FEDERAL GOVERNMENT OF SOMALIA

Ministry of Health and Human Services (MoH)

Improving Health Care Services in Somalia Project (Damal Caafimaad) (P178876)

Environmental and Social Management Plan (ESMP)

Bosaso Regional Hospital Construction
Works Puntland

20 November 2025

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ACRONYMS AND ABBREVIATIONS

BRA	Banadir Regional Administration
CoC	Code of Conduct
E&S	Environmental & Social
EHSG	Environmental, Health and Safety Guidelines
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FGS	Federal Government of Somalia
FMS	Federal Member State
FRS	Federal Republic of Somalia
GBV	Gender-Based Violence
GIIP	Good International Industry Practices
GRM	Grievance Redress Mechanisms
HCF	Health Care Facility
ICU	Intensive Care Unit

IDA	International Development Association
IDP	Internally Displaced Person
IFC	International Finance Corporation
LMP	Labor Management Procedures
MDR-TB	Multi-drug-resistant TB
MoH	Ministry of Health
OHS	Occupational Health and Safety
OPD	Outpatient department
OT	Operational Theatre
PCIU	Project Coordination and Implementation Unit
PPE	Personal Protective Equipment

PSEA	Prevention of Sexual Exploitation and Abuse
PV	Photo voltaic
RCH	Reproduction & Child Heath
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SMP	Security Management Plan
UK	United Kingdom
UNOPS	United Nations Office for Project Services
VCT	Voluntary Counselling and Testing
WB	World Bank
WHO	World Health Organization

EXECUTIVE SUMMARY

The Improving Healthcare Services in Somalia Project (Damal Caafimaad) has been implemented since May 2021 and is planned to end in December 2026. Its Project Development Objective (PDO) is to 'improve the coverage of essential health and nutrition service in project areas and strengthen stewardship capacity of Ministries of Health'. The project seeks to scale up high-impact health services across the population in project target regions and develop the Federal And State Ministry of Health services across the population in project target regions and develop the Federal and State Ministry of Health capacities to act as stewards of the health sector, effectively governing and building core functions that will be able the Government to lead and manage the sector.

One of the health facilities slated to benefit from this activity is the Bosaso Regional Hospital, which is located in Puntland state. Currently under the management of the Ministry of Health, Puntland State of Somalia, the hospital encompasses ten departments, including surgery, maternity care, paediatric health, nutrition, outpatient and inpatient treatment, a laboratory, pharmacy and facilities for dialysis patients. The structural layout of the hospital exhibits a lack of organization in its original design. Although the main building remains in good condition, subsequent constructions over the years lacked proper planning, resulting in a congested environment with no available space. This congestion, coupled with haphazard additions, restricts the possibility of incorporating new departments. The proposed site for improvement faces challenges due to limited space and the historical accumulation of structures, making the overall hospital experience uncomfortable for both patients and staff.

The proposed upgrading of this regional hospital will involve the demolition and relocation of solar PV, demolitions of VCT, OPD, LAB, Admin office, blood bank, external paving and elevated RC Water tank. New construction of OPD, X-RAY, LAB, RCH, VCT/ Administration Offices building, renovate the OT to replace a roof cover, relocation of electrical and mechanical services i.e. New septic tank, 2 No. RC Elevation tanks and Ground RC water tank, equipment and furniture procurement and installations.

The proposed rehabilitation of the Bosaso Regional Hospital was originally planned under the Somalia COVID-19 Emergency Vaccination Project (P176956), which is a World Bank-funded initiative designed to support the Government of Somalia in addressing COVID-19 through effective vaccine deployment. However, the Project is currently closing, and the planned rehabilitation is shifted to the Improving Healthcare Services in Somalia Project (Damal Caafimaad). The government, through the Ministry of Health, has, with the support of the United Nations Office for Project Services (UNOPS) opted to invest in the refurbishment of health facilities. With UNOPS technical backstopping, the sub-project will enhance health facilities.

To identify, manage and mitigate the environmental and social risks in the planned upgrading of Bosaso Regional Hospital, the project has prepared this Environmental and Social Management Plan (ESMP) to manage the E&S risks anticipated from the demolition, construction and operation of the hospital. To make the plan conclusive, robust and scalable it was prepared in consultation with all the relevant stakeholders of the project. The design for the demolition and construction works was prepared by UNOPS after detailed technical assessment with input from the local communities and local health authorities.

There are significant positive impacts that are anticipated during the construction and

operation phase of the project. The primary beneficiaries of the project will be the local communities who for years have not been able to get better services as they will be able to get access to state of the art facilities improving the regional health care system. Adverse risks and impacts are mainly associated with the demolition and construction works, and include risks related to occupational health and safety of workers, such as increased level of dust, noise and vibration from moving of vehicles and machinery, community health and safety risk, risks associated with labor rights and management, e.g. child labor and/or forced labor and sexual exploitation and abuse – sexual harassment due to increase in labor related population in the project site.

Environmental concerns during the demolition and construction process include, for instance, dust and air pollution, as the dismantling of structures generates a significant amount of airborne particulate matter. This dust can affect air quality in the surrounding area, impacting patients, nearby residents, and the workforce. To manage this, dust suppression techniques will be employed, such as regularly spraying water over debris and work areas, which helps reduce dust dispersion. Additionally, barriers will be installed around the demolition site to contain particles, while all workers will be provided with appropriate PPE, including masks and respirators, to protect them from inhaling harmful particulates.

Noise and vibrations from demolition activities present another significant risk, especially given the proximity of patients and local residents who may be disturbed by the constant sounds of heavy machinery. To mitigate this, demolition work will be restricted to daytime hours to minimize disruption during resting periods. Noise-dampening equipment will be used when possible, and communities nearby will be informed about the nature, duration, and timing of demolition-related noise, helping set clear expectations. Workers will also be provided with ear protection, and a buffer zone will be established around the site to shield the community from the brunt of the noise.

Occupational health and safety (OHS) risks are a top priority, as demolition and construction tasks inherently expose workers to hazards such as falling debris, heavy machinery, and potential exposure to harmful materials. To address these risks, all workers will undergo safety training covering demolition protocols and emergency response procedures. Workers will be supplied with essential PPE, including hard hats, gloves, steel-toed boots, and safety harnesses for high- risk tasks. Clear access controls will be set up to prevent unauthorized entry into the work zones, and first-aid facilities will be available onsite for immediate response to any injuries.

Waste management during demolition and construction is another major consideration, as the process generates a substantial amount of solid waste. Without proper management, this waste could lead to environmental contamination. The project's existing waste management plan will be updated, with new sections now categorizing waste types and specifying handling procedures for recyclable, hazardous, and general waste. Where feasible, materials such as bricks and metals will be sorted for reuse or recycling, minimizing the overall waste footprint of the project.

Community health and safety is a priority, as residents, the occasional hospital visitors, and staff could be exposed to hazards such as falling debris, dust, and increased heavy vehicle traffic. To ensure public safety, fencing and prominent warning signs will be installed around the demolition area. Traffic control measures will be implemented, with designated routes established for demolition vehicles to avoid populated areas. Additionally, community

engagement efforts will keep residents informed of the demolition timeline, site hazards, and safety protocols in place.

Social impacts, include potential disruptions to hospital functions and community inconvenience due to noise and dust, child labour, SEA-SH among others. The project's Stakeholder Engagement Plan (SEP) will be adopted and implemented in the context of the site to keep the community involved and informed about the new interventions in Bosaso. To facilitate responsive communication, UNOPS will also put in place a grievance redress mechanism (GRM) for the workers, residents and users of the health facility to voice concerns or complaints and receive timely responses. Communicating the benefits of the project and expected timelines will help address community anxieties and foster positive perceptions of the development.

Following the detailed E&S screening of the proposed sub-project, as per process described in the previous project's approved ESMF,[1] the sub-project fits into a 'Moderate Risk' category, as per the levels defined in the ESMF. The project team has decided that an Environmental and Social Management Plan (ESMP) is best tool for the risk management for the sub-project.

This ESMP lays down a robust framework through which the anticipated adverse environmental and social risks and impacts associated with the demolition and reconstruction activities of the project will be identified and managed. Mitigation hierarchy will be employed where negative adverse impacts anticipated will be avoided. The impacts that can be avoided will be reduced and those that cannot be reduced will be mitigated while only the residual impacts will be compensated or offset. The plan identifies, characterizes and manages the potential risks and impacts.

This ESMP specifies the means through which the adverse environmental and social risks and impacts of the Project associated with the demolition and construction activities are either avoided or mitigated. It identifies, characterises and manages the potential risks and impacts. The ESMP lists the project-specific risks and impacts and mitigation measures, lays out institutional arrangements for implementing and monitoring the risk mitigation measures and proposes monitoring indicators for measurement and monitoring of E&S performance. It shows what must be done, by whom, when, and to what standard; and also shows who will monitor its implementation and when and what the budget implications for mitigation measures and monitoring activities are. It further includes a description of the Project Grievance Redress Mechanism (GRM), which needs to be applied during the demolition and construction period, and reiterates stakeholder consultations that have been conducted in the lead up to the project design.

[1] Ministry of Health, Environmental and Social Management Framework, Somalia COVID-19 Emergency Vaccination Project (P176956), March 2022, p.103

1. INTRODUCTION

1.1Project Background

The overall Project will support the delivery of a package of health services to beneficiaries, which includes procurement of health commodities (including medicines), procurement of key equipment including provision of solar power generation and green cooling equipment, and development of policies and mechanisms that would regulate safer disposal of obsolete cold chain equipment, as well as developing capacity of the regional level to manage health service delivery including support for HMIS, and supportive supervision.

In addition, the Damal Caafimaad project aims to respond to the institutional, operational, and technical capacity needs in Somalia's Ministries of Health (MoHs). At the request of the Federal Ministry of Health (FMoH), this project will strengthen the FMoH public financial management capacity (PFM) in fiduciary and contract management in the short, medium and long-term. Short-term activities will be supported during project preparation using WB executed financing, and longer-term activities will help build credible PFM systems in Somalia's MoHs in a consistent and phased approach. The FP initiative expands the EPHS with a dedicated family planning service line, offering short and long contraceptive methods free of charge through private providers.

The Project has four components as described in the sections below:

(i) Component 1: Expanding the coverage of high-impact health and nutrition services in select geographic areas.
(ii) Component 2: Strengthening Government's stewardship to enhance service delivery.
(iii) Component 3: Project Management and Knowledge Management and Learning.
(iv) Component 4: Contingency Emergency Response Component (CERC).
(v) Under AF, new interventions and activities are introduced under Components 1 and 3.

Bosaso Regional Hospital, is located in Bari Region, situated in Bosaso City, a vital component of the Puntland State of Somalia. Established in 1930 during the Italian colonial era, the hospital stands as a crucial referral centre for the region, extending its services to residents from neighbouring areas. Currently under the management of the Ministry of Health, Puntland State of Somalia, the hospital encompasses ten departments, including surgery, maternity care, paediatric health, nutrition, outpatient and inpatient treatment, a laboratory, pharmacy, and facilities for dialysis patients. Continuous interventions have been implemented over the years, perpetuating its growth and functionality. However, much of the hospital infrastructure is dilapidated and a major refurbishment is required, which necessitates demolitions of out- buildings that have been condemned as unfit for human habitation and construction of new hospital infrastructure to improve on service delivery to the community.

The proposed sub-project for the demolition and construction of Bosaso regional Hospital will be conducted in two phases. Although due to budgetary constraints only phase 1 scope of works will be implemented. Detailed scope of works packaged under phase 2 will be implemented later in case the Federal Republic of Somalia (FRS) will seek funding separately. This ESMP is prepared in support of Phase 1. The Scope of works to be implemented include

- Demolition and relocation of solar Photo Voltaic (PV),
- Demolitions of VCT, OPD, Lab, Admin office, Blood bank, external paving and elevated RC Water tank,Construction of two storey building that will house OPD,

X-RAY, Lab, RCH, VCT and Admin Offices,

- Relocation of electrical and mechanical services and construct a new septic tank, 2 No. RC Elevation tanks and a Ground RC water tank.
- Equipment and furniture procurement and installations

The sub-project team has undertaken an Environmental and Social (E&S) screening of the sub-project, as per the process described in the Annex I-A (Environmental and Social Screening Template) of the previous Project Environmental and Social Management Framework (ESMF)[2]. The screening resulted in classifying the sub-project as a moderate risk category project as per the levels defined in the ESMF (p.105). E&S Screening findings recommended preparation of the Environmental and Social Management Plan (ESMP) as appropriate tool to manage the anticipated adverse negative impacts and risks related to the sub-project.

1.2 Purpose of the ESMP

This ESMP lists the typical environmental and social (E&S) risks and impacts and associated mitigation measures that need to be considered at minimum in the context of the demolition and construction of some of the old structures at Bosaso Regional Hospital. The purpose of the ESMP is to provide a consolidated summary of all the Environmental and Social (E&S) commitments relevant for the works. The measures focus on environmental aspects such as emissions, environmental contamination and social aspects such as communication with local stakeholders and safety of workers and communities. The ESMP lists the sub-project-specific risks and impacts and mitigation measures, lays out the institutional arrangements of the implementation and monitoring of the risk mitigation measures, and proposes monitoring indicators for measurement and monitoring of E&S performance.

The objective of this ESMP is to provide management strategies and actions to mitigate adverse risks and impacts in consistence with national institution, legal and policy frameworks, relevant WB Environmental and Social Standards (ESSs) and the IFC Environmental, Health and Safety Guidelines (EHSGs) for both general and healthcare facilities, as well as Good International Industry Practices (GIIP), such as technical guidance by the World Health Organization (WHO).

1.3 ESMP Approach and Methodology

The ESMP was prepared based on World Bank Environmental and Social Standards (ESSs). It included a community and high-level stakeholder engagement approaches. The approach involved identifying the scope of work (demolition and reconstruction components) which clearly stipulates the nature and magnitude of anticipated environmental and social risks. The risks were determined during the environmental and social screening process. All the adverse negative risks and impacts anticipated were mapped out. Risk mitigation hierarchy was adopted as a standard operating procedure in managing the risks. All the anticipated negative risks were either avoided, reduced, mitigated or offset/compensated for the residual impacts. The ESMP was prepared which includes anticipated impacts, mitigation measures, responsible party to deal with the risk incurred, the occurring frequency of the risk and the budget amount to offset the impacts. Stakeholders included the local communities and the local health workers.

[2] Ministry of Health, Environmental and Social Management Framework, Somalia COVID-19 Emergency Vaccination Project (P176956), March 2022, p.

2. POLICY AND LEGAL FRAMEWORK

A summary of the national policies, laws and the World Environment and Social Standards is highlighted below.

2.1 National Framework

2.1.1. The Provisional Constitution of the Federal Republic of Somalia

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

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

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

Article 31 – Language and Culture: The state shall promote the positive traditions and cultural practices, whilst striving to eliminate customs and emerging practices, which negatively impact the unity, civilization and wellbeing of the Somali society. And, the state shall promote the cultural practices and local dialects of minorities.

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

Article 111J – The Office of the Ombudsman: The office is protected against interference from any other person or entity. As such, independence, integrity and effective service delivery are also maintained. The Ombudsman shall: (i) Investigate complaints against government workers regarding: allegations/ outright violations concerning basic rights and freedom, abuse of power, unfair behavior, mercilessness, lack of clemency, indiscipline or disrespect, corruptive act, illegal behavior, or those that could lead to mischief or injustice; (ii) Investigate complaints in relation to the activities of the Public Service Commission and other administrative institutions of the government, including defense and police forces that could lead to unequal services, unfair recruitment, or administration; (iii) Take appropriate steps to rectify or change items mentioned in earlier clauses through a fair, and appropriate process of consultations and sacrifices among the people concerned; (iv) Report on the complaints and issues raised and submit to the head of the offender; (v) Forward cases to the Attorney General and bring them before a court, as appropriate.

[3] *https://moh.gov.so/so/wp-content/uploads/2023/10/COVID-19-Additional-Financing-ESMF-updated- 29-May-clean.pdf*

Article 111H – National Security Commission: A National Security Commission shall be established to study and develop an integrated security framework to address present and future needs of Somalia. It shall present proposals to ensure that human security is prioritized and incorporated into such a framework, through which the public may provide oversight and monitor security related expenditure and seek redress from abuses by security personnel.

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

Article 115 (—Civil service‖) outlines civil service values and protection of their rights.

2.1.2 Relevant National Policies

Somalia 's National Environmental Policy was approved by Cabinet, on February 13, 2020 the stated goal of environmental policy is to improve the health and quality of life of the Somali people. The Federal Government has drafted, or is in the process of drafting, the following policy, legal and regulatory frameworks: National Environmental Protection and Management Act 2024; Draft National Environmental and Social Impact Assessment Regulations; Draft National Ozone Layer Protection Regulation; Draft National Forest Management Policy; and Draft National Charcoal Policy. All of these have some relevance, in one way or another, for the Somalia COVID-19 Additional Financing Project.

Somalia National Gender Policy (2016) includes strategies to eradicate harmful traditional practices such as female genital mutilation/cutting (FGM/C) and child marriage and to improve services for the management of GBV/SEAH cases.

2.1.3 Environmental Protection and Management Act, 2024:

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

2.1.4 Environmental and Social Impact Assessment and Audit Regulations (ESIA)

Part III, regulations 13, 16 and 17, guides public participation, collection and incorporation of views from the general public.

