.1 Categories of Grievances

9.4.2 GRM Provisions

All project affected persons will be informed of their rights to raise grievances pertaining to national GRM frameworks. Mechanisms are put in place to ensure that grievances are recorded and considered fairly and appropriately. Project management will issue and publicize a grievance redress policy that clearly states that management embraces grievance reports and views them as opportunities for project improvement and identified a guiding principle; defining the scope and types of grievances to be addressed; setting out a user- friendly procedure for lodging grievances; outlining a grievance redress structure; describing performance standards; and spelling grievance review mechanisms.

The GRM will be a project wide GRM and will work inter-connectedly with local level actors at the FMS, community, District, and municipal levels. This is to ensure that all measures are taken to address the grievance. The GRM will be housed at both Ministry of Finance (MoF) at Federal Government of Somalia (FGS) and provide access to SERP stakeholders and contractors to register complaints received at sub-project level or the field.

At the project level, a Grievance Redress Committee (GRC) will be established and will comprise, legal advisor, gender specialist, environmental and social safeguard specialists of the project. Local, state and municipality level GRC that consists of local leaders, municipal representatives, community-based organizations, Legal advisor and law enforcement will be established after the first of the project or once the construction activities start. This GRC will be headed through a consensual appointment done with affected communities, and steps will be taken to ensure that all grievances are properly documented and transferred to the digital platform for tracking of resolution.

The project shall explore and collaborate with existing network of service providers to setup and ethically manage SEA/SH complaints as documented in the separate GBV and SEAH Action Plan. Detailed structure of the GRM for the project workers will be finalized and described in the LMP and project implementation manual.

9.5 GRM Implementation Steps

The GRM structure provides multiple channels to aggrieved parties to file their grievances and receive feedback with regards to the project. The aggrieved party must be able to select the most efficient institution, the most accessible means of filing a grievance, and must be able to circumvent partial stakeholders in the Project, which may be implicated in the complaint. He or she must further be able to bypass some grievance channels that are perceived as potentially not responsive or biased.

STEP 1: Identification of Focal Person

The SERP management will identify experienced (Focal Points) at all levels of their projects and assign them responsibility for handling (receiving and registering) grievances. GRMs can have multiple focal points to receive and register grievances. This GRM is designed to give the aggrieved parties access to seek redress to their perceived or actual grievance using this mechanism or other existing mechanisms such as the National legal system (i.e. Courts), mediation boards (elders), GRCs and traditional systems (village courts). It is equally important to have someone who has overall responsibility for tracking and following up on issues and complaints raised. The descriptions of the GRM functions should clearly stipulate the official designations and the roles of the focal points so that they can really be held accountable for performing their functions. The GRM for the SERP will have identified the focal point persons from community to national level and their tasks have been formulated.

At community level, the project grievance redress structure will be linked and interface to the existing traditional authority structure as this already provides for resolving conflicts in the communities. This will ensure accessibility to the GRM as the traditional structures are close to

the people. The Focal Person will be someone with knowledge of the local and/or official language of communication and should be able to record the grievances where need be.

The Project will implement training program to teach staff, Focal Points, community members and other stakeholders how to handle grievances and why the GRM is important to the project's success. This training should include information about interacting with beneficiaries about grievances, the organization's internal policies and procedures in relation to grievance redress. It will also be useful to establish or build on local and community based GRMs by providing grievance redress training for stakeholders at the local level. This greatly reduces GRM costs while enhancing beneficiary satisfaction with, and ownership of, the grievance redress process.

STEP 2: Registration of Grievances:

A register of grievances which will be held by the GRM Officer or any other appointed person by the project. The Aggrieved Party (AP) must register their grievances with the GRM focal point.
To register the grievance, the contractors and suppliers will provide information to the GRM focal point to be captured in the Grievances Registration Form as presented in the annex. The GRM will accept complaints from the APs submitted through verbal, email, phone, Facebook, WhatsApp, meeting or letter to the office of the GRM, in English or local language. The focal point persons handling grievances will transcribe verbal submissions. Receipt of grievances shall be acknowledged as soon as possible, by letter or by verbal means.

When a complaint is made, the GRM will acknowledge its receipt in a communication that outlines the grievance process; provides contact details and, if possible, the name of the GRM officer who is responsible for handling the grievance; and notes how long it is likely to take to resolve the grievance. Complainants will receive periodic updates on the status of their grievances. This GRM has established clearly defined timetables for acknowledgment and follow-up activities. And to enhance accountability, these timetables will be disseminated widely to various stakeholders, including communities, civil society, and the media.

Means of Filing a Grievance

Diverse methods for reporting grievances that are culturally appropriate are to be used and they should permit for self-identified, confidential, or anonymous procedures (professional letter writers, suggestion boxes, Email, toll-free telephone etc).

Avenues for verbal complaints are:

- Complaints to members of the local Grievance Redress Committee (GRC)
- Social Safeguards & Communications desks at the SERP -PCU
- Open community mediation sessions
- Operators' Customer Care Unit
- Town hall meetings

Avenues for written complaints are:

- Complaint Boxes in the community, operator's office or by hand
- Letters or Email to the SERP-PCU
- Dedicated telephone lines shall include:
- SERP -PCU hotlines
- Operator Costumer Care hotlines

STEP 3: Assessment and Investigation:

This step involves gathering information about the grievance to determine its validity and resolving the grievance. The merit of grievances should be judged objectively against clearly defined standards. Grievances that are straight forward (such as queries and suggestions) can often be resolved quickly by contacting the complainant.

Having received and registered a complaint, the next step in the complaint-handling process is for the focal points to establish the eligibility of the complaint received. The Grievances Registration Officer once a complaint or grievance is registered shall within 5 days assess the registered complaint or grievances to determine its validity and relevance i.e. is it within the scope of the SERP-GRM as defined in this document. The following criteria can be used to assess and verify eligibility:

- The complainant is affected by the project.
- The complaint has a direct relationship to the project.
- The issues raised in the complaint fall within the scope of the issues that the GRM is mandated to address.

Having completed the complaint assessment, a response can be formulated on how to proceed with the complaint. This response should be communicated to the complainant. The response should include the following elements:

- Acceptance or rejection of the complaint
- Reasons for acceptance or rejection
- Next steps – where to forward the complaint

- If accepted, further documents and evidence required for investigation e.g. field investigations

Once the registered grievance or complaint has been determined as falling within the scope of this GRM, the focal point shall investigate the complaint. Investigation of the complaint may include the following:

- On site visit and verification.
- Focus Group discussions and interviews with key informers.
- Review of secondary records (books, reports, public records); and
- Consultations with local government and traditional authorities.

The PCU GRM Committee will ensure that investigators are neutral and do not have any stake in the outcome of the investigation. At the end of the field investigation, the GRM officer shall compile a Grievance Investigation Report (GIR) using a standard template as provided in annex on the outcomes of the investigations and the specific recommendation to resolve the grievance or complaint.

STEP 4: Recommendation and Implementation of Remedies:

After the investigations, the GRM officer shall inform the AP of the outcome of the investigations and the recommended remedies if any. The AP shall be provided with written response clearly outlining the course of action the project shall undertake to redress the grievances and the specific terminal date by which the recommended remedies shall be completed. Potential actions will include responding to a query or comment, providing users with a status update, imposing sanctions, or referring the grievance to another level of the system for further action. The project will take some action on every grievance. If the recommended remedy involves monetary compensation, the GRM must then seek the approval of the Grievance Committee through the SERP project coordinator.