Given that the project is financed by the World Bank, the environmental and social risks likely to be encountered during the sub-projects implementation will be managed using relevant Somali national laws and the World Bank's Environmental and Social Framework (ESF) and the five Environmental and Social Standards (ESS) that apply to the project and which are as follows:

- **ESS1 – Assessment and Management of Environmental and Social Risks and Impacts**: This standard is fundamental for all project activities, requiring, where necessary, Environmental and Social Management Plans (ESMPs) to manage potential risks. For the Bosaso Regional Hospital demolition and reconstruction, ESS1 necessitates an ESMP specifically addressing issues like dust, waste management, and community health and safety during demolition and construction.
- **ESS2 – Labour and Working Conditions**: This standard ensures safe and fair labour practices, including working conditions, worker health and safety, and grievance redress mechanisms for workers. The demolition and construction work at Bosaso Hospital require strict adherence to ESS2 to protect workers from hazards like heavy equipment use.
- **ESS3 – Resource Efficiency and Pollution Prevention and Management**: ESS3 is relevant to managing pollution and ensuring resource efficiency. For the Bosaso Hospital site, it applies to managing dust, noise, and waste during demolition, ensuring minimal environmental impact, and applying best practices in resource us-age during reconstruction.
- **ESS4 – Community Health and Safety**: Focused on protecting the health and safe-ty of nearby communities, ESS4 is critical for the Bosaso sub-project to mitigate potential risks from dust, debris, noise, and hazardous material exposure. Measures include fencing, safety signage, controlled traffic access, and communication with residents about safety precautions.
- **ESS8: Cultural Heritage** recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. ESS8 sets out measures designed to protect cultural heritage throughout the project life-cycle. A chance find procedure is annexed to this report just in case a chance find is encountered during excavation.
- **ESS10 – Stakeholder Engagement and Information Disclosure**: ESS10 emphasizes the need for ongoing community engagement and information dissemination. For the Bosaso Hospital project, this involves informing stakeholders about demolition timelines, risks, and benefits and establishing a grievance mechanism to address concerns.

3. BIOPHYSICAL AND SOCIO-ECONOMIC ENVIRONMENT

This section describes the overall baseline condition of Bosaso District in regard to the biological and physical environment, as well as the socio-economic background of the sub-project area. The target location is the Bosaso Regional Hospital and its periphery in Puntland state. The biophysical environment of the district is in principle similar to the other districts generally in Somalia, with minor variations. However, it is largely an urban environment.

3.1 Proposed Project Location

The sub-project is located in Bosaso District, Bari region, Puntland State of in the north-eastern part of Somalia and on the Gulf of Aden coast. The nearby settlements to the district include Rehiss to the east approximate 3.5 km, Marero to the northeast approximate 14 km, Baalade to the west approximate 3.5 km, Laas Geel to the southwest approximately 16.5 km, Lasgoriga to the south approximately 20.5 km and lastly El Dhuree to the southeast approximately 36 km. The GPS Coordinates are 11° 17’ 19” N, 49° 10’ 55” E. The hospital can easily be accessed by Basosa road that provides access from the west side of the hospital. Figure 1 below shows the location of Bosaso District in Somalia.

Some of the receptors likely to be affected by the proposed project include the patients during demolition activities due to noise pollution produced during demolition and reconstruction. The local community may also be affected as a result of increased likelihood of dust pollution due to moving vehicles carrying rabble and construction materials.

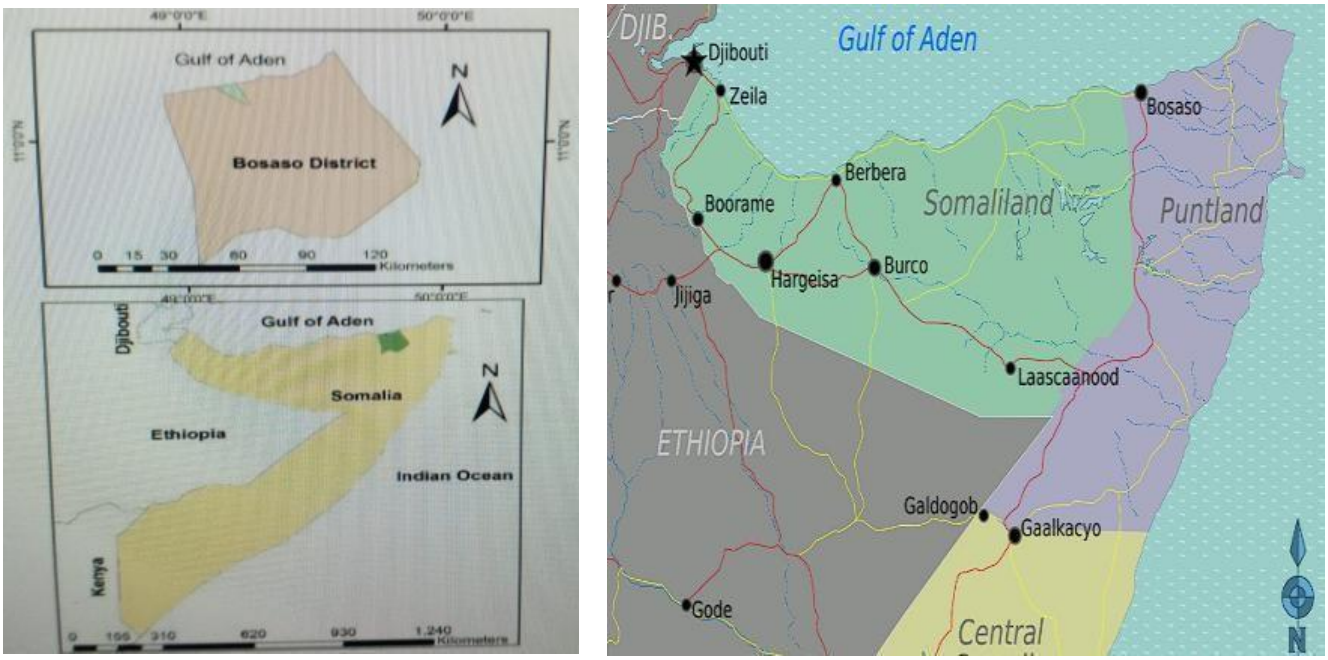

Figure 1 Location of Bosaso District

The construction works will be undertaken at the location of the current hospital.
Figure 2 below shows the location of the proposed sub-project site.

Google Earth image: Survey Location

Figure 2 Location of Bosaso Hospital
Source: Bosaso topo survey report

3.2 Biophysical Environment

Topography: The topography within 2 miles of Bosaso contains only modest variations in elevation, with a maximum elevation change of 135 feet and an average elevation above sea level of 34 feet. Within 10 miles contains only modest variations in elevation (1,673 feet). Within 50 miles contains very significant variations in elevation (6,939 feet).

The area within 2 miles is covered by bare soil (36%), water (34%), sparse vegetation (16%), and artificial surfaces (12%), within 10 miles by water (45%) and bare soil (39%), and within 50 miles by water (45%) and sparse vegetation (27%).

Geology and Soil: The geology of Somalia is built on more than 700-million-year-old igneous and metamorphic crystalline basement rock. It is covered in thick layers of sedimentary rock formed in the last 200 million years.[4]

[4] Geology of Somalia, Mogadishu topographic map, accessed at: https://en-gb.topographic-map.com/mapd3w1h/Mogadishu/?center=1.60067%2C49.87364&popup=1.98015%2C45.39276&zoom=15

Climate: Bosaso has a hot desert climate (Koppen climate classification *BWh*). It has a relative mean humidity of about 60%. Average daily temperature throughout the year is about 30 °C (86 °F). Mean daily highest temperature is about 35 °C (95 °F) while the mean daily lowest temperature of 25 °C (77 °F). The diurnal temperature range is 10 °C. The coolest months of the year are between December and February during winters where the temperatures read 20 °C (68 °F) while the highest peak temperatures are experienced between June and august during summer with the temperatures consistently exceed 40 °C (104 °F). Weather after winter slowly heats up in the spring after April rainy season begins while cold season starts to set in come in September again. Rainfall reaches high in September with an average precipitation of 7 mm (0.28 inches) in November. Total rainfall year-round 1s around 19 mm (0.75 inches).

In view of the above climate data provided it is suggested construction should be undertaken during the time when the weather and rainfall is suitable and conducive to reduce adverse impacts on to the environment and local communities. In Bosaso the summer are long, sweltering, oppressive, arid and partly cloudy. On the other hand, winters are humid, warm, dry and mostly clear. Its windy all year round. Over the course of the year, the temperature typically varies from 71°F to 99°F and is rarely below 68°F or above 101°F. Figure 3 below shows average Bosaso monthly weather pattern.

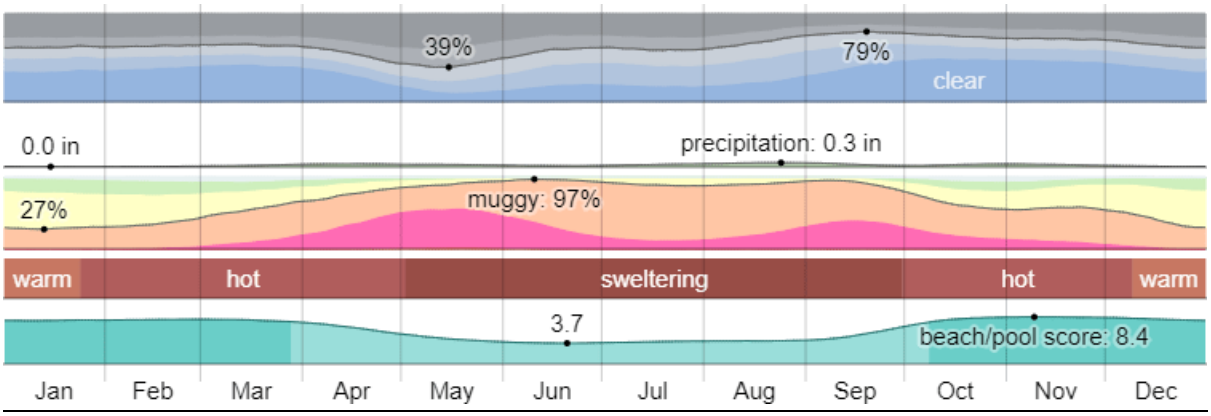

Figure 3 Average Bosaso monthly weather pattern

Average Temperatures: The hot season lasts for 4.2 months, from May 17 to September 22, with an average daily high temperature above 96°F. The hottest month of the year in Bosaso is June, with an average high of 99°F and low of 86°F.

The cool season lasts for 3.1 months, from November 13 to February 16, with an average daily high temperature below 87°F. The coldest month of the year in Bosaso is January, with an average low of 71°F and high of 85°F. Figure 4 below shows the average monthly temperatures on Bosaso

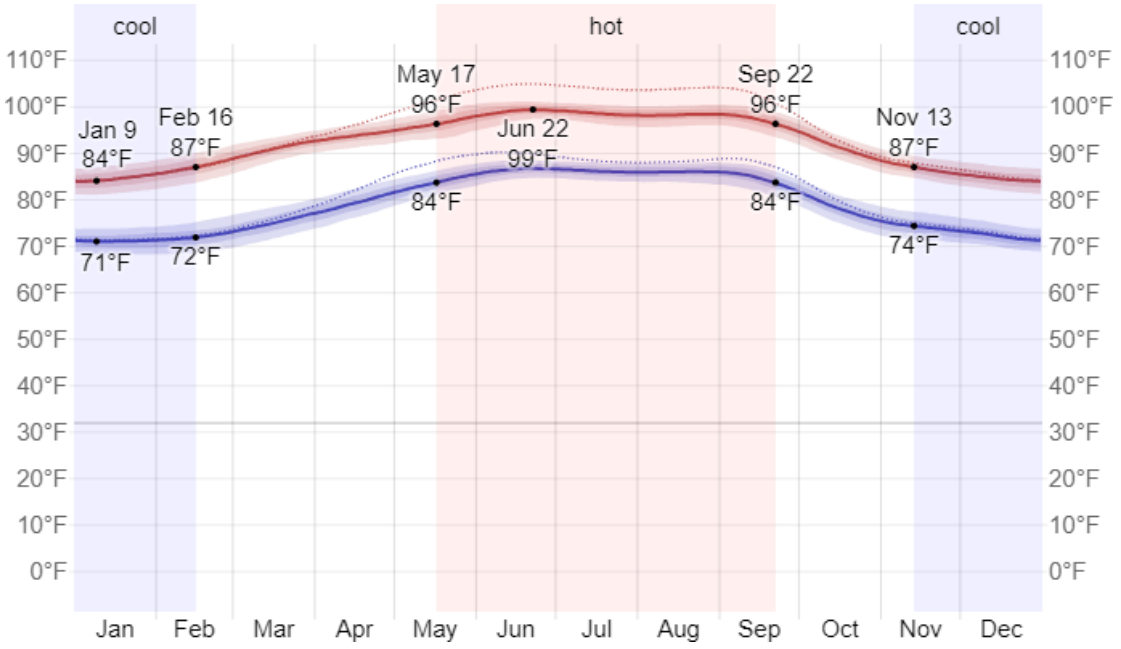

Figure 4Monthly average high and low temperatures in Bosaso
Source: https://weatherspark.com/y/104781/Average-Weather-in-Bosaso-Somalia-Year-Round

Rainfall: Bosaso experiences *some* seasonal variation in monthly rainfall, although rain falls throughout the year. The month with the most rain is *August*, with an average rainfall of *0.3 inches* while the month with the least rain is *January*, with an average rainfall of *0.0 inches as shown in* Figure 5 *below*.

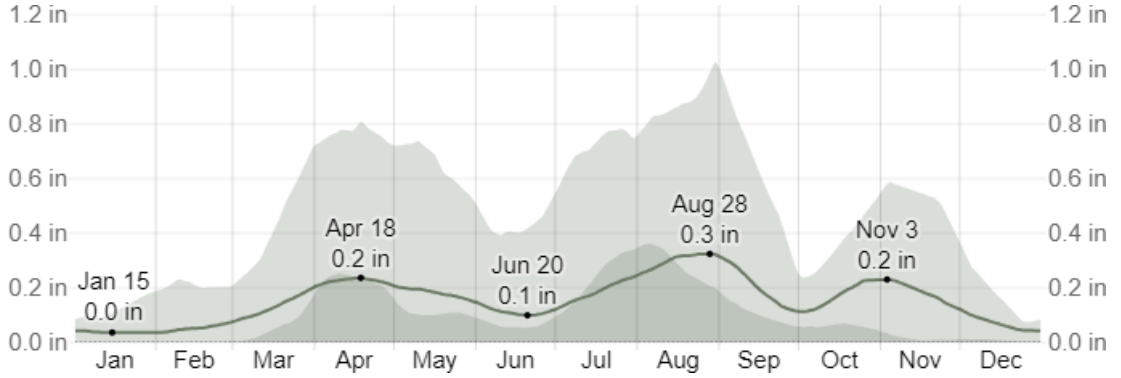

Figure 5 Average monthly rainfall
(Source: https://weatherspark.com/y/104781/Average-Weather-in-Bosaso-Somalia-Year-Round

Precipitation in Basoso Sub-Project Area: Bosaso does not experience significant seasonal variation in the frequency of wet days (i.e., those with greater than 0.04 inches of liquid or liquid-equivalent precipitation). The frequency ranges from 0% to 5%, with an average value of 2%.

Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. The month with the most days of rain alone in Bosaso is August, with an

average of 1.4 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 5% on August 2. Figure 6 below shows the daily chance of precipitation.

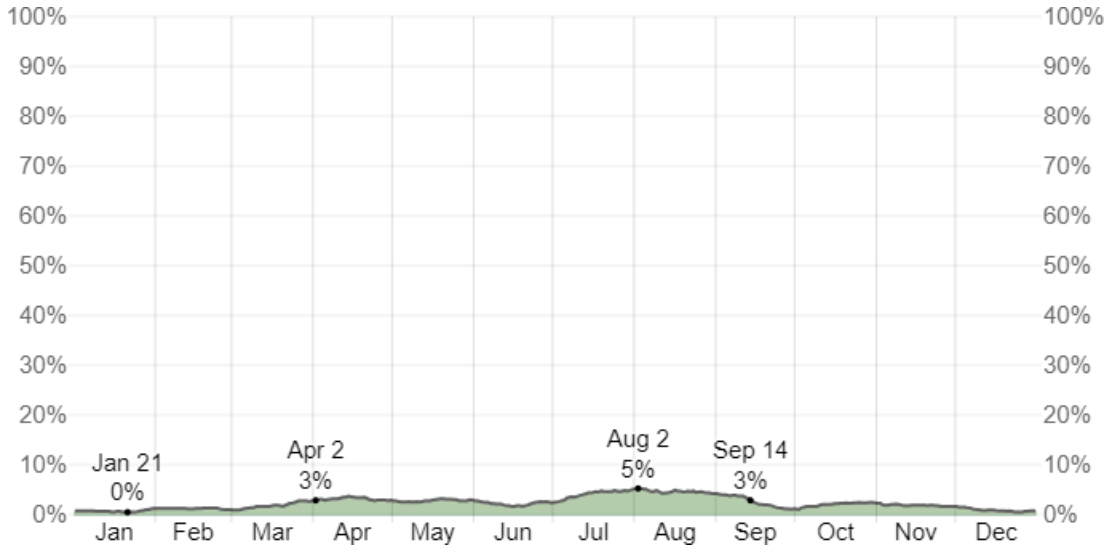

Figure 6 Daily chance of precipitation in Bosaso

Humidity: Unlike temperature, which typically varies significantly between night and day, dew point tends to change more slowly, so while the temperature may drop at night, a muggy day is typically followed by a muggy night. Bosaso experiences extreme seasonal variation in the perceived humidity. The muggier period of the year lasts for 9months, from March to December, during which time the comfort level is muggy, oppressive, or miserable at least 45% of the time. The month with the muggiest days is June while the month with the fewest muggy days is January.