The Aggrieved Party shall, provide a response agreeing or disagreeing with the proposed course of action within a minimum reasonable period after receiving the recommended actions.

STEP 5: Referral to the State Office:

In the likely event that the AP is not satisfied with the recommended remedy. The GRM officer shall forward the copy of Grievance Registration Form (GRF) and the Grievances Investigation Report (GIR) to the State GRM focal point (SFP).

The SFP shall once has received the GRF and the GIR from the District must conduct own investigations and complete his own GIR and communicate to the AP within 30 working days (i.e. repeat stages 2-3). The SFP in his recommendation shall take into consideration the reasons why the AP rejected the remedies offered by the district GRM focal point. He may decide to offer the same remedies as the GRM officer or different and improved offer.

Once the SFP has concluded the investigations and communicated to the AP. The AP shall have 7 days or less to agree or disagree with the proposed remedies. If the AP is agreeable to the remedy the SFP shall ensure that the remedy is implemented within the agreed time frame. For a remedy that requires monetary compensation the SPF submit the information to the relevant government department(s).

STEP 6: Referral to the Grievances Committee:

When the AP disagrees with the recommendation of the SFP, the SFP shall within 7 days of receiving the notice of rejecting the offer from the AP compile all the necessary documents regarding the grievance from district and the province to the Grievance Committee through the grievance Chairperson who will be elected by the Committee.

The government implementing partners at the national level shall investigate the matter further and taking into consideration the recommendation of the coordinator and PCU. The Environmental and Social safeguards Officers shall compile the GIR and submit to the Grievance Committee for consideration. Once the Grievance Committee arrives at a decision it is the responsibility of the SERP to implement the remedies within the agreed time. If the AP disagrees with the remedy offered by the Grievance Committee, the AP reserves the right to appeal to other external GRMs outside SERP.

The above-described steps and timeframes will be followed to address grievances emanating from implementing of project activities. For grievances that need quick and urgent attention, the described steps will be adhered to. However, in terms of timeframe, the grievances will be addressed in the shortest feasible period based on case-to-case basis.

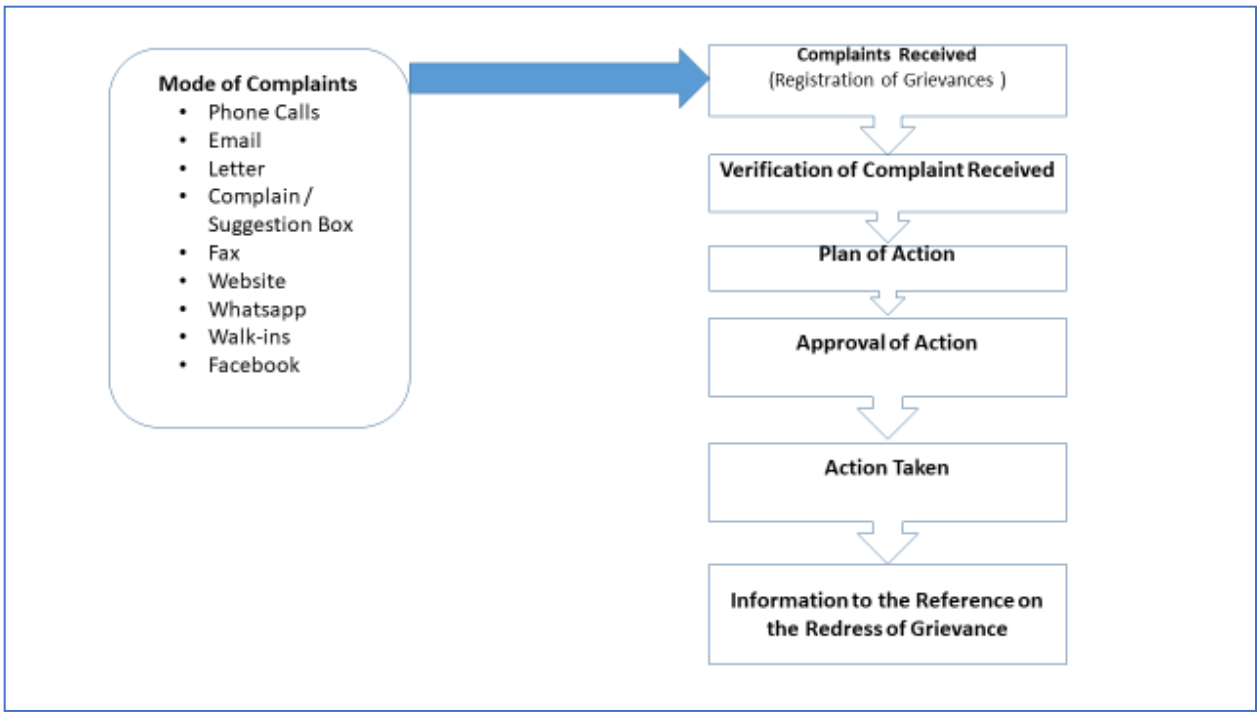

Figure 8.2 Grievance Flow in Basic GRM

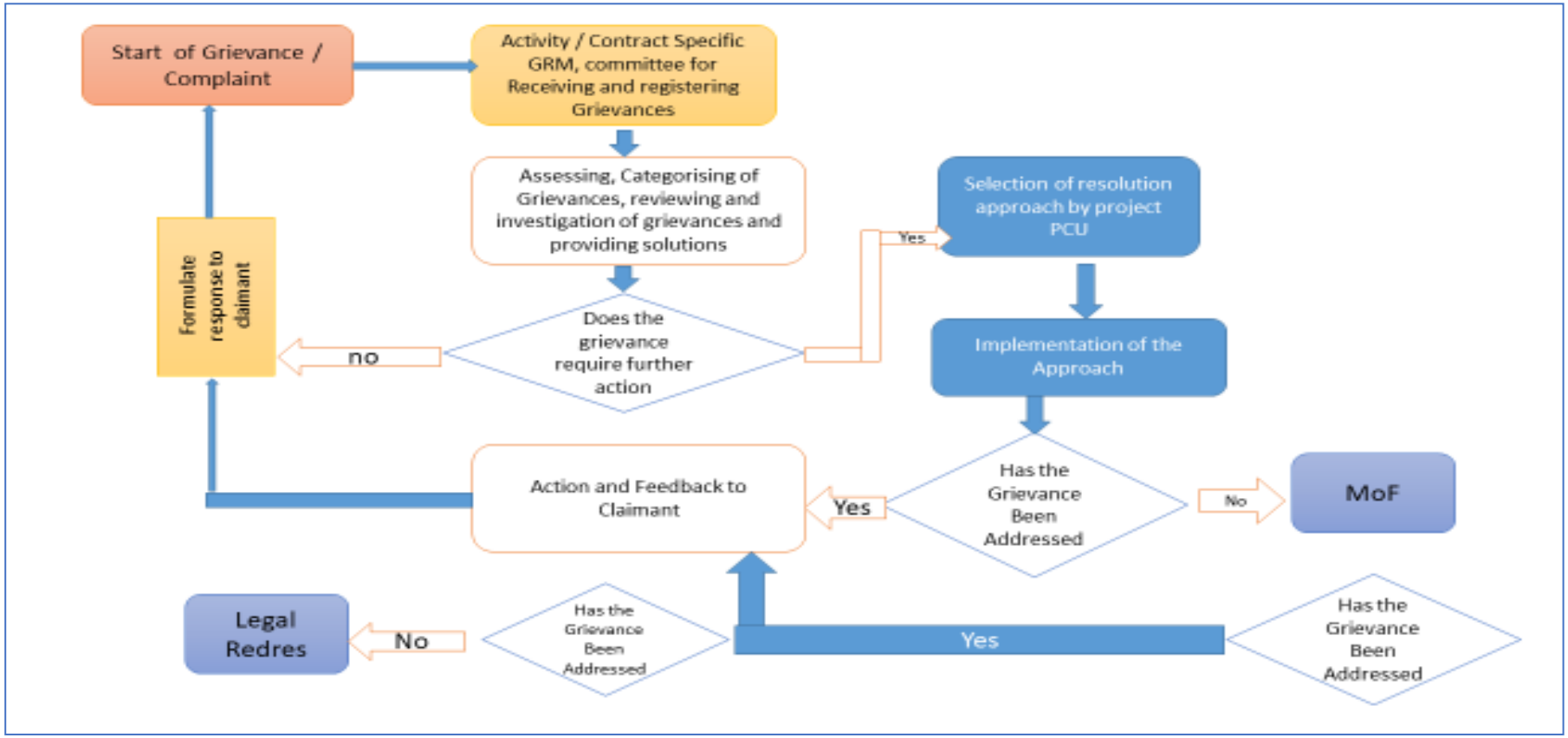

Figure 8.3 Detailed GRM Flow Chart

9.6 Institutional Responsibilities

- **Contractor:** First line of response for construction-related grievances (noise, dust, safety).
- **Galakayo Municipality:** Coordination and oversight of local grievances.
- **Puntland Ministry of Environment:** Oversight of environmental and ESIA-related complaints.
- **AfDB:** Safeguard monitoring and final appeal body for unresolved grievances.

9.7 Monitoring and Reporting

- Quarterly reports on number of grievances received, resolved, and pending.
- Disaggregated data (by gender, age, vulnerable groups).
- Annual review of GRM effectiveness with AfDB and Puntland authorities.

9.8 Budget for GRM Implementation

Item	**Estimated Cost (USD)**
Establishment of complaint desks	500
Training of GRM focal points	1,000
Communication materials (posters, radio, leaflets)	1,000
Monitoring, reporting & community feedback sessions	500
Total GRM Budget:	**3,000 USD**

9.9 Conclusion

The GRM is a vital safeguard tool to ensure that the project is implemented in an inclusive, transparent, and accountable manner. It promotes community trust, prevents conflict, and ensures compliance with both Somali legal frameworks and AfDB's ISS (2023) requirements.

10.FINDINGS AND PROVISIONS

10.1 General Outcome of Assessment

10.1.1 Positive Impacts Identified

- **Improved Sanitation:** - WWTP would improve the quality of sanitation in the area.
- **Public Health Benefits:** - Reduced reliance on unsafe water sources decreases waterborne diseases, improving community health.
- **Gender and Social Equity:** - Women, children, and vulnerable groups gain safer and closer access to water, reducing the time and burden of water collection.
- **Climate Resilience:** - Solar-powered and sustainable pumping systems reduce reliance on fossil fuels and ensure continuous supply during dry periods.
- **Capacity Building and Local Employment:** - Training of Water and Sanitation Committees and engagement of local contractor's support skills development and community empowerment

10.1.2 Trade-Offs

- **High Initial Costs Vs Long-Term Sustainability:** - Use of rotary drilling and solar-powered pumps increases upfront costs but ensures long-term reliability, climate resilience, and low operational costs.
- **Localized Construction Disturbance Vs Community Health Benefits:** - Temporary dust, noise, and soil disturbance are outweighed by improved access to safe water, sanitation, and reduced disease incidence.

Conclusion:

The ESIA demonstrates that the positive impacts of improved sanitation, health, gender equity, and climate resilience outweigh the temporary and manageable adverse impacts. With proper mitigation and monitoring, the project is environmentally sustainable, socially beneficial, and economically justified for South Galkayo.

10.2 Assessment Recommendations:

- The Bid documents prepared for the Project incorporate the Environment, Social Health and Safety Provisions discussed under Chapter 7 of this report (Environment and Social Impact Assessment and Mitigation Measures).
- The contractors through the support of ESHS officer will ensure that all workers sign Code of Conduct (CoC) before site deployment
- The supervising and contractor will undertake training of personnel on Environment, Social, Health and Safety matters tailored to the Project Scope prior to commencement of works
- The contractor will through the ESHS officer apply the provision of Environment and Social Management Toolkit (ESIRT) in management of incidences and accident's during project implementation stage
- The contractor will prepare monthly and quarterly reports on status of implementation of Environment and social compliance measures discussed in this

report.

- Contractor will be required to commit to implementing the Environment, Social Health and Safety (ESHS) Provisions by (ii) Hiring ESHS officers, (ii) Developing site specific (C-ESHS) and Sub Plans listed under Table 7-1 and (iii) Implement Provisions of the Plans and Undertake Monthly and Quarterly reporting of ESHS compliance.

10.3 Pre-Construction Safeguards Readiness

Permits and Licenses

- The Contractor shall ensure that all pertinent permits, certificates and licenses have been obtained prior to any activities commencing on site and are strictly enforced/ adhered to
- Obtain the license in Department of Occupational Health and Safety Registration from Ministry of Labour and Social Services
- Reach out to Water Resources Authority (WRA) for the necessary approvals
- Obtain Approval of Plans from South Galkayo County Government Physical Planning Department for any structures on site
- Acquire Permits from Public Health Department (South Galkayo County) of sanitation facilities installed on site
- The Contractor shall maintain a database of all pertinent permits and licenses required for the contract as a whole and for pertinent activities for the duration of the contract

Engage ESHS Officers

- Prior to construction, the contractor will engage a qualified ESHS expert who will be responsible for below listed tasks
- Prepare and implement Construction Specific Environmental and Social Management Plan for the Project (CESMP)
- Train all staff on ESHS and ensure all staff sign Code of Conduct (CoC) prior to commencement of works.
- Report all accidents and incidents timely as required by World Bank Environment and Social Incident Reporting Tool kit (ESIRT)
- Audit of compliance with the environmental protection, and pollution prevention and control regulations;
- Monitor and report implementation of environmental mitigation measures;
- Monitor the compliance with the environmental protection clauses/specifications in the Contract;
- Investigate and evaluate complaints and identify corrective measures;
- Liaise with the Engineer on all environmental performance matters and timely submission of all relevant environmental monitoring reports;
- Advice the contractor on environmental improvement, awareness, enhancement matters, etc. on site; and
- Modify the ESMP and monitoring program in consultation with the Engineer if necessary throughout the period of works.