Wind: The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Bosaso experiences extreme seasonal variation over the course of the year. The windier part of the year lasts for almost 2months, from June to August 2 with average wind speeds of more than 11.8 miles per hour. The windiest month of the year is July, with an average hourly wind speed of 16.0 miles per hour. The calmer time of year lasts for 9 months, from August to June. The calmest month of the year is May, with an average hourly wind speed of 7.4 miles per hour.

Water resources and Hydrology: After reaching the surface, rainwater infiltrates into the soil. Most of the water in the soil and on the wet surface evaporates or is transpired back into the atmosphere.[5] Groundwater is the major source of drinking water for Bosaso City.[6] Due to the rapid increase of population in the city the use of groundwater supplies has grown over time and created concern about quality and quantity of water available.

[5] Technical report Somalia: Groundwater assessment accessed at https://documents1.worldbank.org
[6] Groundwater flow modelling in the Coastal Aquifer of Bosaso plain, Somalia accessed at https://www.researchgate.net

3.3 Socio-Economic Environment

Population: Bosaso district has a total population estimated at about 615,067 residents.[7] It is the third largest city in the country after Mogadishu and Hargeisa.[8] While Bosaso is a melting pot, with residents hailing from all the major clans of Somalia, most of its population is from the Harti confederation of Darod sub-clans.[9] The population comprises of rural or nomadic at 5.5 %, Urban at 84.1% and internally displaced at 10.4% of the total population.[10] The urban area grows approximately 4.3 percent per year. Population numbers have been fluctuating due to insecurity.

Livelihood and Employment: Bosaso's economic vitality is anchored by the port, the revenue from which is a significant contributor to the City's economy underpinning various sectors from logistics to trade.[11] Bosaso has flourished as an economic centre in Somalia with a vibrant port and business community.[12]

Gender based violence- Gender based violence is rampant in Somalia and the most affected are young girls and women from IDP camps who are vulnerable to rape and other forms of sexual abuse. After decades of war and conflict in the country, women, girls and children have been displaced. They remain vulnerable to gender-based violence due to high insecurity in the camps, limited access to justice and lack of protection from the clans. The Puntland State of Somalia is making headway in the fight against gender-based violence (GBV) as it intensifies efforts towards ending sexual violence, sexual assault and exploitation, female genital mutilation and early and forced marriages. The Federal member state in August 2016 passed a law criminalising all sexual offences.

Administration and Governance: Bosaso is a large city situated in the northern coastal area of Somalia on the shores of the Gulf of Aden.[13] It is the commercial and cultural capital of the autonomous Puntland region in northern Somalia. Bosaso city has 16 different sections in the city. Each district has its own district mayor. Bosaso is considered a Grade A district which is a regional headquarters and the district council is the decision making body of local governments in Puntland with a tenure of 5 years.[14] The councils operate through permanent committees that are composed of Councillors selected among the Council member and are often responsible for functions such as security, economic and planning, public works, revenue, social services, monitoring and evaluation and gender.[15]

Infrastructure: Bossaso is one of the fastest growing cities in Somalia with constantly deteriorating urban conditions due to the lack of institutional, financial and human capacity to manage the urban expansion and provide services on the one hand, and the total absence of control mechanisms

[7] City Population, Bosaso accessed at https://www.citypopulation.de/en/somalia/admin/bari/1601boosaaso/

[8] Meet Minneapolis City by Nature accessed at https://www.minneapolis.org/about-us/sister-cities/bosaso-somalia/

[9] Ibid

[10] City Population, Bosaso accessed at https://www.citypopulation.de/en/somalia/admin/bari/1601boosaaso/

[11] Rapid Market Assessment Bosasso, Somalia December 2023 accessed at https://pro.drc.ngo/media/qztikneg/drc_som_rma_bossaso_march2024_v2.pdf

[12] Bosaso city strategy by UN Habitiat 2024, accessed at https://reliefweb.int/

[13] Latitude and Longitude finder accessed at https://www.latlong.net

[14] Bosaso city strategy by UN Habitiat 2024, accessed at https://reliefweb.int/

[15] Ibid

over land on the other.[16] The city has still only one main tarmac road that connects the city and its port to the south of the country. The port area, Bossaso's most important asset, is seriously deteriorating due to an increasing number of trucks, which transport goods from the port and in & out of town, an overall increase of cars and trucks and the total absence of traffic management, parking or loading and offloading options for the heavy vehicles. The port area, the main tarmac road and other major roads are overwhelmingly exhausted by congestion through the increased traffic and blocked by parking trucks. They are in poor condition with no pavement and potholes and irregular road-widths. The access to and from the port and to all businesses in town is chaotic and not functional, characterized by a confusing system of narrow alleys filled with informal structures and with no sufficient and clear access from the main tarmac road.[17]

Solid waste management is a rising concern that has engulfed all metropolitan centres across Somalia, owing to the country's volatile past, particularly in the previous quarter century and Bosaso faces similar challenges.[18]

Health Services: While there has been positive progress in Somalia's health sector, the Puntland still faces enormous challenges especially in the delivery of better health services as envisaged in the 'Somali Compact' and the 'New Deal Initiative'. The sector is particularly challenged by, among others, shortage of professional staff to provide better healthcare services.[19]

Education: The protracted nature of fragility, vulnerability, conflict and crisis in Somalia has had a profound effect on the education system. The problem is compounded by humanitarian crisis; on-going insecurity; weak governance systems and limited capacities to deliver effective social services such as education, lack of teaching and learning materials; and lack of qualified teachers with qualified female teachers being the scarcest.[20]

Telecommunication: There is no telecommunications infrastructure on site but there is mobile phone network available in the area.

Storm and Water Drainage: There are no elaborate storm water drainage structures within the sub project area. This has resulted to area flooding.

[16] Upgrading and Extension of Major Urban Roads and Establishment of a Lorry Terminal in Bossaso Town Puntland Region, Northeast Somalia accessed at https://staging.unhabitat.org/content.asp?cid=8409&catid=577&typeid=61
[17] Ibid
[18] Environment and Health implication of solid waste accessed at https://journalppw.com/index.php/jpsp/article/download/1510/794/1733
[19] Improving access to health and service delivery in Bosaso and Gorowe towns and its environs in the Puntland state of Somalia accessed https://weblog.iom.int/improving-access-health-and-service-delivery-bosaso-and-garowe-towns-and-its-environs- puntland-state-somalia
[20] Education Sector Programme Implementation Grant (ESPIG) Program document accessed at https://www.globalpartnership.org/node/document/download?file=document/file/2020-9-Somalia%20Puntland- Program%20Document.pdf

Access to Water and Electricity: The sub project Bosaso Regional Hospital is supplied by Piped water from town council water supplier services. The water is not stored but distributed to Operation Theatre (OT) and adjacent facilities. The existing water well is working and pumped to an elevated R.C water tank (40m3) and RFP tanks roof mounted(16m3). Due to structural integrity issues of the existing Elevated RC water tank will be demolished and re constructed to meet the mechanical engineer recommended standards. The sub project is connected to the grid - city power supply (PEPCO). The monthly cost of city power from PEPCO is averagely US$ 12,000, The power supply consists of Solar PV + Grid power, and a backup generator. The power supply is centralized within the generator house 135 kVA genset for main Hospital full load backup generator and 90 kVA Genset for Specialized areas backup generator. There are several decentralized solar PV systems available for both the laboratory and the stabilization centre.

4. PROJECT DESCRIPTION

4.1 Bosaso Regional Hospital

The survey centres on Bosaso's pivotal healthcare institution, Bosaso Regional Hospital, situated in Bosaso City, a vital component of the Puntland State of Somalia. Established in 1930 during the Italian colonial era, the hospital stands as a crucial referral centre for the region, extending its services to residents from neighbouring areas. Currently under the management of the Ministry of Health, Puntland State of Somalia, the hospital encompasses ten departments, including surgery, maternity care, paediatric health, nutrition, outpatient and inpatient treatment, a laboratory, pharmacy, and facilities for dialysis patients. Continuous interventions have been implemented over the years, perpetuating its growth and functionality.21

The proposed topographic survey area is situated within the historic quarter of Bosaso City, Bari region, Puntland. While primarily catering to the Bari region, the hospital's impact extends to adjacent regions, providing 24-hour free healthcare services for all residents of Puntland. The geographical location can be visualized through the Google Earth image provided in the survey map as shown in Figure 7 below.

The land under which the facility is domiciled belongs to the Department of Medical Services, Ministry of Health and Human Services. All works will be undertaken on the existing hospital site and its premises and there will be no land acquisition or resettlement impacts. A perimeter wall currently defines the land boundaries.

Figure 7 Location of the site

The site has several facilities providing health care services as shown in Table below

.

[21] See UNOPS, Bosaso Hospital Project, Design Brief, 2024.

Table 1 Facilities providing health care services on the site

1. HIV & Aid 2. Outpatient department 3. Laboratory 4. Administration offices 5. Blood bank 6. Power room 7. Cold chain 8. Battery room	9. Maternity, Surgical and Medical Departments 10. OT and X-ray Department 11. ICU 12. Dialysis and Neonatal Care Unit 13. Staff House 14. Emergency building 15. Pharmacy and Equipment storage 15. b Kitchen	16. Kitchen SC and Paediatric Department (G+1) 17. Lab Covid Center 17b.Laundry & Toilets 18. Isolation Center 19. Mortuary Rooms 20. Security Room 21. Incineration Pit 22. Water tanks and well 23. Fence

Figure 8 Bosaso Hospital

Figure 9 Existing Facilities of Bosaso Hospital

Topographical Surveys of the site

The detailed topographical survey as captured in **Error! Reference source not found.** below was carried out and the contour map and report prepared.

Figure 10 Bosaso Hospital Topographic Survey map

The hospital currently benefits from well-functioning water and electricity utilities connected to the city's main grid. The proposed sites for improvement seamlessly integrate into these existing grids. The hospital's sewage system is in satisfactory condition, requiring no immediate attention. The structural layout of Bosaso Hospital exhibits a lack of organization in its original design. Although the main building remains in good condition, subsequent constructions over the years lacked proper planning, resulting in a congested environment with no available space. This congestion, coupled with haphazard additions, restricts the possibility of incorporating new departments. Key challenges revolve around the disorganized layout of the hospital, with densely packed structures impeding accessibility. These structural constraints hinder the ease of movement for both patients and service providers, posing a significant challenge to the overall functionality of the hospital. Addressing these challenges is paramount for enhancing the hospital's efficiency and ensuring a conducive environment for healthcare delivery.[22]

UNOPS conducted detailed structural integrity assessments on 23 structural components of the hospital and found some under the risk of collapse while others were found to be structurally

[22] See UNOPS, Bosaso Hospital Project, Bosaso Topo Survey Report, 2024.

safe as per the structural assessments report.[23]Additionally electromechanical assessments were conducted and found that there is need for the expansion and relocation of the solar system, drainage system problem, supply of new and higher capacity generator and changing the tube light fittings and CFL lights to energy saving led lamps.[24]

4.2 Proposed Facilities

The proposed scope of works under phase 1 will include demolitions and relocation of the solar plant, new constructions and renovations, mechanical work and equipment and furniture procurement and installation. This will specifically entail building of a new hospital facility after demolition of an old, outdated hospital structure that has integrity issues. Structures to be demolished include VCT, OPD, LAB, Admin Office, Blood bank, External Paving, Elevated RC water tank. The sub project scope of works will also include relocation of the Solar plant and dismantling its supporting structures. New double story building will include the following departments: OPD, XRAY, Lab, RCH, VCT, and Administration offices. The sub-project will also involve renovation of an OT roof cover and the construction of Septic tank and water tanks.

No land and resettlement impacts are anticipated because the proposed site is on land that has an existing health care facility. Community consultations have further shown that there are also no encroachments on the land. The site is secured and has a perimeter wall along the land boundaries.

Furthermore, the sub-project will engage local personnel for manual removal of non-structural elements such as interior walls, doors, windows, to manually collect and segregate small debris, to operate water spray systems to suppress and for safety inspection and enforcement and other labour requirements. These local labourers will be coming from within the local community and therefore there will be no need for the establishment of a workers' campsite. The engineers and supervisors will likely be from the city and not require accommodation. There will be a site office within the designated project area but there will not be any need for a workers' camp.

The below drawing depicts the master plan for the proposed general hospital:

[23] See UNOPS, Bosaso Hospital Project, Structural Assessment Report, 2024
[24] See UNOPS, Bosaso Hospital Project, Electromechanical Assessment Report, 2024

Figure 11 Hospital General layout plan

The design includes the meeting of all needs of women, girls, and persons with disabilities, as per UNOPS Gender Equality and Social Inclusion (GESI) Guidelines.

4.3 Applicable Design Standards and Codes of Practice

The design adopted the following codes, standards and guides. The references are used in a complementary manner. Where requirements of two or more codes or standards are found to conflict, the more stringent of them is adopted for the purpose of this project.

Architectural Standards and Codes

- International Health Facilities Guidelines - Version 6th May 2016
- NHS Standards Volumes 1-10(2014)
- UNOPS Design Planning Manual for Buildings
- Eurocode 1-8 and relevant annexes
- Relevant Code of Practice (CP)

Structural Standards and Codes

- UNOPS Design Planning Manual for Buildings,
- EN 1990 2002 Eurocode - Basis of structural design

- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions - Densities, self-weight, imposed loads for buildings
- EN 1991-1-4:2005 Eurocode 1: Actions on structures Part 1-4: General actions Wind actions 19
- EN 1992-1-1 2004 Eurocode 2: Design of concrete structures (EN 1992) Part 1-1: General rules, and rules for buildings
- EN 1993-1-1 2005 Eurocode 3: Design of steel structures (EN 1993) Part 1-1: General rules, and rules for buildings
- BS 5268-2: 1996 Structural use of timber — Part 2: 1996 Code of practice for permissible stress design, materials and workmanship
- EN 1996-1-1:2005 Eurocode 6: Design of masonry structures — Part 1-1 General rules for reinforced and unreinforced masonry structures
- EN 1992-1-1 2004 Eurocode 2: Design of concrete structures (EN 1992) Part 3: Liquid and containing structures
- Manual for Design of Reinforced Concrete Structures to Eurocode 2 by IstructE/ICE
- Earthquake Risk in Africa: Modified Mercalli Scale, 2007" by UNOCHA
- Other relevant references.

Mechanical Standards and Codes

- UNOPS Design Planning Manual for Buildings
- Regulations of the Government of Somalia
- Chartered Institute of Building Services Engineers (CIBSE) Design Guides
- NFPA 10: Standards for Portable Fire Extinguishers
- NFPA 14: Standards for Hose Systems
- 2013 ASHRAE Pocket Guide for Air Conditioning, Heating, Ventilation and Refrigeration
- ASHRAE 62.1: Ventilation for Acceptable Indoor Air Quality
- HVAC Engineers Handbook
- HVCA DW 172 & DW 144
- ASHRAE 170-2017: Ventilation of Health Care Facilities

Electrical Standards and Codes

- UNOPS Design Planning Manual for Buildings
- Relevant IEC Standards
- The National Fire Protection Association (NFPA) - Fire Safety
- EN BS7671- IET Wiring Regulations British Standards for Electrical Installations.
- IEEE Photovoltaic Standards 2004 Eurocode 2: Design of concrete structures (EN 1992) Part 1-1: General rules, and rules for buildings
- EN 12464-1:2021 - Lighting of workplace

4.4 Design Functions

The design functions of the new building to be constructed after demolition of outdated structures with low structural integrity will encompass Accidents & Emergency, Operating Theatre (OT), Intensive Care Unit for OT, X-ray, Pharmacy. Any functions not listed below will

be provided within the current existing facility e.g. functions such as laboratory services already exist within the hospital compound and are captured in the as built drawings.[25]

Figure 12 Detailed ground floor plan layout for Bosaso hospital

Figure 13 Detailed upper floor plan layout

[25] See UNOPS, Bosaso Hospital Project, Built Drawings, 2024

Figure 14 3D view of concept design

The building is designed in a way that it allows for future expansions. The facility will be provided with:

Structural Works

- New Building construction to host VCT, OPD RCH, Laboratory, X-Ray and administration offices.
- Elevated Water Tank demolition and re-construction of appropriately sized tanks as per mechanical recommendations

Civil Works

- Rainwater harvesting System to be included in the new construction building construction.
- Pavement demolitions and construction of paved areas for new construction
- Drainage works for the new construction to the road.

Mechanical works

- Water Source- Centralize water sources, pumping and storages in one area and distribute to various blocks via gravity. Rehabilitation of the water wells and provide new covers as per CE advise.
- Water Distribution - Rehabilitation and resizing of pipe distribution from the high-level tanks to the various buildings. Bury pipes for longer lifespan. New external reticulation.
- Water Treatment- Test existing water from city council to provide appropriate Desalination units for compliance to WHO standards. Purified water to be piped to critical areas.
- Hot Water - Introduce solar water heating systems for the new building units.
- Sanitary fittings- Provide proper sanitary fittings for new construction. Change the scrubbing sink in the OT to proper standard of sanitation.
- Rainwater Drainage- Provide gutters and downpipe for proper drainage. Provide rainwater harvesting in the new buildings.
- Fire Protection- Provide appropriate fire protection systems.
- Ventilation - provide natural ventilation in the new building units.
- Air Conditioning - Provide appropriate AC in the new building units.
- Medical Gases - Provide internal medical gas piping in OT and ICU and locating central area for gas cylinders.

- Laundry Equipment - New laundry equipment

Electrical works

- Renovate the powerhouse to accommodate the generators and the Low Voltage Power Distribution Board (LVDB), along with all necessary accessories.
- Power reticulation using existing cables needs to be redone with a new LVDB in the powerhouse (generator house) to the various distribution boards within the building blocks.
- Design and install a fire alarm detection system for the new block and the powerhouse
- Provision for Data access points.
- Relocate the solar PV panels to the roof of the operating theatre (OT).
- Quick Fix: Install new power supply and protection devices for the specialized equipment in OT, Maternity etc.

4.5 Project Activities

Design Phase: The design phase included the following activities:

- Technical assessments i.e. the site assessments, structural integrity assessments, geotechnical studies, surveying, environmental and social impact assessments.
- Preparation of technical assessment reports to inform the design review process and tender documents.
- Stakeholder mapping and Engagement
- Design of a layout plan
- Detailed Design (architectural, civil, structural, mechanical & electrical) of Bosaso regional hospital.

Demolition and Construction Phase: The phase will mainly include the following activities:

Preliminaries:

- Management and disposal of material generated from demolition activities,
- Management of rubble (solid waste) from the existing buildings,
- Potential impacts to patients and health care workers who will be using the existing facility
- Installation of temporary site offices, toilets and space for stores for the workers.
- Provision of water and electricity within the site for the duration of the contract.
- Clearing up of the site.
- Demolition of buildings with low structural integrity i.e. Elevated RC water tanks, external pavements, Solar PV
- Disposal of the material from the demolition to the disposal site.
- Levelling the ground in preparation for the new construction.
- Equipment and furniture procurement
- Excavation works for a new foundation.
- Backfilling.
- Foundation works for the stone strip foundation.
- Structural works (strip reinforced concrete foundations; ground beams and slab on grade; reinforced concrete columns and walls; reinforced concrete solid slabs)

- External walling
- Doors, windows and grills; complete with all accessories
- Installation of Rainwater collection system
- Soil, waste and vent pipe for drainage
- Electrical and low current system
- Equipment and furniture Installation
- Site structural components related to the external works, including water tanks and septic tanks, generator block, maintenance block, waste disposal block, guards room block, internal roads and paving and storm water drainage channels.
- Renovation to replace the roof for the operation and theatre.
- Ventilation and air conditions
- Firefighting system
- Cabling works.
- Installation of equipment and furniture
- Testing and commissioning.

Outdated structures with structural integrity issues will be demolished to pave the way for renovation and space for a state-of-the-art health facility. The basic material requirements to undertake the renovation and construction of the hospital Unit are building sand, stone aggregates, Solar PV, cement, concrete blocks, plumbing accessories etc. Labor management requirements and risk mitigation measures listed below also apply for this process. For building sand and aggregate, the contractor shall have the responsibility to source for a legal site where sand can be extracted from and this shall be approved by the engineer prior to engagement, in consultation with the local authority and any other relevant government institutions. The rest of the material can easily be sourced from block making sites. Plumbing materials shall be procured locally unless this proves a challenge; the material can be sourced from other towns. Procuring materials locally is highly recommended as it will spur the economic growth of the project area while also reducing the carbon footprint related to the project implementation.

Operational Phase: The operational phase activities will include:

- Training of the health workers in the management of generated clinical and other waste and recycling opportunities.
- Establishment of Standard Operating Procedures for the hospital, including emergency response procedures.
- Ensuring adherence to OHS standards for the workers
- Operation of the hospital in compliance with the Infection Control and Medical Waste Management Plan (ICMWMP) (See Project ESMF)
- Management of community exposure to health problems arising from ineffective infection control and inadequate healthcare waste management.
- Security of premises
- Water resource use.

5. ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

5.1 Positive Impacts Related to the Sub Project:

The health sector has been overstretched due to the population growth rate that is exponential as a result population influx in towns, increased climate sensitive diseases, and the demand for well- equipped medical facilities by patients. This has led to increased mortality rates among the expectant mothers and those suffering from chronic illness and other climate sensitive diseases. Renovation and reconstruction of a new state of art health facility (Bosaso regional health centre) in Bosaso will greatly impact the local community increasing access to health care. Anticipated positive will include but not limited to:

- Increased access to quality health care for the community
- Improved access to medical health care services for the local community
- The project will spur economic growth as a result of local sourcing of materials and patient influx in the hospital for treatment.
- The project will also improve living standards of the local community as a result of local sourcing of labour semi-skilled, unskilled and skilled where possible.
- Water quantity and quality in the hospital will increase due to installation of water harvesting systems and desalination of water to critical units of the hospital.
- Renovation of OT roof will assist stabilize external temperatures.
- Landscaping and greening around the constructed building will assist sequestrate carbon from the atmosphere while improving the aesthetic area of the hospital.
- Project technical team working closely with the community skilled practitioner will result in knowledge transfer increasing the technical capacity of the community members for future engagements.
- Storm water will be managed as the area has been flooding; introduction of storm water infrastructure will greatly reduce flood related risks.

4.2 Negative Impacts Related to the Sub-Project:

Any project to be implemented if not critically assessed and analysed on the potential environmental and social risks and impacts associated with it, can have adverse impacts both on the environment and the local community in the sub-project area. The activities associated with the demolition and construction of the main hospital building and the auxiliary buildings will likely generate adverse site-specific risks and impacts, including:

Design Phase:

- Inadequate consultation and stakeholder engagement.
- Exclusion of vulnerable and marginalized groups during stakeholders' engagement
- Lack of access to GRM

Demolition and Construction Phase:

- Management and disposal of material generated from demolition activities,
- Management of rubble (solid waste) from the existing buildings,
- Soil and Groundwater contamination during demolition

- Increased level of dust, noise and vibration from moving of construction vehicles and machinery,
- Increased level of air pollution through operation of heavy equipment and vehicles for construction,
- Fall of material or bricks
- Sourcing of materials, an activity which may degrade the surrounding environment,
- Use of existing borrow pits which may further deteriorate the surrounding environment
- Increased level of dust, noise and vibration from moving of construction vehicles and machinery,
- Increased level of air pollution through operation of heavy equipment and vehicles during construction,
- Generation and improper management of construction waste,
- Security for project operations including the protection of project workers and beneficiaries,
- Labor influx and associated Gender Based Violence (GBV) risks and Sexual Exploitation and Abuse/Sexual Harassment,
- Risks associated with labor and working conditions and management, e.g., child labor, forced labor and improper Remuneration of the project workers, extended working hours
- Occupational health and safety of workers, including risk of slips and trips; working at height; working without proper PPEs; working in confined spaces; work with electrical equipment; working in hot environment,
- Transport/road hazards,
- Challenges in access to beneficiaries for meaningful stakeholder and community engagements as well as grievance redress and monitoring,
- Disruption in healthcare services for the current and potential patients,
- Traffic risks during construction,
- Potential impacts to patients and health care workers who will be using the existing facility during renovations and demolitions,
- Stormwater (build stormwater discharge system)
- Hot climate: narrow windows to reduce solar radiation with double glazed aluminium profiles)
- Security for project operations including the protection of project-affected persons.

Operational Phase:

- Community health and safety risk: water and sanitation safety, life and fire safety, protection from infectious disease.
- Potential impacts to patients and health care workers who will be using the existing facility
- Waste management
- Medical wastes, wastewater and air emissions leading to contamination of th e environment and the workers,
- Risk of infection among health professionals,
- Risk of infection to the handlers
- Physical hazards (for example, handling of sharps),
- Electrical and explosive hazards,

- Fire
- Ergonomic hazard; OHS hazards related to healthcare and non-healthcare daily operations,
- Poor sanitation conditions at the facility leading to discomfort and poor aesthetic values
- Community health and safety: carriage of healthcare waste through public streets can be a risk in case of an accident or mare spill of health care waste.
- Lack of access for vulnerable groups, including women, disabled, minorities
- Exclusion from ongoing consultations of vulnerable groups
- Risks of GBV/SEA for persons with disability and other vulnerable groups
- Risks related to incinerator operation, increased air emissions.

4. RISKS AND IMPACTS AND MITIGATION MEASURES

The Table 2 below lays down a phase out framework by identifying the specific adverse environmental and social risks and impacts anticipated of the sub-project and the respective mitigation measures required to reduce or eliminate the associated risks and impacts. This matrix forms the core of the ESMP, as it clearly maps out the anticipated social and environmental impacts, provides robust mitigation measures, the party to address the risk, the timeframe of implementation, the monitoring indicator as well as the cost for compensation/ offsetting the residual impacts.

Table 2 ESMP Table

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
ESS1 Assessment and management of Environmental and Social Risk and Impacts						
Demolition and Construction Phase						
	Risk of poor implementation of the respective mitigation measures against the negative impacts identified in this ESMP	Enhance capacity of all implementers on E&S risk assessment and mitigation measures through training sessions Provide capacity building opportunities to the E&S teams working on the subprojects on understanding and implementing assessment and management requirements of the WB's ESF and WBG's EHSGs. Provide H&S training to the construction workforce (including subcontractors, temporary workers, and drivers). Raise awareness of workers regarding the implementation of the ESMP tailored to the project scope, through toolbox talks and other platforms.	Implementation: UNOPS Monitoring: PCIU	500 USD for logistics	# of awareness sessions provided to workers # of training sessions provided to project team	Monthly PCIU budget
	ESS 2: Labour and Working Conditions					

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	Lack of implementation of mitigation measures	Provide H&S training to the workforce Raise awareness of workers regarding the implementation of the ESMP tailored to the project scope, through toolbox talks and other platforms	UNOPS /Contractor Monitoring: PCIU	500 USD for logistics	# of H&S Training session # of awareness raising session or toolbox talks	At the beginning of construction activity UNOPS budget
	Risk of insecurity affecting project workers	PCIU to provide actions according to the Project Security Management Framework and UNOPS adopt actions and cascade them to contractors. Contractors to implement security risk management mitigation measures according to the SMF.	PCIU / UNOPS / Contractor	Costs for security risk implementation as part of contractor budget	# Security Risk Assessments updated # Records of SMPs # Records of security incidents	Prior to commencement of activity and during construction activities
	Labor and working conditions are not in compliance with WB and Somali legislation	Implement and monitor the labour management procedures (LMP) and ensure each employee has a contract or defined terms of engagement. Listing of all staff and titles, new hires and departures. Site visit and review of records, major findings, and actions taken by contractor, engineer, or others, including authorities—to	Implementation by UNOPS/contractor Monitoring by PCIU	Incl. in contractor staff costs Cost of monitoring is included in the project/ operational cost.	Availability of register Availability of logbook showing site visited and actions taken	Monthly Cost of monitoring is included in the project/ operational cost

		include				

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		date, inspector or auditor name				
	OHS risks, including impacts of dust, noise, vibration, extreme temperatures, struck by objects, slips and trips, working at height, and working in confined spaces	Dust: Watering the soil to dampen the surface to be used to reduce dust Wear PPE (including safety glasses and gloves and dust masks). Use dust suppression techniques, such as water spraying on demolition sites and debris. Use dust barriers or screens around the site to contain airborne particles. Ensure all workers wear appropriate personal protective equipment (PPE), like masks and respirators Noise: Provide hearing protection where necessary (when sound level over 8 hours reaches 85 dB(A)) Use of acoustic insulating materials, isolation of noise source, and other engineering controls No noise from machine breakers if used during evening hours	Contractor PCIU E&S specialist to monitor adherence to requirements	Incl in Contractor budget	Frequency of watering and number of dust masks provided to staff and being used % of workers that have been provided with hearing protection # of equipment with potential to cause vibrations fitted with vibration-dampening pads or devices # of temporary shelters available # of training for industrial vehicle operators conducted # of rest and	Monthly reports PCIU budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	Risk of labor influx on the limited resources and increase of social ills and GBV cases	All workers engaged at any point in the project to sign CoCs. (see Annex 3) Dedicated reporting channel for victims through Project GRM Provide GBV awareness training to workers	Contractor PCIU	Incl in contractor staff costs / PCIU costs	% of workers that signed COCs # of labor influx management plan # of training sessions provided on GBV	At commencement of project activity and throughout the project cycle.

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	Discrimination against women and vulnerable groups in employment	Contractor to develop recruitment and retention policies that enable fair working conditions and women's safe and equitable participation. Contractor to track of the vulnerable persons engaged in the project. Comply with LMP	Contractor Monitoring: UNOPS	Incl. in staff costs	Record of contractors' recruitment and retention policies available # of vulnerable groups engaged in the sub-projec6	At start of project Quarterly UOPS budget
	Delayed payment or underpayment of workers, leading to complaints and conflict	Ensure provision of timely and equitable payment system Preparation and implementation of Local labor management plan Ensure provision of an effective workers' GRM Ensure information on workers' GRM is provided	Contractor Monitoring: UNOPS	Incl. in contractor staff costs	Records of recruitment and retention policies available # of women and vulnerable groups employed in comparison to the total number of people employed in the activity	Monthly UNOPS budget
	Child and forced labor resulting in employing of underage children and human	Implementation of GRM to ensure their voices / complaints are heard Contractor to maintain staff records, ID copies	Contractor / PCIU Monitoring: UNOPS	Included in contractor staff costs	# of workers' grievances filed # of GRM cases filed Record of all workers IDs and	Throughout project implementation UNOPS budget

	trafficking					

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		Minimum age for workers to be set at 18 years Regular monitoring inspections			contract or consent to work. Number of workers' grievances filed and/or of GRM cases filed, resolved or pending Records of cases of child and forced labor reported	
	Risk of SEA/SH among workers	All workers to sign CoC. Dedicated reporting channel for victims through Project GRM Provide gender segregated closet toilets for workers Provide GBV awareness training to workers	Contractor / PCIU Monitoring; UNOPS	Included. budget of PCIU and contractor	% of workers that signed COCs SEAH risks management plan Number and records of training sessions provided # gender segregated toilet facilities at the work place	Monthly UNOS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
ESS 3: Resource Efficiency and Pollution Prevention and Management						
	Lack of management and disposal of material generated from demolition activities, including rubble / waste management	Contractor to provide Waste Management Plan for site, including specifications on waste disposal. Reuse and recycling of the waste generated should be prioritized Ensure disposal of generated solid waste at designated and authorized disposal site in consistence with the local and international requirements (see WBG General EHS Guidelines) [1], such as: Institute good housekeeping and operating practices - including inventory Control to reduce the amount of waste Institute procurement measures that recognize opportunities to return usable materials Implement stringent waste segregation to prevent mixing hazardous and non-hazardous wastes Identify potentially recyclable materials Disposal at permitted facilities specially designed to receive waste	Contractor Monitoring: UNOPS	Incl in contractor budget	Records of amount of solid waste re-used, recycled, disposed, where and when Records of waste tracing sheets from the premises to the disposal sites Grievances filed related to Waste management plans Report on implementation of the waste management	Quarterly UNOPS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		Provide on-site or off-site transportation of waste to prevent or minimise spills, releases and exposure to employees and public Ensure mechanisms exist for community to bring forth any complaints/feedback concerning the waste disposal by the contractor – Project GRM Carry out disposal of solid waste in a manner that does not negatively affect the drinking water sources, the existing waste management system in the area, local routes, and general aesthetic value of the area.				
	Air quality impacts from construction machinery and material transport	Install emission control devices, such as diesel particulate filters or oxidation catalysts on older machinery Ensure equipment or vehicle is properly maintained to operate efficiently and emit fewer pollutants	UNOPS/Contractor	Incl. in contractor budget	Availability of emission control device Record of maintenance is available	Throughout construction phase
	Risk of water consumption	Manage water consumption, including through - On-site water recycling - Rainwater harvesting	UNOPS/Contractor	Incl. in contractor budget	Availability of emission control device	Throughout construction phase

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		Conduct regular inspections to identify and fix leaks in pipes, hoses and tanks			Record of maintenance is available	
	Prevention of spills during refuelling	Apply spill containment trays Inspect and maintain fuel hose and connection to prevent leaks.	UNOPS/Contractor	Incl. in contractor budget	Availability of emission control device Record of maintenance is available	Throughout construction phase
Operational Phase						
	Risk of medical wastes, wastewater and air emissions leading to contamination of the environment and the workers	Ensure waste is segregated at point of generation to the extent possible for easy handling Ensure the segregated waste is appropriately packaged in colored containers using standard clinical waste color codes for respective waste type, and stored for final disposal consistent with the WHO standards.[26] Sensitisation of workers on sustainable medical waste management practices	Bosaso Regional Hospital administration Monitoring: MoH	Incl. budget of HCF	# of labelled secure bags for generated medical waste waste management plan prepared # of wastewater and air emissions analytical results available # of sensitisation exercises conducted	Quarterly MoH Budget

[26] https://www.who.int/publications-detail-redirect/9789241548564

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		Rigorously segregate waste so that no PVC (IVs, etc.) waste is incinerated and instead directed to the appropriate waste bag for appropriate disposal				
	Risks of physical hazards (for example, handling of sharps); Electrical and explosive hazards; Fire; Chemical use OHS hazards related to healthcare and non-healthcare daily operations	Ensure a local risk assessment (identification of risks at work) is conducted for each process step, that is, from sample collection to disease isolation to identify specific hazards and for each identified risk, appropriate risk control measures must be defined. Provide safety training in the management of hazards identified other than those related to sample handling Provide review of Infectious Preventive Control training for the health care facility staff, including Health Care Workers charged with the responsibility to handle and dispose of the medical waste Ensure conducting regular fire drills All fire and life safety measures	Bosaso Regional Hospital administration Monitoring: MoH	Incl. budget of Hospital	# Local risks assessment conducted every year and specific hazards identified for each and way forward # of regular safety training provided # of reviews of training provided # of fire drills conducted # of OHS incident reports	Monthly MoH budget

		follow applicable good practice standards such as those under ESS4, and the IFC EHSG for Fire Prevention and Life Safety (see Annex 6)				
	Risk of infection among health professionals	Ensure appropriate training on Infection Prevention and Control for healthcare workers and other	MoH	Incl. budget of MoH	# of training sessions held and workers who has	At start of the clinical operations