Preparation of C-ESMP and Sub Plan

The contractor upon signing of civil works contract will prepare Construction Environmental and Social Management Plans (C-ESMPs) and Sub Plans for review and

approval by the implementation authority, a summary of the Sub Plans is presented below

- GBV/SH/SEA
- Campsites Management Plan
- Labor Management Plan
- Labor Influx Management Plan
- Water Resources Protection Plan
- Drug Abuse and Substance Awareness Plan

ESHS Training

The supervisor and contractor will undertake training of personnel on Environment, Social, Health and Safety matters tailored to the Project Scope prior to commencement of works

11. APPENDIXES

APPENDIX 1: STAKEHOLDER CONSULTATION (Minutes, Reports, List of Attendance)

CLUSTER 1 ESIA PUBLIC PARTICIPATION MINUTUES ON PROPOSED SANITATION INTERVENTIONS (PIT LATRINES, SEPTIC TANKS AND DTF) HELD ON 23RD OCTOBER, 2025 AT HAAR HAAR FOR SOUTH GALKAYO

AGENDA ITEM	DISCUSSION POINTS
1. INTRODUCTION	**Welcome and Opening Remarks** The meeting commenced with a word of prayer after which the consultant welcomed all stakeholders to the consultation meeting for the proposed Sanitation Project in South Galkayo. **Purpose of Meeting:** • To present the proposed sanitation project to key stakeholders • To provide detailed information on project scope and implementation • To gather stakeholder input, concerns, and recommendations. • To ensure community participation and ownership of the project.
2. PROJECT INFORMATION	**Project Background:** The consultant outlined the situational analysis highlighting current sanitation conditions in South Galkayo with the proposed project having a primary objective of improving the sanitation condition by increasing access to improved sanitation facilities in the area. The consultant informed the members present of the proposed project components as follows; • Construction of 100 septic tanks across institutions; offices, schools, universities, educational centres and hospitals. • There will be 2No. WWTP; at Bulo Burde village and at Durdur area. • Construction of 175No. Pit Latrines spread across institutions; offices, schools, universities, educational centres and hospitals. **Expected Benefits:** • Reduced cases of diseases outbreak. • Improved sanitation facilities within South Galkayo. • Creation of several employment opportunities. • Hygiene promotion and community mobilization. • Protection of groundwater from contamination. • Enhanced environmental sanitation and aesthetic improvement. • Improved dignity and privacy, particularly for women and girls.
3. QUESTION AND ANSWER SESSION	**Q1:** How will the project address the specific sanitation needs of women and girls, particularly regarding menstrual hygiene and privacy? **A1:** Women and girls have specific sanitation needs that the project prioritizes such as all latrines will be designed with lockable doors and proper lighting for safety and privacy and also having Institutional latrines be gender-segregated with menstrual hygiene management (MHM) facilities including water, disposal bins, and soap. **Q2:** What benefits will the project have to the community at large? **A2: E**mployment opportunities will be created. Priority is hiring of local especially the youth for construction labor including excavation, material transport, and general construction

AGENDA ITEM	DISCUSSION POINTS
	support. **Q3:** Will sanitation facilities be accessible for persons with disabilities? **A3:** Accessibility is an important consideration in our design standards. Household & Institution beneficiary selection will prioritize households with persons with disabilities (PWDs) where Latrine designs will be adapted to individual needs. **Q4:** When will the project commence? **A4:** The project will begin once all the necessary approvals have been sought and funding released.
4. CLOSING REMARKS	The consultant expressed gratitude to all participants for their attendance, active participation, and valuable contributions. The meeting was officially closed at with a closing prayer.

ATTENDANCE LISTS

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PREPARATION OF GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

Attendance List

Activity: Cluster 1 pit latrines and Septic tanks and DTF-ESIA public participation

Venue: Haar Haar Date: 23/10/2025

#	Name	Institution / village	Designation	Tel	Sign
1	Kaafiyo nur Cilmi	Maryamo	Member	0614880812	Kaafiyo
2	Abshiro gamcaale caalin	Maryamo	Member	0615084372	Abshiro
3	Idil Cilcali budul	Barwago	Member	0612180121	Idil
4	Canab Cifgaabdi mamand	Maryamo	Leader	0617781245	[illegible]
5	Magool Siraad Abdullahi	Barwago	member	061-4041432	Magool
6	Hindi Mohamed warsame	Maryamo	member	061-9458590	Hindi
7	Fartuun Aadan Nor	Maryamo	member	061-9193254	
8	Iuul Abdirahman Abdulle	Hilaac	member	061-4893689	
9	Mulki Cisman Abdulle	Barwago	member	0612022271	
10	Farane Jaame dhagane	Barwago	Leader	0612180123	
11	Siraad Mohamud Cadceed	Maryama	Member	0617329362	Siraad
12	MaagE Cumar Axmed	Barwago	Member	0619672463	[illegible]
13	Baelenuurcais	Maryamo	member	0613010051	[illegible]
14	Cumar Cabdi Ibraahim	Hilaac	Member	0617618693	[illegible]
15	Aadan Cumar Axmed	Hilaac	Member	0619698176	[illegible]
16	Sayid Cali Maxdum Abshir	Hilaac	Member	0613029757	[illegible]
17	Yoonis Cali Faarax	Hilaac	Member	0619824373	
18	Malyuun maxamed xaash	Hilaac	Leader	0617946462	[illegible]
19	Qaadir Badal Abdi	Barwaago	Member	614362352	Qaadir
20	Mystuf Mohamed Abdillahi	Maryamo	Member	061-9456725	[illegible]
21	Cabdrisaaq mohamed yuusuf	Barwaago	Member	061-4830738	

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PREPARATION OF GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

Attendance List

Activity: Cluster 1 pit latrines and Septic tanks and DTF-ESIA public participation

Venue: Haar Haar Date: 23/10/2025

#	Name	Institution / village	Designation	Tel	Sign
1	Shariifo Ali Husen	Hilaac	Member	061-6404846	Shariifo
2	Safiyo Abdi Mohamed	Hilaac	Member	061-3588275	Safio
3	Ayaan Omar Mohamud	Maryama	Member	061-6695919	
4	Fatis Omar Milaag	Maryama	member	061-9458591	
5	Nasri Clrarman Cbdulle	Barwago	Member	061-8809903	
6	Sowdo Nor Elmi	Maryama	member	061-4830466	
7	Boosteyo kenadid Ahmed	Barwago	Member	061-3150835	Boosteyo
8	Hamdi Ibrahim Mohamed	Hilaac	member	061-4882799	Hamdi
9	Dahab Mowlid Mohamud	Barwago	member	061-2895595	Dahab
10	Bisharo Carab dhumuw	Barwago	member	061-9458696	
11	Iqro Hassan Ibrahim	Maryamo	member	061-4974930	
12	Abdi Hussien Farah	Barwago	member	061-3434106	Abdi
13	Abdi da'ud Ahmed	Maryamo	member	061-5425313	[illegible]
14	Dacar Ali Elmi	Barwaago	member	061-7923754	Dacar
15	Bishaar Mohamed Ahmed	Barwaagu	member	061-4363460	
16	Nuru Hassan Ahmed	Maryamo	Leader	061-5801620	Nuro
17	Bishaaro Salat Husien	Maryamo	member	061-0207045	Bf
18	Sahro Mohamed Ali	Barwaago	member	061-3756131	
19	Sabiriin Rays Husien	Barwaago	member	061-7156297	
20	Nafiso Mohamed Abdullahi	Maryamo	member	061-9193586	[illegible]
21	Maido Sa'id Osman	Maryamo	member	061-9058968	

PHOTO REPRESENTATION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) STUDY REPORT FOR GALKAYO SOUTH WASH PROJECTS.