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		staff. WHO prescribed protocols for personal protection of healthcare professionals is to be enforced at all times Ensure training in Health care waste management systems, which enable health care waste to be managed responsibly, without harming the community or the environment.			been trained # of protocols available at location	MoH budget
	Risk of GBV/SEAH among workers	All workers to sign CoCs (see Annex 3). Dedicated reporting channel for survivors through Project GRM Provide GBV awareness training to workers	Bosaso Regional Hospital administration Monitoring: MoH	Incl. budget of MoH	% of signed COCs GBV/SEAH road map generated # of training sessions provided	Monthly MoH budget
	OHS risks for hospital workers	Provision of adequate PPE Regular training for workers on workplace safety, Preparation and implementation of health and safety plan	Bosaso Regional Hospital administration	Incl. budget of MoH	# of training sessions provided # of health and safety plans available	Monthly MoH budget
ESS 3: Resource Efficiency and Pollution Prevention and Management						
Demolition and Construction Phase						

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	Lack of management and disposal of material generated from demolition activities, including rubble / waste management	Contractor to provide Waste Management Plan for site Reuse and recycling of the waste generated should be prioritized Ensure disposal of generated solid waste at designated and authorized disposal site in consistence with the local and international requirements (see WBG General EHS Guidelines)[1], such as: Institute good housekeeping and operating practices - including inventory Control to reduce the amount of waste Institute procurement measures that recognize opportunities to return usable materials Implement stringent waste segregation to prevent mixing hazardous and non-hazardous wastes Identify potentially recyclable materials Disposal at permitted facilities specially designed to receive waste Provide on-site or off-site transportation of waste to prevent	Contractor Monitoring: UNOPS	Incl in contractor budget	Records of amount of solid waste re-used, recycled, disposed, where and when Records of waste tracing sheets from the premises to the disposal sites Grievances filed related to Waste management plans Report on implementation of the waste management	Quarterly UNOPS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		or minimise spills, releases and exposure to employees and public Ensure mechanisms exist for community to bring forth any complaints/feedback concerning the waste disposal by the contractor – Project GRM Carry out disposal of solid waste in a manner that does not negatively affect the drinking water sources, the existing waste management system in the area, local routes, and general aesthetic value of the area.				
	Poor sanitation facilities and sanitation conditions at work site	Provide proper water closet toilet facilities at work sites. Do not allow water to run out in toilets. Ensure liquid waste is treated before release into the external environment. Maintain all toilets in clean and sanitary condition. Do not allow site workers to defecate in the open spaces on the	Contractor Monitoring: UNOPS	Budget of contractor	Number of water closet toilet facilities available # Incidents of toilets leaking # liquid waste treatment mechanisms in place Number of Toilets in good working condition during	Monthly UNOPS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		site or in its vicinity. Add the use of sanitation arrangements in toolbox talks			inspections Records of toolbox talks where Sanitary arrangements was covered	
	Risk of pollution on surface water and groundwater sources From waste generated during demolition and construction phases	Through accurate estimation of the sizes and quantities of materials required, order materials in the sizes and quantities they will be needed, rather than cutting them to size, or having large quantities of residual materials. Ensure that construction materials left over at the end of construction will be used in other projects rather than being disposed of. Ensure that damaged or wasted construction materials will be recovered for refurbishing and use in other projects Donate recyclable/reusable or residual materials to local community groups, institutions and individual local s or home	Contractor Monitoring: UNOPS	Incl. in contractor staff costs	Volume of construction materials left over at the end Volume of waste at construction site is disposed of appropriately # of waste bins available at construction sites # of waste related complaints	Throughout project implementation UNOPS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		owners. Dispose waste more responsibly by dumping at designated dumping sites or landfills only. Waste collection bins to be provided at designated points on site.				
	Air quality impacts from construction machinery and material transport	Install emission control devices, such as diesel particulate filters or oxidation catalysts on older machinery Ensure equipment or vehicle is properly maintained to operate efficiently and emit fewer pollutants	UNOPS/Contractor	Incl. in contractor budget	Availability of emission control device Record of maintenance is available	Throughout construction phase
	Risk of water consumption	Manage water consumption, including through - On-site water recycling - Rainwater harvesting Conduct regular inspections to identify and fix leaks in pipes, hoses and tanks.	UNOPS/Contractor	Incl. in contractor budget	Availability of water recycling Availability of inspection record	Throughout construction phase

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	Prevention of spills during refuelling	Apply spill containment trays Inspect and maintain fuel hose and connection to prevent leaks.	UNOPS/Contractor	Incl. in contractor budget	Availability of containment trays Availability of inspection record	Throughout construction phase
	Hazardous material storage and disposal	Empty paints cans store in closed drums or isolated area from soil and water at Contractor store, then handle as recycled metal scrap. Store any chemicals and hazardous waste at designated areas, insulated from the ground Ensure trained personnel handle hazardous chemicals and wastes.	UNOPS/Contractor	Incl. in contractor budget	Availability of material safety data sheets in areas where chemicals are used or stored Availability of eye wash stations Training records on handling of hazardous chemicals	Throughout construction phase
Operational Phase						
	Stormwater	Build stormwater discharge system	Contractor Monitoring: UNOPS	Contractor budget	Availability of stormwater discharge system	During construction phase UNOPS budget
	Hot Climate	Build narrow windows to reduce solar radiation with double glazed	Contractor Monitoring: UNOPS	Contractor budget	Availability of narrow windows	During construction

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		aluminium profiles				phase UNOPS budget
	Risk of medical wastes, wastewater and incinerator air emissions leading to contamination of the environment and the workers	Rigorously segregate waste so that no PVC (IVs, etc.) waste is incinerated and instead directed to the appropriate waste bag for appropriate disposal Implement the ICMWMP (see Project ESMF)	HCF	Incl. budget of HCF	# records of PVC waste segregated Report on implementation of the OCMWMP.	Quarterly
	Impacts of air emissions from incinerator	Conduct preventative periodic maintenance of incinerator Ensure compliance with national standards and the Stockholm Convention's Best Available techniques (BAT) and Best Environmental Practice (BEP) Do not use single-chamber, drum and brick incinerators Operate through qualified personnel only Ensure auditing and reporting systems Conduct routine inspections of	Bosaso Hospital Administration Monitoring: MoH	Hospital budget	# of maintenance events # of routine inspections	During operational phase MoH budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		the furnace and air pollution control systems Implement ICMWMP (see Project ESMF)				
ESS 4: Community Health and Safety						
Demolition Construction Phase						
	Increased GBV/SEAH cases and risks of sexual exploitation and abuse or sexual harassment, such as requests for sexual favors by project workers	GBV awareness sessions for community members GBV awareness sessions for workers Engage a dedicated service provider to support oversight and management of these risks Workers to sign COC Provide continuous awareness on GRM for SEA/SH channels to all workers Implement the SEA/H action plan.	PCIU	Incl. in PCIU staff and travel costs	Records of GBV awareness sessions to staff and the community members % of workers that have signed CoC # of GBV-related incidents reported	Monthly PCIU budget
	Spread of communicable diseases (Sexually Transmitted Diseases SIIs,	Periodic community and workers awareness sessions on communicable diseases including HIV/AIDS	Contractors Monitoring: UNOPS	Include. in PCIU staff costs and contractor budget	# of community sensitization % of workers that have signed CoC	Monthly UNOPS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	HIV/AIDS, etc..) between workers and the community	Provide hand washing stations for workers Provide mosquito nets for workers			# of related complaints filed in GRM	
	Exposure of community members to physical hazards on project sites.	Undertake safety precautions to address safety hazards for the nearby community, Sensitize the local community and inform them about construction risks and the restricted access to the site Restrict access to construction site through signage Remove hazardous conditions on site that cannot be controlled effectively with site access restrictions, such as covering openings to small confined spaces, ensuring means of escape for larger openings Lock storage of hazardous material	Contractor Monitoring: UNOPS	Included. in Contractor budget	Number of sensitization sessions measures for communities Number of signage available around construction site % of small openings that have been covered % of larger openings that have an escape opening Number of locked storage facilities for hazardous materials	Throughout activity UNOPS budget
	Increased level of dust, noise and vibration from	High level maintenance of the project vehicles and equipment as per the manufactures	Contractor Monitoring: UNOPS	Included. in Contractor budget	% of vehicles adhering to maintenance	Throughout the project cycle

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	moving of constructio n vehicles and machinery	specifications to reduce air, water and soil pollution. Selecting equipment with lower sound power levels Planning activities in consultation with local communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance. Spray work area with water to avoid dust Install no hooting sign and ensure it is enforced.			schedule % of engine exhausts with mufflers installed % of activities implemented during the days Signage for no hooting	UNOPS budget
	Disruption in health services for current and future patients	Ensure alternative and accessible health centres are mapped and communicated and patients transferred particularly patients in critical units	Bosaso Regional Hospital administration Monitoring: PCIU	Included in MoH budget	Number of GRM cases filed in relation to site closure	Throughout activity PCIU staff time
	Potential impacts to patients and health care workers who will be using the existing facility	Put in place an effective GRM Provide signage and fencing to guard access between the demolition site and the remaining hospital site	Contractor Monitoring: UNOPS	Included. in contractor budget	Number of GRM cases filed Number of safety signages installed	Throughout activity UNOPS budget
	Transport/road	Prepare implement a traffic	Contractor	Incl. in	% of industrial	Monthly

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	hazards and traffic risks during construction	management plan Training and licensing of industrial vehicle operators in the safe operation of specialized vehicles. Ensure drivers undergo medical surveillance Establish rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures CoC signing by drivers and operators Ensure drivers undergo medical surveillance Establish rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures Ensure the vehicle are in good and serviceable conditions Avoid traffic in the night or when and where there are no sufficient	Monitoring: UNOPS	contractor budget	vehicle operators with license % of drivers and equipment operators who have signed the CoC % of vehicle operators who have undergone medical surveillance Traffic signage installed Record of traffic management plans Grievances related to traffic and vehicle operations	UNOPS budget

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		lights Ensure there are visible traffic signs in and around the construction site.				
	Exclusion of women in the work force	Encourage contractor to recruit women for the works in view of creating gender parity Maintain lists of workers indicating their gender	Contractor Monitoring: UNOPS	Incl. in contractor budget	# of women included in the workforce	Monthly UNOPS budget
Operational Phase						
	Risk of poor sanitation conditions at the HCF leading to discomfort and poor aesthetic values	Provide cleaning staff with adequate cleaning equipment, materials and disinfectant. Provide adequate facilities to disinfect the cleaning equipment and dispose of the used consumables in a safe manner; Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas. Train cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely	Bosaso Regional Hospital Administration	Incl. budget of Hospital	# of cleaning equipment available % of cleaners trained	Monthly

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
		use PPE (where required); in waste control (including for used PPE and cleaning materials)				
	Communities' exposure to health problems arising from ineffective infection control and inadequate health care waste management	Implement MWMP	Bosaso Regional Hospital Administration	running costs of Hospital	See MWMP	Monthly
ESS 8: Cultural Heritage						
Construction phase						
	Risk of Chance Finds	Implement Chance Find procedures (see Annex 4)	Contractor Monitoring: UNOPS	Contractor's budget	Report on chance find procedures implementation	Monthly UNOPS budget
ESS 10: Stakeholder Engagement and Information Disclosure						
Construction phase						
	Challenges in access to beneficiaries for meaningful stakeholder and community engagements as well as grievance redress and	Implementation and monitoring of GRM Implementation of Project SEP on stakeholder's engagement especially those living around the hospital vicinity	PCIU / UNOPS	PCIU and UNOPS GRM costs	% of complaints filed and addressed Number of site-specific incident logs	monthly

	monitoring					
	Risks of lack of	Awareness raising on GRM and	PCIU	PCIU and	Number of	quarterly

WB ESS	E&S Risks and Impacts	Mitigation Measures	Responsibility	Budget for mitigation (in USD)	Monitoring Indicator	Monitoring Frequency
	information on access to GRM leads to lack of accountability	the available channels		UNOPS budget for GRM	awareness sessions on GRM	
	Lack of information disclosure leads to lack of transparency and suspicions of mismanagement of the sub project	Conduct in- depth community engagement, providing information on the sub project Implement SEP on information disclosure	PCIU	PCIU budget for stakeholder engagement	Number of community engagement sessions held	quarterly

5. IMPLEMENTATION ARRANGEMENTS

5.1 Government and UNOPS Responsibilities

The overall responsibility for the works sits with the Ministry of Health (MoH) as the main recipient and implementer of the project. The work is overseen by the Project Coordination and Implementation Unit (PCIU) embedded within the Project's institutional structures. The PCIU contracted UNOPS as a sub-implementer for the demolition and reconstruction of 6 hospitals, including Bosaso Regional Hospital (BRH). UNOPS has designed the works and is preparing the bidding documents for a contractor to be recruited to perform the works. UNOPS will oversee the works and the compliance with the ESMP-specific E&S mitigation measures. The construction companies will implement the project including all Environmental and Social (E&S) mitigation measures defined in this ESMP. For Bosaso Regional Hospital demolition and construction works, one contractor will be engaged.

Below under Table 3 is the list of Government institutions involved in the implementation, with their respective roles and interests.

Table 3 Institutional partners responsibilities

MoH	The MoH through PCIU is responsible for the overall implementation of the Project including monitoring of implementation of this ESMP.
Hospital Administration	The Hospital Administration has agreed to the design of the demolition and construction works.
UNOPS	UNOPS Engineers and E&S safeguard team have prepared the design for the works and this ESMP. They will oversee the implementation of the works by the contractor and supervise implementation of the environment and social management plan
Contractor	The contractor will implement the demolition, and construction works at Bosaso Hospital based on the agreed design and this ESMP.

5.2 Contractor

The contractor is responsible for complying with requirements for all field activities covered by this ESMP, the contractor is also responsible to ensure that all its sub-contractors follow the ESMP and other ESF instruments that apply to this sub project. The contractor will have contractual clauses specifying compliance with the mitigation measures listed in the ESMP and in the WBG EHS Guidelines, in addition to national requirements and to indicate measures taken in cases of non-compliance. The contractor is also responsible for the actions of any sub- contractors they may engage. Sub-contractors also have to comply with all E&S standards as laid out in this ESMP. Contractor's responsibilities include:

- Ensuring that all operations comply with the mitigation measures laid out in this ESMP, for which the contractor is responsible.
- The contractor to prepare and implement site-specific E&S sub plans recommended in this ESMP.
- Ensuring that the control measures provided for in the ESMP are both understood and implemented by site personnel.
- Complying with accident and incident reporting framework as laid out in the ESMF. All severe incidents must be reported to UNOPS/PCIU within 48 hours of occurrence.
- Setting up plans for action to be taken in the event of spills or leakages of hazardous materials, and other environmental emergencies.
- Monitoring the ESMP implementation, against the monitoring indicators laid out in the ESMP Table.
- Participating in community consultative meetings.
- Identify additional significant matters pertaining to environmental and social compliance.
- Liaise with UNOPS on the need for corrective action in the event of unexpected environmental or social issues emerging during operations.
- Communicating with all staff regarding E&S compliance requirements and other matters of importance.
- Identifying additional environmental mitigation or corrective measures that are deemed to be necessary during project implementation.
- Preparing reports on all aspects of E&S compliance.
- Maintaining lists of all workers, including their age and gender.
- Maintaining a workers' grievance mechanism
- Prepare and maintain an OHS Plan and provide training to all workers on OHS Plan.
- Ensuring signing of code of conduct by every worker, including issues of Sexual Harassment, children exploitation and abuse (CEA), Gender-Based Violence (GBV) and Sexual Exploitation and Abuse.
- Implementing the Security Management Plan.
- Ensuring technical milestone during project are in tandem with E&S milestones.
- Ensuring alternative health facilities are mapped out for the community to use before commencement of works.
- The contractor is obliged to implement this ESMP with all risk mitigation measures assigned to it.

The contractor is obliged to implement this ESMP with all risk mitigation measures assigned to it.

E&S Safeguards or Environmental Health and Safety (EHS) Specialist: The contractor will deploy an E&S or EHS Specialist to ensure operationalization of this ESMP, including monitoring, supervision and reporting on mitigation measures. The key tasks of the Specialist is to;

- Ensure PPEs for workers are available and workers are trained on their use
- Provide OHS training to all workers, based on the OHS Plan
- Ensure health and safety of all workers and visitors at the construction site
- In case of a non-compliance with the technical team on E&S aspects, stop the works to ensure safety and compliance.

- Maintain records of accidents and incidents and ensure appropriate reporting of incidents to UNOPS
- Ensure sustainable waste management procedures are followed closely.
- Ensure the health and safety of the community is not compromised during works implementation.
- Ensure availability of water and sanitation facilities for all workers at site and at the campsite
- Conduct toolbox talks for workers
- Train all workers in the CoC and ensure that CoC is signed by every worker
- Liaise closely with the UNOPS and the PCIU on training workers on GBV issues, as well as community awareness on GBV
- Maintain workers' lists indicating age, gender and vulnerability aspect (persons living with disabilities, etc)
- Maintain records of Workers' GRM
- Ensure all grievances are lodged, acknowledged, resolved and closed within the specific set timelines by the sub-project.
- Ensure all the provisions of this ESMP are implemented.

6. REPORTING ON ESMP COMPLIANCE

UNOPS will prepare periodic monitoring reports, including inputs from the contractor on the status of implementation of this ESMP. The reports will be submitted to the PCIU for its review and feedback. Details of these reports and their content are given in the Table 4 below. A template for E&S Monitoring report is included in Annex 2.

Table 4 ESMP Monitoring and Compliance Reports

#	Title of the Report	Contents of the Report	Frequency of Report Preparation	Report to be prepared by
1	ESHS Monitoring Report to UNOPS	Compliance status of the Project with the E&S mitigation and monitoring measures. The report should cover: Environmental incidents; Health and safety incidents, child and forced labor; Health and safety supervision; Usage of PPEs by workers; Highlights of inspections; Training conducted, and workers participated; Worker's grievances.	Monthly	Contractor
2	ESMP Monitoring Report to PCIU	Compliance status of overall Project with ESMP requirements	Monthly	UNOPS
3	Incident Reports to PCIU	Incident investigation reports for all major incidents covering details of the incident, root cause analysis, and corrective actions taken to address the future recurrence of this event	Initial investigation report for severe incidents within 24 hours. Detailed Investigation Report within ten days	UNOPS
4.	Incident and accident Reports to the World Bank	Incident and accidents notification and investigation reports	Notification within 48 hours	PCIU

7. The E&S induction training for the contractors is currently scheduled for 18 December 2025.

8. BUILDING AND TRAINING

The implementation of this ESMP is highly dependent on the capacity and awareness of the contractors' staff, the surrounding community and the concerned stakeholders. Training workshops are required to increase the awareness of all individuals concerned with the Project and to train and follow up with the workers who are specifically involved in the site operation.

On-site workers should receive appropriate training to undertake the duties of implementing the necessary mitigation measures. The training workshops should be undertaken prior to commencement of construction activities and as capacity building exercises throughout the project construction phase. The recipients of the training are all construction workers. The training is to be included in the budget of the contractor. The only training to be provided by the UNOPS include GBV/SEA/SH prevention. One initial training on mitigation measures will be provided to the contractor.

The training for the workers should cover at least the following issues:

- Occupational and public health and safety.
- Mitigation measures to be applied.
- GBV/SEA/SH prevention and response plan
- Accidents and emergency plans
- Roll-out of GRM among workers and communities
- Appropriate segregation, transportation, final disposal of solid waste.
- COC

The E&S induction training for the contractors is currently scheduled for 18 December 2025.

This will be achieved through the implementation of small workshops in the induction phase for the workers. During the construction phase, refresher training will be held.
Next to the training of workers, communities at the site will receive awareness raising sessions on the following topics:

- heighten awareness of environmental and social risks and impacts and mitigation measures
- Community grievance redress mechanism
- GBV prevention

The Project team will further sensitize the Hospital leadership on the requirements for a Hospital Workers' Grievance Redress Mechanism (GRM) to be implemented during the operational phase.

9. Stakeholder Consultations

The preparation of this ESMP and design process of the sub-project was dependent on stakeholder consultations, conducted as per the previous Project Stakeholder Engagement Plan (SEP).

Preliminary activities for the proposed demolition and construction works involved site visits, technical site assessments and stakeholder engagements which were conducted in July 2024. The design team met with the PCIU Project Coordinator among other key stakeholders who had extensively been mapped during the preparation of the stakeholder's engagement plan (SEP). It was through extensive stakeholders' engagement processes that the phasing out of the hospital was agreed upon.

Figure 15 Stakeholder Engagement meeting

A variety of stakeholders was consulted once the decision was taken to focus on Bosaso Hospital, community level stakeholder consultations were undertaken in January 2024.

Local authorities at the district level indicated that the biggest challenges in the health sector are that people travel a long-distance area to find health services. They go to Mogadishu and outside of the country to seek health services because of the lack of necessary equipment around the region. Furthermore, it's difficult to pay the cost of the doctors and staff of the hospital, they have mentioned that the ministry of health cannot pay the salary of doctors and other staff of the hospital.

Healthcare services could be strengthened through improvement of health services as the foun- dation of the healthcare system. This includes promoting preventive care, health promotion, ear- ly detection, and management of common health conditions through well-functioning primary care clinics and community-based services. Authorities confirmed that the planned hospital demolition and construction meet the needs of the people.

Environmental risks connected to the demolition and construction, that were mentioned during consultations, included construction waste and its disposal. Furthermore, medical waste can also result if the contaminated fluids are not properly managed. Construction activities can generate noise, dust, and other pollutants to the communities around the hospital.

Extreme heat and temperature conditions can affect labour during the construction, because Bosaso is one of the hot areas in Somalia during the months of April up to September.

Local authorities confirmed that there will be no impact in view of the land ownership because the government owns the land. The demolition and construction will not affect community live- livelihoods negatively.

The best Communication channels for a GRM are a telephone number or hotline, where people can send their grievances, concerns, requests for improvements, or appreciations regarding the work done. The establishment of committee members selected from our community through whom we can transfer our concerns and be held accountable for them.

The district committee suggested additional stakeholders that are vulnerable groups in the district. These include People with Disabilities are vulnerable groups in our Community that should be consulted and listened to.

Community members states that the most vulnerable groups in the district are

1. Elderly people
2. People with co-morbidities/ chronically ill internally displaced people
3. Representatives of minority groups
4. Representatives of women groups
5. Persons with disabilities

Community groups were generally happy with the demolition and construction plans of the hospital, as they were facing some gaps in the hospital services. The key gaps named in the current services were:

- Vulnerable groups could not pay the cost of health services
- Lack of necessary equipment for health services like MRI,
- Lack of quality health care services

Community members pointed out some of the environmental risks they see in relation to the demolition and construction: management of medical waste during the construction; Solid waste production during the construction such as debris from the demolition of construction parts; Medical waste can also be associated if the contaminated fluids are not properly managed.

Social risks named included the temporary closure of the hospital that would affect the commu- nity. Everyday people come to the hospital for health services. During the construction of the hospital, the community around the hospital will experience impact from construction activities, which will also contribute to noise and dust.

Elders confirmed that the demolition and construction of the hospital would not have an impact on land ownership. The scope of the construction will be only the hospital and land owned by the government. There are some people, who have small businesses nearby the hospital, and they may have experienced some dust and noise during the demolition and construction.

This will have an indirect effect on their livelihood. But the demolition and construction will not have a direct negative effect on their livelihood.

Women pointed out the risks of gender-based violence (GBV) during construction works. Also, they see construction works as a male dominated type of work, only male dominated work. Construction sites typically have a higher concentration of male workers in the Somali culture. This creates SEA/SH risks, but also poses inequality in opportunities. Most women do not know the chances and opportunities; they stay at home, while men go to work and find the opportunities to make money.

However, representatives of women groups and other vulnerable individuals said that vulnerable groups will benefit from demolition and construction of the hospital for the following ways:

- Healthcare services: Enhance and expand healthcare services that specifically will ad- dress the needs of women and vulnerable groups.
- IDPs and Vulnerable groups will benefit from the project due to jobs opportunities and improved healthcare services
- Jobless men and women will get jobs from the demolition and construction of Bosaso hospital

Women suggested that organizing consultations meetings and updating them on your project activities would be a good idea. The project should also collect their feedback.

Figure 16 Meeting with Director-General of the Hospital

10. GRIEVANCE REDRESS MECHANISMS

One of the key objectives of ESS 10 (Stakeholder Engagement and Information Disclosure) is 'to provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow borrowers to respond and manage such grievances'. This Project GRM facilitates the Project to respond to concerns and grievances of the project-affected parties related to the environmental and social performance of the project. The Project provides mechanisms to receive and facilitate resolutions to such concerns. This section lays out the grievance redressal mechanisms (GRM) for the Project.

The MoH has the responsibility to resolve all issues related to the Project in accordance with the laws of FGS and the World Bank ESSs through a clearly defined GM that outlines its process and is available and accessible to all stakeholders. The entry point for all grievances is the social specialists at the FGS and FMS/BRA levels, who receive grievances by phone, text or email to publicized mobile phone lines and email addresses. The social safeguards specialists will acknowledge, log, forward, follow-up grievance resolution and inform the complainant of the outcome. The complainant has the right to remain anonymous, in which case the identifying details will not be logged. The PCIU senior social specialist will carry out training of FMS/BRA social officers and project officers on complaints handling and reporting. Grievances may also be submitted to UNOPS or the contractor. Both will aim to handle grievances and solve them, or feed the cases into the established Project GRM described here where applicable.

A Grievance Committee (GC) is established at federal level, consisting of the project coordinator, and relevant staff, with the social safeguards' specialist acting as the secretary to the meeting and taking minutes and following up the grievance resolution process. The GRM offers different channels to enable a confidential and sensitive approach to GBV-related cases that ensures the safety of survivors and enables survivor-centred care. The GC meets every two months throughout the project implementation period to review non-urgent appeals and the functioning of the GM.

The previous PCIU and UNOPS conduct public awareness campaigns about the respective GRMs to inform all communities and staff on the mechanism. A one-pager provides summary details on the GM, while a poster and leaflet are prepared for the project site. Various mediums are used to sensitize the communities on the project GRM including social media and FM radio to reach out to communities at the Project locations, including call-ins with panels including community and government representatives. The GRM details will also be published on the MoH website indicating a phone number, email address and physical address for further information (see below). The GRM is represented in simple visual formats as well as in Somali dialects, as needed. UNOPS will conduct its own awareness for its GRM in the vicinity of the site.

The GRM includes an appeals process if the complainant is not satisfied with the proposed resolution of the complaint. Once all possible means to resolve the complaint have been proposed and if the complainant is still not satisfied, then he/she should be advised of his/her right to legal recourse. Anonymous grievances can be raised and addressed.

Uptake channels include:

- Toll-free telephone hotline/Short Message Service (SMS) line;
- E-mail;
- Letter to Grievance Focal Points at local health facilities and vaccination sites;
- Complaint form to be lodged via any of the above channels; and

- Walk-ins may register a complaint on a grievance logbook at a healthcare facility or suggestion box at clinic/hospitals.

To avoid the risk of stigmatization, exacerbation of the mental/psychological harm and potential reprisal, the GRM has different channels and protocols to enable a confidential and sensitive approach to GBV/SEAH related cases that ensures the safety of survivors and enables survivor- centred care. Women, girls and other at-risk groups often have less access to information and available services. They are also more likely to receive inaccurate information due to existing unequal power structures and/or create opportunities for exploitation. Specifically, targeted information campaigns, radio and other means of communication modalities will be used. The information shared includes messages on GBV/SEAH risks related to the Project and potential response services.

The Project will identify clear channels for reporting as well develop tools to track complaints related to GBV/SEAH. Where such a case is reported to the GRM, actions taken will ensure confidentiality, safety and survivor-centred care for survivors. Any survivors reporting through the GRM are offered immediate referral to the appropriate service providers based on their preference and with informed consent, such as medical, psychological and legal support, emergency accommodation, and any other necessary services. Project workers will also have the right to lodge complaints related to GBV/SEAH through the GM operator, with any supervisor at any level, with the UNOPS in the case of a subcontractor, or directly with the PCIU (GBV Specialist). All personnel shall be trained appropriately in receiving such cases and in providing appropriate referrals. Only the nature of the complaint (what the complainant says in her/his own words), whether the complainant believes the perpetrator was associated with Project and additional demographic data, such as age and gender, will be collected and reported, with informed consent from the survivor. If the survivor does not wish to file a formal complaint, referral to available services will still be offered. The preference of the survivor will be recorded, and the case will be considered closed. Recorded GBV/SEAH cases should be reported to the World Bank project team within 24 hours.

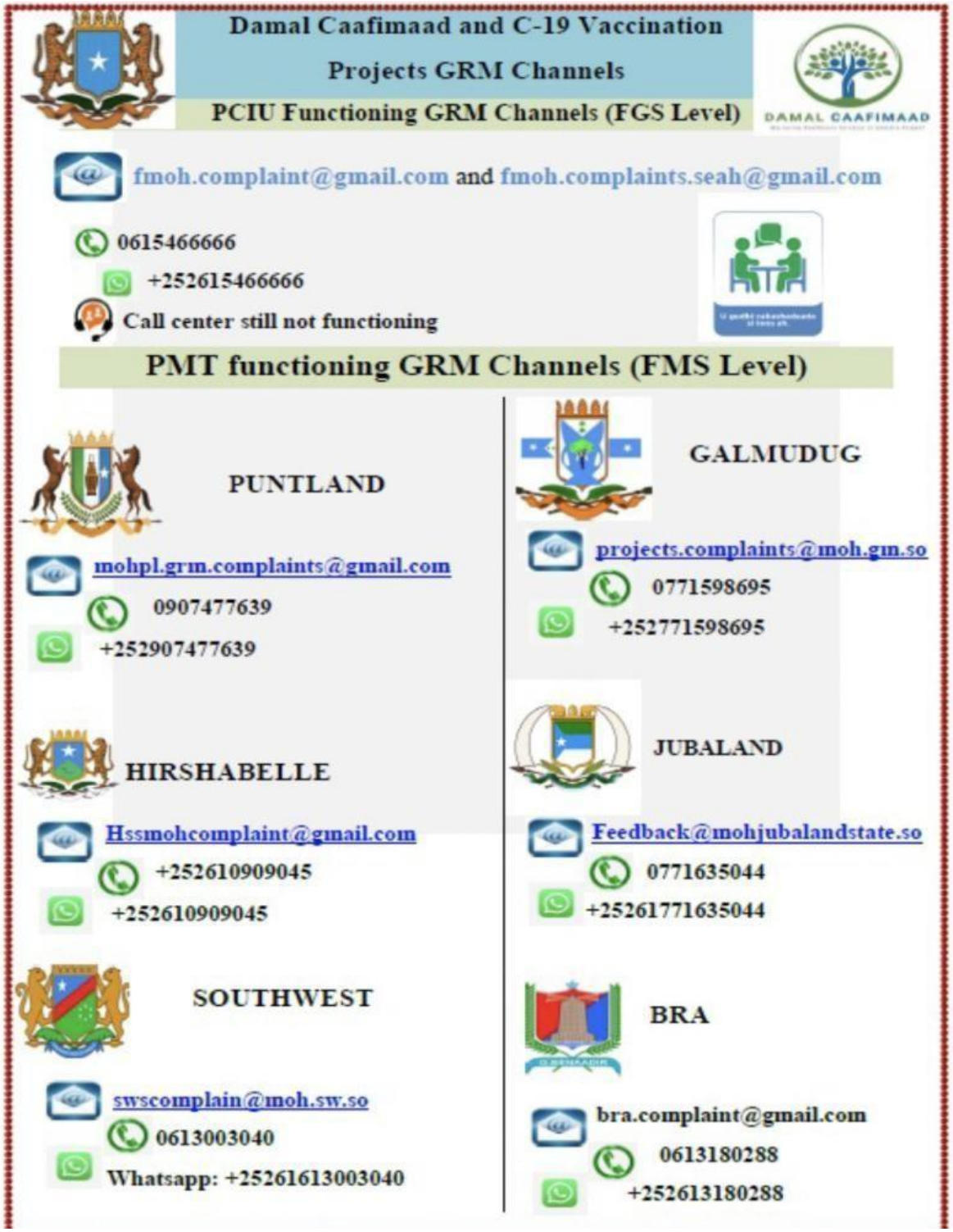

Figure 17 GRM contacts

11. IMPLEMENTING BUDGET

Table 5 Implementing Budget

	Required Resources	Costs
UNOPS – Monitoring of ESMP		
1.	Human Resources: 1 E&S/EHS Specialist (50 percent of time)	UNOPS staff costs
2.	1 Security Specialist (20 percent of time)	UNOPS staff costs
3.	Logistics / Travel	UNOPS travel budget
4.	Training for contractor	500 USD
5.	Community engagement	2,000 USD
Implementation of Risk Mitigation Measures Contractor		
6.	Human Resources 1 EHS Specialist x 4 months	Bidder to assess and estimate
7.	Cost of PPE	Bidder to assess and estimate
8.	Cost of OHS and other mitigation measures and Training	Bidder to assess and estimate
9.	Construction Waste Disposal	Bidder to assess and estimate
10.	Safety Signages	Bidder to assess and estimate
11.	Latrines	Bidder to assess and estimate
12.	Security risk mitigation	Bidder to assess and estimate
13	Community Engagement	Bidder to assess and estimate

Annex 1: Stakeholder Consultations

Stakeholder consultations were undertaken in November 2023, with the following participants.

Name	Role
1. Abdirahman hudur	Business committee
2. Aisha Abdi Aw-muse	Community
3. Dr Abdulahi said aw-muse	General director hospital
4. Ahmed Mohamed ALI	Pharmacist
5. Dr Ahmed Ali Aden	Doctor
6. Abdicaziz Ahmed Mohamed	Surgery
7. Abdirizak Ahmed ALI	Member of city council
8. Sahra Mohamed Abdi	Business committee
9. Ali Ahmed Mohamed	Director of social affairs
10. Abdirahman Mohamed Salad	Advisor major office
11. Mohamud Muse Hassan	Community
12. Mohamed Ahmed Samatar	Member of city council
13. Ahmed tomin almas	Community
14. Amal Mohamed Aden	Community
15. Mohamud Dahir Gaani	Member of city council
16. Abdirizak Dahir Jamac	Member of city council

Figure 18 Community meeting, November 2023 in Bosaso

Figure 19 Meeting with women representatives, November 2023 in Bosaso

Annex 2: Environmental and Social Monitoring Template

This annex presents a template that should be used for the E&S monitoring process by the UNOPS E&S team. This template will be based on the EMSP Table above (Table 4), it will list all the above-mentioned risks and impacts, mitigation measures, indicators, responsibilities, monitoring frequency as per the table above. Prior to the commencement of the works, targets will be added to the indicators, after consultation with the contractors. The findings and observation column will be filled upon reviews, supervision and inspection as well as based on reporting by the contractors. The corrective action column will be filled in when non-compliances have been discovered, and corrective actions have been agreed on jointly with the contractor.

Environment and social monitoring Template

Risks and Impacts	*Mitigation Measures*	*Indicators*	*Responsibility*	*Monitoring Frequency*	*Findings/Observations*	*Corrective Action*

Annex 3: Code of Conduct for Workers

I, _____acknowledge that adhering to environmental, social, health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing gender-based violence (GBV) and violence against children (VAC) is important. All forms of GBV or VAC are unacceptable in the workplace or when interacting with communities. The organization considers that failure to follow ESHS and OHS standards or to partake in GBV or VAC activities, constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution of those who commit GBV, or VAC may be pursued if appropriate.