MINUTES OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IMMEDIATE INTERVENTIONS- PUBLIC PARTICIPATION FORUM HELD 3rd TO 4th SEPT 2025 AT FIVE STAR HALL GALKAYO SOUTH.

MINUTES OF MEETING

Item	Minutes	Action By
1.	**Introduction: Reason for Stakeholder Consultation** The meeting commenced with opening remarks delivered by focal points from the Galkayo Municipality, representing the Departments of Public Works, Social Affairs, and district Council members. These representatives emphasized the importance of inclusive dialogue and collaboration between the local government, technical experts, and the community. Following the opening remarks, all participants were given the opportunity to introduce themselves, promoting transparency and encouraging open communication among stakeholders. The session then proceeded with the Consultant Engineer, Abdikani Dahir representing the Tertiary Consultant, who presented a clear overview of the meeting agenda including list of projects go to discuss their impacts. The Consultant welcomed all attendees and highlighted the key purpose of the stakeholder consultation – to gather meaningful input from community members and stakeholders regarding the potential environmental and social impacts of the proposed project. Participants were urged to actively contribute their views, concerns, and suggestions on both **positive and negative impacts** of the project. This feedback would play a critical role in: • Enhancing the design and implementation of mitigation measures, • Finalizing the engineering designs, and • Ensuring the project aligns with both community expectations and environmental sustainability. • Public private partnership (PPP) strategies The session reinforced the legal and policy basis for public participation as outlined in the Provisional Constitution of Somalia and the Somalia National Environmental Policy (2020), emphasizing transparency, inclusivity, and sustainability in environmental decision-making	
2.	**Project Information** The Tertiary Consultant representative Mr Abdikani Dahir thanked stakeholders for allocating time to come and participate in the ESIA public participation forum for Galkayo South WASH Project components. He gave a brief of the proposed Project scope as below bullets:	

Item	Minutes	Action By
	• The project encompasses a comprehensive range of activities aimed at improving water supply, sanitation, and hygiene infrastructure. These include the extension of new pipelines ranging from 200mm to 12.5mm in diameter, complete with all necessary fittings and appurtenances. It also involves the rehabilitation of the existing water network through the installation of chambers, air valves, washouts, junctions, and marker posts. Zonal and master meters will be supplied and installed at borehole sites and throughout the existing network, including appropriate chambers and markers. • In South Galkayo, guided by a groundwater study, new boreholes will be drilled and equipped, while existing boreholes will undergo rehabilitation, including the replacement of pumps. Solar panels will be replaced for existing boreholes and installed for new ones, alongside standby generators (110 Kva) to serve as backup for unreliable mains electricity. Water storage tanks with a cumulative capacity of up to 3000m^3 will be constructed both at borehole sites and key town locations to ensure balanced water pressure distribution, based on hydraulic modelling. • A new adsorption-based water treatment plant (2000m^3/day capacity) will be constructed at selected borehole sites, with an overall production target of 4000m^3/day from two plants. Additionally, a water quality monitoring laboratory will be established and equipped with modern tools and machinery. • In terms of sanitation, two mobile desludging trucks (10m^3 capacity each) and five manual desludging units will be deployed to empty overflowing latrines, especially in IDP camps. Emergency latrines and soak pits will be constructed in high-density and flood-prone areas. Furthermore, 100 units of septic tanks and soak pits will be constructed or rehabilitated in public areas and vulnerable communities. • To enhance long-term sanitation management, community awareness campaigns will be conducted, and decentralized wastewater treatment will be piloted at public institutions such as hospitals and schools. Community-led maintenance plans, including fee-based systems and the formation and training of Community Sanitation Committees, will be introduced. A Public-Private Partnership (PPP) strategic plan will also be developed for sustainable facility management. • Climate-resilient drainage and protection works will be implemented to safeguard sanitation infrastructure. The project will further include hygiene promotion campaigns, women empowerment and youth engagement initiatives, and engagement with engineering consultancy firms for specialized studies, monitoring, and certification. Lastly, the implementation of the Environmental and Social Management Plan (ESMP) will ensure compliance with environmental and social safeguards.	
3.	**Potential Project Impacts (Both Positive and Negative)** **Positive Impacts** The project is expected to deliver several important benefits to the Galkayo community. Improved water and sanitation infrastructure will enhance hygiene practices, reduce exposure to waterborne diseases, and	

Item	Minutes	Action By
	address health issues caused by saline water, such as dental discoloration and eye irritation. Access to safe water and sanitation will restore dignity, particularly for vulnerable populations in informal settlements and IDP camps, while also reducing the prevalence of Acute Watery Diarrhea (AWD). Better wastewater management and decentralized treatment systems will help protect groundwater from contamination. Women and girls will benefit significantly, as the burden of water collection and caregiving related to waterborne illnesses will be reduced. This creates more opportunities for education and economic participation. The project is also expected to increase land values and encourage better housing development. It will generate employment, with direct jobs during construction for both skilled and unskilled workers, and operational roles such as sewer operators later on. Finally, by replacing multiple unsafe water sources with a single, reliable, multipurpose supply system, the project will improve efficiency, reduce costs, and ensure long-term sustainability. **Negative Impacts** Despite the positive outcomes, the project may generate environmental and social risks. These include vegetation loss, soil degradation, and potential overuse or pollution of water resources. Socially, the influx of workers could strain local resources and services, while creating risks of child labor, gender inequality, teenage pregnancies, and school dropouts. Land acquisition and resettlement may displace vulnerable groups, such as IDPs, leading to loss of livelihoods. Construction activities may also cause noise, dust, air pollution, and occupational hazards, affecting both workers and nearby communities. **Mitigation Measures** To minimize risks, environmental impact assessment (EIA) recommendations and environmental management plans (EMPs) must be implemented. These should include reforestation, erosion control, and monitoring of water use to avoid over-extraction. A labor influx management plan and community awareness programs on health, gender, and education are recommended. Local labor should be prioritized, and contractors must follow fair labor standards. Health and safety risks can be mitigated by enforcing occupational safety standards, providing personal protective equipment (PPE), training workers regularly, and monitoring pollution levels with appropriate dust and noise control measures. Continuous monitoring and evaluation (M&E) will allow timely corrective actions, while a grievance redress mechanism will ensure community concerns are addressed. Alignment with Somalia's National Environmental Policy (2020) will further strengthen transparency,	