I agree that while working on the project I will:

- Attend and actively partake in training courses related to ESHS, OHS, HIV/AIDS, GBV and VAC as requested by my employer.
- Follow my employers' guidance on prevention of the spread of infectious diseases, including Covid 19;
- Follow my employers' guidance on security and safety, including not causing conflict or exposing myself, other colleagues, stakeholders including community members, project facilities or assets to risks;
- Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with children (anyone age 18 or under) – including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.

Not engage in any form of sexual harassment of a co-worker - for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behavior. E.g. Looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; giving personal gifts; making comments about somebody's sex life etc. Sexual harassment constitutes acts of serious misconduct and are therefore grounds for disciplinary measures, including summary dismissal.

- Not engage in any form of sexual exploitation or abuse – for instance, exchanging money, employment, goods or services for sex or sexual favors, or making promises or favorable treatment dependent on sexual acts – or other forms of humiliating, degrading or exploitative behavior. This includes any project-related assistance due to community members. Sexual exploitation and sexual abuse constitute acts of serious misconduct and are therefore grounds for disciplinary measures, including summary dismissal.
- Not engage in sexual misconduct, use the project resources or funds to exploit community members.
- Report any suspected or actual GBV or VAC by a fellow worker, whether employed by my organization or not or any breaches of this Code of Conduct through the reporting
- mechanism.

The standards set out above are not intended to be an exhaustive list. Other types of sexually exploitive or sexually abusive behaviour may be grounds for administrative action. With regard to children under the age of 18:

- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children unrelated to my family into my home unless they are at immediate risk of injury or in physical danger.
- Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornographic material through any medium (see also "Use of children's images for work-related purposes" below).
- 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 places them at significant risk of injury.
- Comply with all relevant local legislation, including labor laws in relation to child labor.
- Use of children's images for work-related purposes
- When photographing or filming a child for work-related purposes, I must:
- Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
- Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
- Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
- Ensure images are honest representations of the context and the facts.
- Ensure file labels do not reveal identifying information about a child when sending images electronically.
- Sanctions
    - I understand that if I breach this Individual Code of Conduct, my employer will take discipli- nary action, which could include:
    - Informal warning.
    - Formal warning.
    - Additional training.
    - Loss of up to one week's salary.
    - Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
    - Termination of employment; and
    - Report to the police if warranted.

I hereby acknowledge that I have read the foregoing Individual Code of Conduct, agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV and VAC issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to take action mandated by this Individual Code of Conduct may result in disciplinary action and may affect my on-going employment.

Signature: _____ Name _____ Title: _____ Date: _____

Annex 4: Chance Find Procedures

This procedure was developed in accordance with the World Bank's ESS8 (to protect cultural heritage from the impacts of project activities and support its preservation, to address cultural heritage as an integral aspect of sustainable development, to promote meaningful consultation with stakeholders regarding cultural heritage. To promote the equitable sharing of benefits from the cultural heritage).

This procedure is included as a standard provision in the implementation of Public Works contracts to ensure the protection of cultural heritage (Archaeological and Historical Sites). All implementers / contractors will be required to observe this procedure as documented hereafter.

Excavation in sites of known archaeological interest should be avoided. Where this is unavoidable, prior discussions must be held with the PCIU and the World Bank in order to undertake pre-construction excavation or assign an archaeologist to log discoveries as construction proceeds. Where historical remains, antiquity or any other object of cultural or archaeological importance are unexpectedly discovered during construction in an area not previously known for its archaeological interest, the following procedures should be applied.

- Stop construction activities;
- Delineate the discovered site area;
- Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a full-time guard should be present until the responsible authority takes over;
- Notify the responsible foreman, who in turn should notify the PCIU and the World Bank and local authorities (within less than 24 hours);
- The significance and importance of the findings will be assessed according to various criteria relevant to cultural heritage including aesthetic, historic, scientific or research, social and economic values;
- Decision on how to handle the finding will be reached based on the above assessment and could include changes in the project layout (in case of finding an irrevocable remain of cultural or archaeological importance), conservation, preservation, restoration or salvage;
- Implementation of the decision concerning the management of the finding;
- Construction work can resume only when permission is given from the respective authorities, PIU and World Bank after the decision concerning the safeguard of the heritage is fully executed;

In case of delay incurred in direct relation to archaeological findings not stipulated in the contract (and affecting the overall schedule of works), the contractor may apply for an extension of time. However, the contractor will not be entitled for any kind of compensation or claim other than what is directly related to the execution of the archaeological findings works and protections.

Annex 5: E&S Screening

This E&S screening form was completed in view of the sub-project design.

Subproject Name	Bosaso Regional Hospital
Subproject Location	Mogadishu
Subproject Proponent	
Estimated Investment	US$1.87 million
Start/Completion Date	Feb 2025 - Oct 2025

Questions	Answer		ESS relevance	Due diligence / Actions
	Yes	no		
Does the subproject involve civil works including new construction, expansion, upgrading or rehabilitation of healthcare facilities, vaccine cold storage units and/or waste management facilities?	yes		ESS1	ESIA/ESMP, SEP
Does the subproject involve land acquisition and/or restrictions on land use?		No	ESS5	RAP/ARAP, SEP
Does the subproject involve acquisition of assets for quarantine, isolation or medical treatment purposes?		No	ESS5	ESIA/ESMP, SEP
Is the subproject associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant for healthcare waste disposal?		No	ESS3	ESIA/ESMP, SEP Septic tank on Site
Is there a sound regulatory framework and institutional capacity in place for healthcare facility infection control and healthcare waste management?		No	ESS1	ESIA/ESMP, SEP

Does the subproject have an adequate system in place (capacity, processes and management) to address waste?	Yes			
Does the subproject involve recruitment of workers including direct, contracted, primary supply, and/or community workers?	Yes		ESS2	LMP, SEP
Does the subproject have appropriate OHS procedures in place, and an adequate supply of PPE (where necessary)?	Yes			SEP
Does the subproject have a GRM in place, to which all workers have access, designed to respond quickly and effectively?		No		GRM, ESMP, SEP
Does the subproject involve transboundary transportation (including Potentially infected specimens may be transported from healthcare facilities to testing laboratories, and transboundary) of specimen, samples, infectious and hazardous materials?		No	ESS3	ESIA/ESMP, SEP
Does the subproject involve use of security or military personnel during construction and/or operation of healthcare facilities and related activities?	Yes		ESS4	ESIA/ESMP, SEP, SMP
Is the subproject located within or in the vicinity of any ecologically sensitive areas?		No	ESS6	ESIA/ESMP, SEP
Are there any indigenous groups (meeting specified ESS7 criteria) present in the subproject area and are they likely to be affected by the proposed subproject negatively or positively?		No	ESS7	Indigenous Peoples Plan/other plan reflecting agreed terminology
Is the subproject located within or in the vicinity of any known cultural heritage sites?	Yes		ESS8	ESIA/ESMP, SEP
Does the project area present considerable Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risk?	Yes		ESS1	ESIA/ESMP, SEP

Does the subproject carry risk that disadvantaged and vulnerable groups may have unequitable access to project benefits?	Yes		ESS1	ESIA/ESMP, SEP Low risk
Is there any territorial dispute between two or more countries in the subproject and its ancillary aspects and related activities?		No	*OP7.60 Projects in Disputed Areas*	Governments concerned agree
Will the subproject and related activities involve the use or potential pollution of, or be located in international waterways[38]?		No	*OP7.50 Projects on International Waterways*	Notification (or exceptions)

Conclusions:

1. **Proposed Environmental and Social Risk Ratings (High, Substantial, Moderate or Low). - ESMP will be required.**
2. **Proposed E&S Management Plans/ Instruments. - ESMP will be required.**

Annex 6: Emergency Preparedness and Response Plan

During construction, and as the hospital enters its operational phase, an "***Emergency Preparedness and Response Plan"*** (EPRP) is essential to ensure safety, efficiency, and resilience in handling emergencies. This plan focuses on preparedness, response, and recovery measures for Bosaso Hospital's specific context, in alignment with international best practices, ensuring that the hospital is resilient and well-prepared for emergencies, enhancing patient and staff safety while ensuring continuity of healthcare services.

Emergency Risk Assessment

This risk assessment identifies potential hazards based on Bosaso hospital's location, infrastructure, and operational environment.

Overview of Risks, Impact Levels and Mitigation Measures

Risk Category	Potential Hazards	Impact Level	Mitigation Measures
2.1 Natural Disasters	Earthquakes, floods, droughts	High	Seismic reinforcement, flood barriers, emergency water supply
2.2 Fire Hazards	Electrical faults, flammable materials	High	Fire alarms, extinguishers, evacuation routes
2.3 Health Emergencies	Disease outbreaks (cholera, COVID-19, malaria)	High	Infection control, isolation units, vaccination programs
2.4 Security Threats	Armed conflict, terrorism, theft	High	Perimeter security, emergency lockdown procedures
2.5 Technological Failures	Power outages, IT system failure	Medium	Backup generators, redundant IT systems

Emergency Preparedness Measures

Preparedness ensures that Bosaso hospital is equipped to handle emergencies effectively

Overview of Emergency Preparedness Measures for Bosaso Hospital

Preparedness Component	Measures Implemented
3.1 Emergency Response Team (ERT)	Establishes a trained multidisciplinary team for rapid response
3.2 Training & Drills	Conducts regular fire drills, CPR training, and active shooter drills
3.3 Early Warning Systems	Installs alarms for fire, biohazards, and security threats
3.4 Medical Supplies	Maintains emergency stockpiles (medications, PPE,

	oxygen)
3.5 Evacuation Planning	Develops and posts clear evacuation routes
3.6 Emergency Communication	Implements radio and satellite phone backup communication
3.7 Community Engagement	Engages with local authorities for coordinated response

Emergency Response Protocols

This section outlines actions during emergencies based on the type of incident.

Overview of Emergency Response Protocols for Bosaso Hospital

Emergency Type	Response Steps	Details
4.1 Fire Response	4.1.1 **Alert**	Activate fire alarm and notify the Fire Department.
	4.1.2 **Evacuate**	Follow designated exit routes and use stairwells.
	4.1.3 **Contain**	If safe, use fire extinguishers to control small, manageable fires.
	4.1.4 **Assist**	Help vulnerable patients evacuate safely.
	4.1.5 **Assess & Report**	Document incident(s) and review fire safety measures.
4.2 Disease Outbreak Response	4.2.1 **Detection**	Isolate symptomatic patients and notify public health authorities.
	4.2.2 **Containment**	Implement infection control protocols (PPE, sanitation, restricted access).
	4.2.3 **Treatment**	Provide medical care based on protocols (antivirals, antibiotics, IV fluids).
	4.2.4 **Communication**	Issue public health advisories and coordinate with the Ministry of Health.
	4.2.5 **Recovery**	Conduct decontamination and review hospital's policies.
4.3 Security Threat Response	4.3.1 **Lockdown**	Secure all hospital entrances and limit movement.
	4.3.2 **Alert Authorities**	Notify police/ military for assistance.
	4.3.3 **Patient & Staff Safety**	Move non-essential personnel to safe areas.
	4.3.4 **Incident Management**	Coordinate security response and debrief staff.
	4.3.5 **Post-Incident Review**	Assess security vulnerabilities and improve protocols.

Recovery and Business Continuity

Post-emergency recovery ensures a smooth return to normal hospital operations.

Overview of Post-emergency Recovery Actions for Bosaso Hospital

Recovery Phase	Actions
5.1 Damage Assessment	Identify affected hospital areas and necessary repairs
5.2 Patient Care Continuity	Arrange temporary care facilities if needed
5.3 Staff Support	Provide psychological/ psychosocial first aid for affected personnel
5.4 Infrastructure Restoration	Restore power, water, and medical supplies
5.5 Policy Review	Update emergency protocols based on lessons learned

Summarised Schedule of Coordination with External Agencies

The table below outlines the structured coordination with external emergency response agencies under the Regional Administration framework, and is intended to ensure efficient emergency response, reduce response time, and enhance Bosaso Regional Hospital's preparedness to handle health crises effectively.

Coordination Schedule for Bosaso Regional Hospital with External Agencies

Agency	Role	Coordination Frequency	Formal Agreement
Regional Health Office	Supervision and outbreak response coordination.	Quarterly & during emergencies	MoU with Ministry of Health
Fire and Rescue Department	Fire safety, emergency evacuation, and fire drills.	Bi-annual training & drills	Emergency Response Protocol
Ambulance Service	Patient transfer and emergency medical support.	As needed & annual review	Service Agreement
Police Force	Security support during emergency responses and hospital safety.	Monthly review meetings	Security Collaboration Agreement
WHO & UN Agencies	Technical support for infection prevention and control.	Annual assessment & emergency responses	UN Coordination Framework
Environmental Health Department	Waste management and environmental health inspections.	Quarterly audits	Compliance MoU

Key Actions:

Annual review of agreements with external agencies to ensure effectiveness.
Joint simulation exercises with emergency responders every six months.
Centralized emergency response hotline to facilitate rapid response.

Emergency Evacuation Plan (EEP) for Bosaso Hospital

Introduction

The Emergency Evacuation Plan (EEP) for the Hospital ensures the safe, rapid, and coordinated evacuation of all individuals in the event of a fire, security threat, natural disaster, or other emergency. This plan aligns with regional risks specific to the Region, including security challenges and limited emergency response capacity.

Objectives

Objectives of the Emergency Evacuation Plan (EEP) for the Hospital

Objective	Description
Safe Evacuation	Ensure all patients, staff, and visitors evacuate quickly and safely.
Minimize Panic	Implement structured procedures to avoid confusion during emergencies.
Assist Vulnerable Groups	Provide priority evacuation for ICU, maternity, and disabled patients.
Coordination with Emergency Services	Ensure seamless interaction with fire, ambulance, and police services.
Regular Drills	Conduct scheduled drills to maintain high preparedness levels.

Evacuation Procedures

Overview of the 4-Step Evacuation Procedure for the Hospital

Step	Action
Step 1: Alert & Notification	Activate alarms and notify emergency services.
Step 2: Staff Response & Coordination	Assign personnel to assist with patient movement.
Step 3: Evacuation & Assembly	Guide evacuees to designated **safe zones** outside the hospital.
Step 4: Headcount & Reporting	Conduct roll calls and report missing individuals.

Evacuation Routes & Exits

Overview of the Proposed Evacuation Routes & Exits for the Hospital

Element	Specification
Exit Signage	Clearly marked, illuminated, and unobstructed.
Stairwell Access	NO elevator use during fire/ power failures. Wide staircases prioritized.
Assembly Points	Pre-designated areas away from the hospital for regrouping.

Evacuation for Special Needs Patients

Overview of the Proposed Evacuation Protocols for Special Needs Patients

Category	Evacuation Plan
Non-Ambulatory (ICU, Disabled)	Use **stretchers and wheelchairs**, assigned evacuation teams.
Critical Care Patients	Immediate transfer with **life support assistance**.
Maternity & Pediatric Patients	Nurses assist **mothers with newborns** for safe relocation.
Visitors & General Staff	Directed to the **nearest exits** by security personnel.

Coordination with External Agencies

Overview of Evacuation Coordination Measures with External Agencies

Agency	Role in Evacuation	Coordination Frequency
Mogadishu Fire & Rescue Service	Fire suppression, rescue operations, hazard control.	Bi-annual training & drills.
Benadir Ambulance Service	Emergency transport for critical patients.	On-demand response.
Mogadishu Police	Security management, crowd control, protection.	Quarterly security drills.
Benadir Regional Health Office	Medical support coordination, outbreak control.	Annual review.

Emergency Drills & Training

Overview of Emergency Drills & Trainings

Activity	Frequency	Responsible Team
Full Evacuation Drill	Twice a year	Emergency Response Team (ERT)
Fire Safety Training	Quarterly	Fire & Rescue Service
Security Threat Response Drill	Every 6 months	Mogadishu Police
Evacuation Route Updates	Annually	Hospital Safety Committee

Emergency Equipment & Communication

Overview of Emergency Equipment and Communication Infrastructure for the Hospital

Equipment	Location	Maintenance Frequency
Fire Extinguishers	Every hospital wing	Monthly inspections
Emergency Lighting	Stairwells, corridors	Quarterly maintenance
First Aid Kits	Nurses' stations, exits	Bi-monthly replenishment
Emergency Call System	All hospital wards	Monthly system test
Evacuation Maps	Posted in hallways	Reviewed annually

Post-Evacuation Procedures

Overview of Post-Evacuation Procedures for the Hospital

Action	Responsibility

Headcount & Accountability	Supervisors confirm all evacuees are accounted for.
Medical Assessments	Emergency medical teams treat injuries.
Incident Report & Review	Management documents events for process improvement.
Debriefing Sessions	Staff feedback gathered to enhance future responses.

Fire Safety Equipment Inspection and Maintenance Schedule

This section outlines minimum requirements for fire extinguishers, fire alarm systems, and associated safety devices. All inspections must be documented in the Fire Safety Logbook and reported to the Safety and Security Officer.

1. Fire Extinguishers

1.1 Monthly Visual Inspection

- Verify extinguishers are present, mounted properly, and unobstructed.
- Check pressure gauge is in the operable range.
- Ensure safety pin and tamper seal are intact.
- Confirm no visible damage, corrosion, leakage, or blocked nozzle.
- Record inspection date, initials, and any noted deficiencies.

1.2 Annual Maintenance (by certified technician)

- Conduct full mechanical inspection and internal condition assessment.
- Weigh extinguishers (if applicable) to verify correct charge.
- Replace tamper seals and clean equipment.
- Repaint or replace damaged labels and operating instructions.
- Perform hydrostatic testing according to manufacturer's schedule (typically every 5 years).

2. Fire Alarm and Detection Systems

2.1 Weekly/Monthly Checks

- Confirm control panel shows normal operation (no trouble signals).
- Test manual call points/alarms on a rotating schedule to avoid disruption.
- Inspect smoke/heat detector locations for dust, obstruction, or damage.

2.2 Quarterly Testing

- Test a representative sample of smoke detectors, heat detectors, and notification devices (sirens, strobes).
- Verify battery backup functionality.

2.3 Annual System Test (by qualified technician)

- Full functional test of all detectors, alarm circuits, annunciator panels, and communication links.
- Clean smoke detectors following manufacturer instructions.
- Document all faults and corrective actions.

3. Emergency Lighting and Exit Signs

Monthly Inspection

- Check lights and signs for proper illumination.
- Ensure batteries or backup power systems are operational.

Annual Test

- Conduct a full 90-minute discharge test of emergency lighting systems.

4. Fire Hose Reels, Hydrants, and Sprinkler Systems (if present)

Monthly

- Confirm equipment is accessible and free of obstruction.
- Check hoses, nozzles, valves, and fittings for visible wear.

Annual (or per manufacturer standard)

- Pressure-test hose reels and hydrants.
- Inspect pumps, tanks, and sprinkler valves.
- Conduct flow tests and verify adequate water pressure.

5. Documentation and Reporting

- All inspections should be recorded using standardized forms.
- Any deficiencies must be reported immediately to the Safety Officer and corrected within agreed timelines.
- Maintain maintenance records for a minimum of 5 years or as required by hospital policy.

Annex 7: Occupational Health and Safety Plan

The purpose of this OHS Plan is to provide guidance for the systematic identification, evaluation, prevention and control of general workplace hazards, specific job hazards, potential hazards and environmental impacts that may arise during the implementation of the hospital rehabilitation. The measures are based on the IFC's Environmental, Health and Safety Guidelines (EHSG).

This plan shall be followed by all workers of the sub-project.

Types of Incidents & Their Reporting: The three categories of Incident are as follows:

Non-Reportable Cases: An incident where the injured person is given medical help and discharged for work without counting any lost time.

Reportable Cases: In this case the injured person is disabled for 48 hours or more and is not able to perform his duty.

Injury Cases: These are covered under the heading of non-reportable cases. In these cases, the incident caused injury to the person, but he/she still continues his duty.

HSE ORGANIZATION

Number of Safety Officers: The contractor must deploy one safety officer. In addition, there must be one safety-steward/safety-supervisor for every 100 workers.

Responsibilities

Site In -Charge of Contractor

- Shall engage qualified safety officer(s) and steward (s) as per clause;
- Shall adhere to the rules and regulations mentioned in this code, practice very strictly in his area of work in consultation with his concerned engineer and the safety coordinator;
- Shall screen all workers for health and competence requirement before engaging for the job and periodically thereafter as required;
- Shall not engage any employee below 18 years of age;
- Shall arrange for all necessary PPEs like safety helmets, belts, full body harness, shoes, face shield, hand gloves etc. before starting the job;
- Shall ensure that no person lifts, carries or move any load which, by reason of its weight, is likely to injure his health or jeopardize his safety;
- Shall ensure that all Tools & Plants (T&Ps) engaged are tested for fitness and have valid certificates from competent person;
- Shall ensure that provisions for the welfare of the employees such as canteen, rest rooms/washing facilities are provided for at the site;
- Shall adhere to the instructions laid down in Operation Control Procedures (OCPs) available with the site management;

- Shall ensure that person working above 2.0 meter should use Safety Harness tied to a lifeline/stable structure;
- Shall ensure that materials are not thrown from height. Cautions to be exercised to prevent fall of material from height;
- Shall report all incidents (Fatal/Major/Minor/Near Miss) to the Site engineer /HSE officer;
- Night work is forbidden;
- Shall ensure that all personnel working under contractor are working safely and do not create any Hazard to self and to others;
- Shall ensure display of adequate signage/posters on OHS;
- Shall ensure conductance of OHS audit, mock drills, medical camps, induction training and training on OHS at site;
- Shall ensure full co-operation during OHS audits;
- Shall ensure submission of look-ahead plan for procurement of HSE equipment's and PPEs as per work schedule;
- Shall ensure good housekeeping;
- Shall ensure adequate valid fire extinguishers are provided at the worksite;
- Shall ensure availability of sufficient number of toilets /restrooms and adequate drinking water at work site and labor colony;
- Shall ensure adequate emergency preparedness;
- Shall be member of site OHS committee and attend all meetings of the committee;
- Temporary fencing should be done for open edges if Hand – railings and Toe-guards are not available.

Health, Safety and Environment Officer of Contractor

- Carry out safety inspection of Work Area, Work Method, workers, Machine & Material, processes and materials and other tools;
- Facilitate inclusion of safety elements into Work Method Statement;
- Highlight the requirements of safety through toolbox talks/ other meetings;

- Help concerned heads of sections to prepare Job Specific instructions for critical jobs;
- Conduct investigation of all incident/dangerous occurrences & recommend appropriate safety measures;
- Advice & co-ordinate for implementation of HSE permit systems;
- Convene HSE meeting & minute the proceeding for circulation & follow-up action;
- Plan procurement of PPE & Safety devices and inspect their healthiness;
- Report to OHS specialist on all matters pertaining to status of safety and promotional program at site level;
- Facilitate administration of First Aid;
- Facilitate screening of workmen and safety induction;
- Conduct fire Drill and facilitate emergency preparedness;
- Design campaigns, competitions & other special emphasis programs to promote safety in the workplace;
- Notify site personnel non-conformance to safety norms observed during site visits / site inspections;

- Recommend to Site In-Charge, immediate discontinuance of work until rectification of such situations warranting immediate action in view of imminent danger to life or property or environment;
- To decline acceptance of such PPE / safety equipment that do not conform to specified requirements;
- Encourage raising Near Miss Report on safety along with, improvement initiatives on safety.

Mobilization of Machinery/Equipment/Tools by Contractor: As a measure to ensure that machinery, equipment and tools being mobilized to supplier or consultant are fit for purpose and are maintained in safe operating condition and complies with legislative and owner requirement, inspection shall be arranged by in-house competent authority for acceptance as applicable.

Mobilization of Personpower by Contractor

- The Contractor shall arrange induction and regular health check of their employees as per requirement in the Labor Code.
- The Contractor shall take special care of the employees affected with occupational diseases. The employees not meeting the fitness requirement should not be engaged for such a job.
- Ensure that the regulatory requirements of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
- Appropriate accommodation to be arranged for all workers in hygienic condition.

Provision of PPEs: PPEs, in adequate numbers, will be made available at site & their regular use by all concerned will be ensured.

- All the PPEs shall be checked for their quality before issue and the same shall be periodically checked. The users shall be advised to check the PPEs themselves for any defect before putting them on. The defective ones shall be repaired/ replaced.
- The issuing agency shall maintain register for issue and receipt of PPEs.
- The helmets shall have logo or name (abbreviation of agency name permitted) affixed or printed on the front.

Drinking water: Drinking water shall be provided and maintained at suitable places at different elevations. Container should be labeled as “Drinking Water”

Washing Facilities: In every workplace, adequate and suitable facilities for washing shall be provided and maintained. Separate and adequate cleaning facilities shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition and dully illuminated for night use.

Latrines and Urinals

- Latrines and urinals shall be provided in every workplace.

- They shall be adequately lit and shall be maintained in a clean and sanitary condition at all times, by appointing a designated person.
- Separate facilities shall be provided for the use of male and female worker if any.

Provision of Shelter During Rest: Proper Shed & Shelter shall be provided for rest during break.

Medical Equipment: To be available nearby/at site:

Medical Centre
First Aider
First Aid Box
Health Check Up

HSE Induction Training: All persons entering into the project site shall be given HSE induction training by the HSE officer of Contractor before being assigned to work**.**

In-house induction training subjects shall include but not limited to:

- Briefing of the Project details.
- Safety objectives and targets.
- Site HSE rules.
- Site HSE hazards and aspects.
- First aid facility.
- Emergency Contact No.
- Incident reporting.
- Fire prevention and emergency response.
- Rules to be followed in the camp
- Proper safety wear & gear must be issued to all the workers being registered for the induction (i.e., Shoes/Helmets/Goggles/Leg guard/Apron etc.)
- They must arrive fully dressed in safety wear & gear to attend the induction.
- Anyone failing to conform to this safety wear & gear requirement shall not qualify to attend.
- On completing attending Contractor's in-house HSE induction, each employee shall sign an induction training form to declare that he/she has understood the content and shall abide to follow and comply with safe work practices. They may only then be qualified to be issued with a personal I.D. card, for access to the work site

HSE Toolbox Talk: HSE toolbox talk shall be conducted by frontline foreman/supervisor of Contractor to specific work groups prior to the start of work. The agenda shall consist of the followings:

- Details of the job being intended for immediate execution.
- The relevant hazards and risks involved in executing the job and their control and mitigating measures.
- Specific site conditions to be considered while executing the job like high temperature, humidity, unfavorable weather etc.
- Recent non-compliances observed.
- Appreciation of good work done by any person.
- Any doubt clearing session at the end.
- Tool box talk to be conducted at least once a week for the specific work.

HSE Training During Project Execution

- Other HSE training shall be arranged by Contractor as per the need of the project execution and recommendation of HSE committee of site.
- The topics of the HSE training shall be as follows but not limited to:
    - Hazards identification and risk analysis (HIRA)
    - Work Permit System
    - Incident investigation and reporting
    - Fire fighting
    - First aid
    - Fire-warden training
    - T&Ps fitness and operation
    - Storage, preservation & material handling
    - A matrix shall be maintained to keep an up-to-date record of attendance of training sessions carried out.

HSE Promotion-signage, Posters, Competition, Awards etc

Display of HSE posters and banners: Site shall arrange appropriate posters, banners, slogans in local languages at workplace

Display of HSE signage: Appropriate HSE signage shall be displayed at the work area to aware workmen and passersby about the work going on and dos and don'ts to be followed

Competition on HSE and award: Contractor shall arrange HSE awareness program periodically on different topics including medical awareness for all personnel working at site

Incident Reporting: The Contractor shall submit report of all incidents, fires and property damage etc., not later than 24 hours of the occurrence. The Engineer shall report the same to the OHS Specialist immediately. Such reports shall be furnished in the manner prescribed by the implementer. (Refer to HSE procedure for incident investigation, analysis and reporting for details).

In addition, periodic reports on safety shall also be submitted by the Contractor to the implementer from time to time. Compiled monthly reports of all kinds of incidents, fire and property damage to be submitted to the Specialist as per prescribed formats.

HSE incidents of site shall be reported to the implementer site Management as per Procedure for Incident Investigation and Reporting. Corrective action shall be immediately implemented at the workplace and compliance shall be verified by the implementer's OHS Specialist and until then, work shall be put on hold by the Construction Manager.

Work Permit System: "HSE Procedure for Work Permit System" shall be followed while implementing permit system.

- Permit applicant shall apply for work permit of particular work activity at particular location before starting of the work with Job Hazard Analysis.

- Permit signatory shall check that all the control measures necessary for the activity are in place and issue the permit to the permit holder.
- The permit holder shall implement and maintain all control measures during the period of permit. He will close the permit after completion of the work.
- The closed permit shall be archived in HSE Department of site.

Safety During Work Execution: Respective Operation Control Procedures are to be followed and adhered to and the same would be contractually binding.

Electrical Handling

- Providing an adequate number of 24 V sources and ensuring that no hand lamps are operating at voltage level above 24 Volts.
- Fulfilling safety requirements at all power tapping points.
- High/ Low pressure welders to be identified with separate color clothing. No welders will be deployed without passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at workplace.
- The Contractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
- All portable electric tools used by the Contractor shall have a safe plugging system to source of power and be appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the Contractor to carry out all types of electrical works. Details of earth resources and their test date to be submitted to OHS specialist.
- The Contractor shall use only properly insulated and armored cables which conform to the requirement.
- The implementer reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the Contractor.
- All electrical appliances used in the work shall be in good working condition and shall be properly earthed.

- No maintenance work shall be carried out on live equipment.
- The Contractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations.
- Area wise Electrical safety inspection is to be carried out on monthly basis as per “Electrical Safety Inspection checklist’ and the report is to be submitted to the implementer’s safety officer
- Adequate precautions shall be taken to prevent danger to electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public
- The Contractor shall carefully follow the safety requirement of the implementer/ the purchaser with regard to voltages used in critical areas.

Fire Safety

- Providing appropriate firefighting equipment at designated workplace and nominating a fire officer/warden adequately trained for his job.
- Contractor shall provide enough fire protection equipment of the types and numbers at his office, stores, temporary structure in labor colony etc. Such fire protection equipment shall be easy and kept open at all times.

- The fire extinguishers should be properly refilled and kept ready, which should be certified at periodic intervals. The date of change should be marked on the Cylinders.
- All other fire safety measures as laid down in the emergency preparedness and response plan shall be followed.
- Non-compliance with the above requirement under fire protection shall in no way relieve the Contractor of any of his responsibility and liabilities to a fire incident occurring either to his materials or equipment or those of others.
- Emergency contact numbers must be displayed at prominent locations
- Tarpaulin being inflammable should not be used (instead, only non-infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.

Lifting Safety

- It will be the responsibility of the Contractor to ensure safe lifting of the equipment, taking due precaution to avoid any incident and damage to other equipment and personnel.
- All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the Contractor by engaging only the Competent Persons as per law.
- Defective equipment or uncertified goods shall be removed from service.
- Any equipment shall be loaded more than its recommended safe working load.

Environmental Control: Environmental damage is a major concern of the principal Contractor and every effort shall be made, to have effective control measures in place to avoid pollution of Air, Water and Land and associated life. Chlorofluorocarbons such as carbon tetrachloride and trichloroethylene shall not be used. Waste disposal shall be done in accordance with the guidelines laid down in the Waste Management Plan. Any chemical, including solvents and paints, required for construction shall be stored in designated bonded areas around the site as per Material Safety Data Sheet (MSDS).

In the event of any spillage, the principle is to recover as much material as possible before it enters drainage system and to take all possible action to prevent spilled materials from running off the site. The Contractor shall use appropriate MSDS for clean-up technique.

All Contractors shall be responsible for the cleanliness of their own areas.

The Contractors shall ensure that noise levels generated by plant or machinery are as low as reasonably practicable. Where the Contractor anticipates the generation of excessive noise levels from his operations the Contractor shall inform the Construction Manager accordingly so that reasonable and practicable precautions can be taken to protect other persons who may be affected. The Contractor shall carry out periodic air and water quality check and illumination level checking in his area of workplace and take suitable control measure.

Housekeeping: Keeping the work area clean/ free from debris, removed scaffoldings, scraps, insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the Contractor. Such cleanings have to be done by

Contractor on a daily basis by an identified group. If such activity is not carried out by Contractor is not satisfied, then the implementer may get it done by other agency and actual cost along with overheads will be deducted from contractor's bill. Such decisions shall be binding on the Contractor.

- Proper housekeeping to be maintained at workplace and the following are to be taken care of on a daily basis.
- All surplus earth and debris are removed/disposed of from the working areas to identified locations.
- Unused/Surplus cables, steel items and steel scrap lying scattered at different places/elevation within the working areas are removed to identified locations.
- All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from the workplace to identified locations. Sufficient waste bins shall be provided at
- Different workplaces for easy collection of scrap/waste. Scrap chute shall be installed to remove scrap from high location.
- Access and egress (staircase, gangways, ladders etc.) path should be free from all scrap and other hindrances.
- Workmen shall be educated through toolbox talk about the importance of housekeeping and encourage not to litter.
- Labor camp area shall be kept clear and materials like pipes, steel, sand, concrete, chips and bricks, etc. shall not be allowed in the camp to obstruct free movement of men and machineries.
- Fabricated steel structures, pipes & piping materials shall be stacked properly.
- No parking of trucks/trolleys, cranes and trailers etc. shall be allowed in the camp, which may obstruct the traffic movement as well as below LT/HT power line.
- Utmost care shall be taken to ensure overall cleanliness and proper upkeep of the working areas

Waste Management: Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained.

Inspection on HSE for different activities being carried out at site shall be done to ensure compliance to HSE requirements. The Contractor shall maintain and ensure necessary safety measures as required for inspection and tests as applicable, to enable inspection agency for performing Inspection. If any test equipment is found not complying with proper safety requirements, then the Inspection Agency may withhold inspection, till such a time the desired safety requirements are met.

HSE PERFORMANCE

- Contractor shall be assessed on a monthly basis for HSE Compliance by Safety In-charge at the site.
- The implementer shall reserve the right to use this assessment for evaluating bidder’s capacity for future tenders

- Suitable HSE reward system shall be developed at site level to promote HSE compliance amongst workmen by the Contractor. To decide HSE reward, performance towards HSE shall be evaluated for workers and it shall be awarded regularly in public gathering.
- If safety record of the Contractor in execution of the awarded job is to the satisfaction of safety department of the implementer, issue of an appropriate certificate to recognize the safety performance of the Contractor may be considered by the implementer after completion of the job.

NON-COMPLIANCE: *NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND UNOPS HAS THE RIGHT TO IMPOSE PENALTIES ON THE CONTRACTOR FOR EVERY INSTANCE OF VIOLATION NOTICED:*

HSE AUDIT/INSPECTION: Regular HSE Audit/inspection shall be carried out by Contractor as per Site HSE audit calendar. HSE checklist shall be used for carrying out audit/inspection and report shall be submitted to site management.

All non-conformities and observations on HSE identified during internal or external HSE audit shall be disposed of by site in a time bound manner and reported back the implementation status

Corrective action and Preventive action on HSE issues raised by certification body issued by Regional HQs shall be implemented by site and reported to Site management.