Item	Minutes	Action By
	inclusivity, and sustainability in project implementation.	
4.	**Wastewater Management and Decentralized Treatment Systems** The selected site for the proposed wastewater management and decentralized treatment system is located at 6.7524N, 47.4524E. Proximity to health facility: The site is less than 200 meters north of a health centre constructed in 2024 by the Ministry of Health and Qatar Charity. During the months of May to August, prevailing winds blow southward, which means that odors from the treatment site will directly affect the health centre, undermining its function and exposing patients and staff to health risks. Proximity to IDP settlements: Over the past six months, more than 50 internally displaced households (IDPs) have settled on both sides of the proposed site, also within a 200-meter radius. The treatment site poses environmental and public health hazards to these already vulnerable communities. Nearby residential and community structures: To the west of the site are established residential homes, a large mosque, and the main Golol Road, which serves as a busy community access route. The placement of the system here risks causing odor nuisance and contamination concerns for daily commuters and worshippers. **Key Concern** The proposed site location is unsuitable due to its close proximity to critical social infrastructure (health center, mosque, residential homes) and newly established vulnerable IDP households. If implemented at this location, the plan will create negative health and social impacts, particularly during the windy season when odors will spread toward the health facility and surrounding residents. **Proposed Mitigation** To relocate current health centre, IDPs settlement and stop town growing towards this direction or to assign another location for this project.	
5.	**Any Other Business (AoB).** **Collaboration & Ownership:** Maintain close collaboration with government institutions, local authorities, and community representatives to strengthen long-term ownership, accountability, and sustainability of interventions. **Land Acquisition:** Recognize that all identified lands are privately owned. There is a need for clearer and transparent rules governing both private and public interests to avoid disputes and ensure fair, inclusive decision-making.	
6.	**Closing Remarks** Director of Social affairs and Training Department for Local Authority Farah Abdulkadir said ''I would like to sincerely thank all participants for their valuable contributions to today's meeting. I extend my deepest appreciation to our donor, the African Development Bank, for their continued support, to UNICEF as the implementing partner, and to the consultant team from Tertiary Engineers for their tireless efforts in guiding and supporting this important initiative. As we close, I urge all stakeholders to expedite the implementation of the	

Item	Minutes	Action By
	planned projects so that the people of Galkayo South may begin to benefit from improved WASH services as soon as possible. Together, through our collaboration and commitment, we can ensure the success of these vital projects and deliver lasting impact to our community.	

Minutes Prepared by: - Abdikani Dahir, water specialist and civil engineer at Galkayo South, Signed and stamp


04/09/2025 17:09
FIVE STAR HOTEL


04/09/2025 16:26

SAMPLE PHOTOS OF THE MEETING HELD GALKAYO

Attendance Lists

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PREPARATION OF GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IMMEDIATE INTERVENTIONS- PUBLIC PARTICIPATION

ATTENDANCE LIST

Venue five star Hotel Date 03-04/09/2025

#	Name	Village	Tel	Sign
1	Abdullahi Ali Afrah	Caraf water co.	661820 7788	Allaahi
2	Bashir Cumar geed	Carafoot water	616699143	[illegible]
3	maxamed cali cabdi	Community Elder	619103420	[illegible]
4	cabdiqadir cali maxed	Buseness - Craft	612957747	C/Qadir
5	ibrahim maxamed nuur	Horsed - Labour	617796437	Ibrahim
6	C/Kaafi Diiriye warsame	Horumar - Technician	615797647	[illegible]
7	C/Qadir Axmed warsame	Horsed	618206417	warsame
8	Cayduid m. Xaaji	Caraf at	619696692	Caiydid
9	mursal Axmed Cilmi	Carafat	610580786	MURSAL
10	Cali Salaad Cabdi	Horumar	616324977	[illegible]
11	m. maxamed Abshir	Garsoor	616625437	[illegible]
12	Ahmed maxed Xoosh	Garsoor	614160394	AXMED
13	mowlid qaalin maxamed	Heald weleg	616489522	maxmed
14	Baalyar Nuur cali	Howl wadag	617151274	Baalyr
15	Sh C/shakur maxamed	Horumar	618094046	Sheikh
16	Cali Auloys maxamed	Carafoot	615099700	[illegible]
17	maryama maxed	Garsoor	618595287	Marysmo
18	faadumo Badal	Garsoor	771589579	FADUMO
19	Axmed m. maxamed	Wadajir	617755721	Axd
20	BooRe muumin cumar	Wadajir	619477486	BoBE
21	Tayan xaaji muslim	Wadajir	614363721	Xaji

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ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IMMEDIATE INTERVENTIONS- PUBLIC PARTICIPATION

ATTENDANCE LIST

Venue Hotel Five Star Date 03-04/9/2025

#	Name	Village	Tel	Sign
22	AHMED HASSAN Farah	Galkayo - Mower	0618623121	
23	Sharfic Abdulkhadir Shire	Galkayo youth	0615061602	
24	Mohamed Abdulkadir Shire	Galkayo water	0615020996	
25	[illegible] Abdirahman Mohamud	Galkayo youth	0616221491	
26	Adhi Mohamud Hashi	Galkayo water agency	0615196614	
27	Liban Said Ali	Galkayo - WATER AGENCY	0615184498	
28	Abdulkadir Shire Cigal	Elder	0615807030	
29	Uways Abdullahi Siyaad	Business	0614399212	
30	Yusuf Abdirahman Haji	Elder	0615788746	
31	Abdisaqa Tahlil Jimale	Elder	0612749489	
32	Ali Abdulle Borjedle	Elder	0618038023	
33	Farhan Mohamed Farah	Business	0612749491	
34	Mohamud Hashi Ali	youth	0614883156	
35	Abdinasir Umar Jibreel	Mower	0612685102	
36	Lakonye Amin Agnes	Mower	0614176008	
37	Dahir Nur Ali	Business	0615024230	
38	Xawo Ahmed Hassan	Women Group	0619336878	
39	Muno Aday Ali	Women Group	0619824562	
40	Nafisco Ali Ibrahim	Group	0614830880	
41	Dahir Hussein Elmi		0615433466	
42	Hassan Mohamed Sahal		0617199497	

MAYOR OF GALKACYO

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ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IMMEDIATE INTERVENTIONS- PUBLIC PARTICIPATION

ATTENDANCE LIST

Venue: Five star Hotel Date: 04/09/2025

#	Name	Village	Tel	Sign
43	Dahir Mohamed Shurie	Galkayo - Municipality	0615773800	[signature]
44	Farah Abdulkadir Salad	Galkacyo / Alg	616697435	[signature]
45	Abdikarim Abshir Isse	Horseed	616518020	[signature]
46	Faduma Ahmed Hussein	Horsed - Women	0617577815	FADUMO
47	Xawo Hassan Farah	Hawlwadag - women	0612180444	Xawo
48	Habiba Mohamed Hassan	Peace C.P.O	0618720633	[signature]
49	Ubah Dirshe Jama C	women	0617579962	UBAX
50	Cangal Dhiin Sh Abdi	Galkay. C.B.O	0618656912	[signature]
51	Bashiir Cisman Carab	Galkayo	615796659	[signature]
52	Mohad Hassan Warsame	Glkayo	615160340	[signature]
53	Abshir Maxamed	Gakayo	0617842289	Abshir
54	Bashir osman arab	Galkayo	615796689	[signature]
55	Cabdiwali Sharif Hassan	Galk / Wadagir	613604388	[signature]
56	Sharif Mohamed Sahal	Galkio / Horseed	617314240	[signature]
57	Abdirahim Abdulahi Ali	Galkayo / Wadir	0612614414	[signature]
58	Farhan Aden Gelle	Galkacyo Hawlwadag	0615603405	[signature]
59	Bashiir Ciise Geed	Gkcio Horseed	0613030335	[signature]
60	YASIN ABDULLAHI ALI	GLK - Environment F.P.	0615224408	[signature]

DOWLADDA GOBOLEEDKA GALMUDUG SOMALIA · DUQA DAGMADA GAALKACYO · MAYOR OF GALKACYO · GALMUDUG STATE OF SOMALIA

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FOCUSSED GROUP (FGD)DISCUSSION GUIDE

South Galkayo

1. Entity / Name of Group/ Waste handlers from the IDP camp
2. Date and Venue 1st June → Hayaan Baraadweyne Camp
3. Attendance / Representation
   Garbage Handlers
4. Topic of Discussion
   → lack of gloves, tools & working
   → waste disposal
5. Key Issues Discussed
   → better working equipments
   → waste bins in the camps
   → training on recycling and waste segregation
6. Way forward and Resolution
   → capacity building in the camps
   → more garbage disposal pits
7. Signature and Confirmation

GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

FOCUSSED GROUP (FGD)DISCUSSION GUIDE

South Galkayo

1. Entity / Name of Group/ Male Youths
2. Date and Venue 2nd June - South Galkayo Market
3. Attendance / Representation
   young men from the community
4. Topic of Discussion
   livelyhood challenges
5. Key Issues Discussed
   - Water source management mostly elders do it
   - lack of jobs - Unemployment
   - their role in the society
   - gender sensitive toilets
6. Way forward and Resolution
   - capacity building and training for the youth on income generating projects
   - better ways of waste disposal.
7. Signature and Confirmation

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GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

FOCUSSED GROUP (FGD)DISCUSSION GUIDE
South Galkayo

1. **Entity / Name of Group/** Women entrepreneurs
2. **Date and Venue** 2nd June - South Galkayo Market
3. **Attendance / Representation**
   Women business (small scale traders)
4. **Topic of Discussion**
   - access to microfinance
   - sanitation in the market
5. **Key Issues Discussed**
   - not enough garbage disposal bins
   - lack of Gender sensitive toilets
   - accessing (micro finance is a problem
   - Expensive sanitary pads
6. **Way forward and Resolution**
   - support from local Government is needed
   - better loan terms from the banks and micro finance
   - capanity building.
7. **Signature and Confirmation**

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GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

FOCUSSED GROUP (FGD)DISCUSSION GUIDE

South Galkayo

1. **Entity / Name of Group/** Women Headed Households
2. **Date and Venue** 1st June → Hayaa Bacaadweyne Camp
3. **Attendance / Representation**
   Women from Different Households
4. **Topic of Discussion**
   → Sanitation facilities
5. **Key Issues Discussed**
   → lack of enough sanitation facilities in the camps
   → lack of enough water points in the camp.
   → insecurity at night
   → No gender specific toilets
   → expensive sanitary pads
6. **Way forward and Resolution**
   → capacity building and traing on menstrual Hygiene
   → improved access to water
   → more latrines in the camps
7. **Signature and Confirmation**

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GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

KEY INFORMANT INTERVIEW (KII) DISCUSSION GUIDE

South Galkayo

1. **Entity / Organization / Department**

   Social Department

2. **Name of officer and Position / Individual Consulted**

   Rakia Ali

3. **Date and Venue** 31st May – Galkayo Town

4. **Topic of Discussion**

   Menstrual Hygiene Management, Women Entrepreneurship

5. **Key Issues Discussed**

   → Ways of improving menstrual Hygiene
   → Gender Based violence especially in IDP camps
   → Gender gaps in the society
   → Improving of gender sensitive sanitation facilities

6. **Way forward and Resolution**

   → Design of gender sensitive washrooms especially in markets
   → Capacity building for women entrepreneurs

7. **Signature and Confirmation**

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GENDER SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

KEY INFORMANT INTERVIEW (KII) DISCUSSION GUIDE

South Galkayo

1. **Entity / Organization / Department**

   Ministry of Health

2. **Name of officer and Position / Individual Consulted**

   Hospital Director → Galkayo Hospital

3. **Date and Venue** 4th June → Galkayo Hospital

4. **Topic of Discussion**

   Challenges interms of WASH

5. **Key Issues Discussed**

   → Sometimes handling medical waste is an issue
   → Rely get support from local NGOs with drugs & supplements
   → Its very expensive to handle weekly drainage of septics
   → No gender specific toilets

6. **Way forward and Resolution**

   → More sanitation facilities
   → trainings for case officers to handle GBV
   → improved services

7. **Signature and Confirmation**

unicef

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KEY INFORMANT INTERVIEW (KII) DISCUSSION GUIDE

South Galkayo

1. **Entity / Organization / Department**

   Local NGO → CISP

2. **Name of officer and Position / Individual Consulted**

   Mr. Mannir → CISP Manager South Galkayo

3. **Date and Venue** 4th June 2025 → CISP Offices

4. **Topic of Discussion**

   GBV / SEA / capacity building

5. **Key Issues Discussed**

   → Protection Programs for school going girls
   → Dialogue with school going boys and girls to teach them about effects of GBV and MHM
   → Action plans (message in tshirts)
   → poor sanitation

6. **Way forward and Resolution**

   → more programs to help girls and women
   → target training in schools
   → capacity building

7. **Signature and Confirmation**

unicef

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KEY INFORMANT INTERVIEW (KII) DISCUSSION GUIDE

South Galkayo

1. **Entity / Organization / Department**

   Director Planning Department

2. **Name of officer and Position / Individual Consulted**

   Abshir Abdi – Director

3. **Date and Venue** 29th May 2025

4. **Topic of Discussion**

   gender responsive issues with regards to the project

5. **Key Issues Discussed**

   → lack of gender sensitive sanitation facilities in the markets
   → improvement of sanitation in the camps (waste disposal)
   → accessibility of public toilets
   → women entrepreneurship

6. **Way forward and Resolution**

   → gender sensitive project
   → include in the designs accessibility to the disable
   → solid waste disposal points

7. **Signature and Confirmation**

MINUTES OF PUBLIC PARTICIPATION ON PROPOSED SANITATION INTERVENTIONS (WWTP, SEPTIC TANK AND PIT LATRINE CONSTRUCTION) HELD ON 29TH MAY 2025 AT FIVE STAR BOARDROOM SOUTH GALKAYO

AGENDA ITEM	DISCUSSION POINTS
1. INTRODUCTION	**Welcome and Opening Remarks** The meeting commenced with the consultant welcoming all stakeholders to the consultation meeting for the proposed Sanitation Project in South Galkayo and giving an opportunity to all members present to introduce themselves. **Purpose of Meeting:** • To present the proposed sanitation project to key stakeholders • To provide detailed information on project scope and implementation • To gather stakeholder input, concerns, and recommendations. • To ensure community participation and ownership of the project.
2. PROJECT INFORMATION	**Project Background:** The consultant outlined the situational analysis highlighting current sanitation conditions in South Galkayo. Key statistics presented included households lacking access to improved sanitation facilities, high prevalence of open defecation particularly in peri-urban areas, frequent outbreaks of diseases, contamination of groundwater sources from poor waste disposal, and absence of wastewater treatment infrastructure leading to environmental degradation. **Project Objectives:** • Eliminate open defecation in target communities. • Increase access to improved sanitation facilities in households. • Establish proper wastewater collection and treatment systems. • Reduce incidence of waterborne and sanitation-related diseases. • Protect groundwater sources from fecal contamination. • Strengthen capacity of local institutions for sanitation service delivery. The consultant informed the members present of the proposed project components as follows; **Component 1: Septic Tank Construction** • Construction of 100 septic tanks. • They will be spread across institutions; offices, schools,

AGENDA ITEM	DISCUSSION POINTS
	universities, educational centres and hospitals. **Component 2: Waste Water Treatment Plant (WWTP)** • There will be 2No. WWTP; at Bulo Burde village and at Durdur area. **Component 3: Pit Latrine Construction** • Construction of 175No. Pit Latrines and associated facilities. • They will be spread across institutions; offices, schools, universities, educational centres and hospitals. **Expected Benefits:** • Reduced cases of diseases outbreak. • Improved sanitation facilities within South Galkayo. • Creation of several employment opportunities during construction and capacity building. • Hygiene promotion and community mobilization. • Protection of groundwater from contamination. • Enhanced environmental sanitation and aesthetic improvement. • Improved dignity and privacy, particularly for women and girls.
3. QUESTION AND ANSWER SESSION	**Q1:** How will the project address the specific sanitation needs of women and girls, particularly regarding menstrual hygiene and privacy? **A1:** Women and girls have specific sanitation needs that the project prioritizes such as all latrines will be designed with lockable doors and proper lighting for safety and privacy and also having Institutional latrines be gender-segregated with menstrual hygiene management (MHM) facilities including water, disposal bins, and soap. **Q2:** Health facilities generate wastewater that may contain infectious materials. How will the WWTP handle potentially hazardous healthcare waste, and what about existing health facility septic systems? **A2:** The WWTP design includes provisions for receiving and treating wastewater with higher pathogen loads; additionally, Healthcare facilities will be required to have preliminary treatment (septic tanks) on-site before discharge to the collection system. **Q3:** We've seen many sanitation projects in the past where latrines were built but fell into disuse or disrepair within a short time. How will this project ensure that facilities are actually used and maintained? **A3:** Sustainability through actual use and maintenance is our primary concern and learning from past experiences, Community-Led Total Sanitation (CLTS) approach will be used to trigger

AGENDA ITEM	DISCUSSION POINTS
	behavior change before construction, creating internal demand rather than external supply. **Q4:** What opportunities exist for young people in this project, both for employment during construction and for longer-term livelihoods in sanitation services? **A4:** Youth employment and entrepreneurship are important project outcomes. Priority is hiring of local youth for construction labor including excavation, material transport, and general construction support. **Q5:** Will sanitation facilities be accessible for persons with disabilities? Many public toilets are impossible for wheelchair users or those with mobility challenges to use? **A5:** Accessibility is an important consideration in our design standards. Household & Institution beneficiary selection will prioritize households with persons with disabilities (PWDs) where Latrine designs will be adapted to individual needs.
4. CLOSING REMARKS	**Summary of Key Discussion Points:** The consultant summarized the main outcomes of the meeting which included Strong stakeholder support for the sanitation project confirmed, clear understanding of project scope, and components established. Multiple channels were established for ongoing stakeholder communication. **Vote of Thanks:** The consultant expressed gratitude to all participants for their attendance, active participation, and valuable contributions. The commitment demonstrated by stakeholders reinforces the project's foundation for success and sustainability. **Closing:** The meeting was officially closed with a closing prayer. Informal discussions continued among participants.

Attendance List

African Water Facility
Facilité africaine de l'eau
Mobilising Resources for Water in Africa
Mobiliser des ressources pour l'eau en Afrique

unicef

TCE

VITAL CARE CONSULTANCY

PREPARATION OF GENDER-SENSITIVE AND CLIMATE-RESILIENT CITY WASH MASTERPLANS, MANAGEMENT MODALITIES AND TECHNICAL FEASIBILITY STUDIES FOR QARDHO AND SOUTH GALKAYO, SOMALIA

TOWN: GALKAYO SOUTH **ORGANIZATION:** Local Committee **VENUE:** 5 Star Bardroom **DATE** 29/05/2025

ATTENDANCE LIST.

NO.	NAME	ORGANIZATION	PHONE NO.	EMAIL ADDRESS	SIGNATURE
1.	Maymuun Cali Nuur	HG Hawenka	0616718181	Mengquamanassosiation@g	[signature]
2.	Xaliso Mohamud Abdi	Hawenka	0618720637	—	[signature]
3.	Zamzam Maxed Colad	Hawenka	0617944646		[signature]
4.	Anuuro axmed cabdi	Smc Xaafada	0615094308		[signature]
5.	Ardo Cabdi Maxamud	Women Org	615-241023		[signature]
6.	Faadume Maxamed	hawenka mobad	617423339		[signature]
7.	Deeqo Aden Ahmed	Haweenka mobad	617948746		[signature]
8.	Sacdiyo Xasan Cigaal	HORUUMAR	0617198831		[signature]
9.	Foosaade Xasan	Wadajir	0617423571		[signature]
10.	Fardowso Axmed Xasan	Gar Soor	0906649536		[signature]
11.	nasro Jamac nuur	WadaJir	0617966404	Nasro Jamac2020@gmail.	[signature]
12.	shigri ~~maxamed~~ cade	wadajir	0617423500		[signature]
13.	ilhaam Mohamud Harbi	Hawlwadaag	0618603153	ilham HarPius@gmail.com	[signature]

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TOWN: ORGANIZATION: .... VENUE: DATE

ATTENDANCE LIST.

NO.	NAME	ORGANIZATION	PHONE NO.	EMAIL ADDRESS	SIGNATURE
14.	Cadar Jaama C Nuur	Hawlwadaag	0617237738		[signature]
15.	Shugri Mohamed Cade	Hawlwadaag	0617423500		[signature]
16.	Xawadi Cabdi	Ximin	619672944		[signature]
17.	[illegible] Cabdilaahi	HHU	0618653153		[signature]
18.	Nuuyo Cali	Yusfa	0619 824038		N
19.	Nasteho Xirse Cali	Hormar	0619174072		[signature]
20.	Maryan Cabdi Cilishe	H	0615292449		maryan
21.	Xalimo Xasan Cadule	H	0616067062		Xalimo
22.	Lafsa Cabdi Ciman	HH	0619132734		[signature]
23.	Amran Cali Jamac	H	0617577957		amran
24.	Samsam Mohamed Mohamud	Falar	0617948380		S
25.	Faadumo Cabdi Xusen	Hirmaan	0617577385		faadumo

Appendix 2: Photographs Of Situations in Various Parts of South Galkayo

Pictorial views of South Galkayo Town

Hayaan Bacadweyn IDP community Centre

A household in the IDP camp

Sanitation facilities in the one of the camps

APPENDIX 3: PROJECT TECHNICAL DESIGNS AND LAYOUT

Typical layout of a Decentralized Treatment Facility (DTF)

1. Operator Store
2. Receiving Bay / Balancing Tank
3. Anaerobic Reactor
4. Vertical Flow Constructed Wetland
5. Sludge Drying Bed
6. Waste Disposal Unit