UNOPS

UNITED NATIONS OFFICE FOR PROJECT SERVICES

REPUBLIC OF YEMEN
INTEGRATED URBAN SERVICES EMERGENCY PROJECT II
P175791

Environmental and Social Management Framework (ESMF)

Final Draft

2 May 2021

Second Yemen Integrated Urban Services Emergency Project (P175791)
Environmental and Social Management Framework

Prepared by UNOPS with the support of Yves Prévost

Document History

UNOPS v1	UNOPS internal review	8 December 2020
UNOPS v2	Submitted to the World Bank	17 December 2020
WB Quality Team comments on v2	Circulated within World Bank	23 December 2020
WB Quality Team comments on v2	Received by UNOPS	7 January 2021
UNOPS v3, and Response Matrix	Submitted to the World Bank	15 January 2021
WB Quality Team comments on v3	Received by UNOPS	20 January 2121
UNOPS v4 and Response Matrix	Submitted to the World Bank	3 March 2021
WB ESQAT comments	Received by UNOPS	8 April 2021
WB RSA comments	Received by UNOPS	13 April 2021
UNOPS v5 and Response Matrix	Submitted to the World Bank	29 April 2021
UNOPS v6, Final Draft	Submitted to the World Bank	2 May 2021

Table of contents

Document History ..... **i**
List of Tables v
Abbreviations vi
Glossary of Terms Used in the ESMF viii
Executive summary x
Chapter 1. Introduction and Background 1
1.1 Introduction **1**
1.2 Background **1**
1.3 Rationale **3**
1.4 Lessons learned **3**
Chapter 2. Project Description 5
2.1 Project Components **5**
Component 1: Service Restoration (US$40 million) *5*
Component 2: Implementation Support and Capacity Development *7*
Component 3: Contingent Emergency Response *8*
2.2 Project Beneficiaries 8
Chapter 3. Institutional and Implementation Arrangements 9
3.1 UNOPS **9**
3.1.1 TPM *10*
3.1.2 ESMF Implementation *10*
3.2 Implementing Partners **11**
3.2.1 Public Works Project (PWP) *11*
3.2.2 Road Maintenance Fund Implementation Unit (RMF-IU) *11*
3.2.3 Urban Water Project Management Unit (UW-PMU) *11*
3.3 Other National Stakeholders **12**
3.3.1 Local Water and Sanitation Corporations (LCs) *12*
3.3.2 Local Councils *12*
3.3.3 Local Cleaning Funds *12*
3.3.4 Civil Society Organizations (CSOs) *12*
3.4 The World Bank **12**
3.5 Project Technical Coordination Committee (TCC) **13**
Chapter 4. Legal and Regulatory Framework 14
4.1 World Bank Requirements **14**
4.1.1 World Bank Environmental and Social Framework *14*
4.1.2 Environment, Health and Safety Guidelines *14*
4.1.3 Environmental and Social Risk Classification *15*
4.1.4 Environmental and Social Management Framework *15*
4.1.5 Labor Management Procedures *16*
4.1.6 Stakeholder Engagement Plan *16*
4.1.7 Grievance Mechanism *17*
4.1.8 Environmental and Social Commitment Plan *17*
4.1.9 Information Disclosure *17*
4.1.10 Contingent Emergency Response Components (CERC) *18*
4.2 UNOPS Requirements **18**
4.3 National Requirements and Policies **19**
4.3.1 National Environmental Action Plan *19*
4.3.2 Environmental Protection Law *19*

4.3.3 Water Law *21*
4.3.4 Resettlement *22*
4.3.5 Labor *22*
4.3.6 International Conventions *23*
4.4 Comparison between World Bank Requirements and Yemeni Requirements **23**
Chapter 5. Environmental and Social Baseline 34
5.1 Tertiary Municipal Services and Solid Waste Management **34**
5.2 Urban Water and Sanitation **34**
5.3 Urban Roads and Transport **35**
5.4 Energy **35**
5.5 Climate **36**
5.6 Climate change-related cross-sector challenges **36**
Chapter 6. Potential Environmental and Social Risks and Mitigation 37
6.1 Selection, design and siting risks **37**
6.2 Contractor Related Risks and Impacts **37**
6.3 Sector Specific Risks and Impacts **40**
6.3.1 Solid Waste Management *40*
6.3.2 Urban Water and Sanitation *42*
6.3.3 Urban Roads *43*
6.3.4 Electricity for Critical Services *46*
Chapter 7. Procedures to Address Environmental and Social Issues 48
7.1 Exclusion List **48**
7.2 Screening **48**
7.3 Environmental and Social Risk Management Instruments **49**
7.4 Consultation and Disclosure Requirements **50**
7.5 Grievance Mechanism **51**
7.6 Implementation of Subproject Mitigation Measures **52**
Chapter 8. Monitoring and Reporting 53
8.1 Subproject Environmental and Social Database **53**
8.2 Monitoring of ESMPs **54**
8.3 Monitoring of Contractors **54**
8.4 Completion Reports **55**
Chapter 9. Capacity 56
9.1 UNOPS **56**
9.2 UW-PMU **56**
9.3 Public World Projects (PWP) **56**
9.4 RMF-IU **56**
9.5 Capacity Development **57**
9.6 Budget **57**
Annex 1. Template for Subproject Screening 59
Screening Form for Potential Environmental and Social Issues **59**
Conclusions of the screening: *60*
Annex 2. Yemeni Environmental Quality Standards 61
Microbiological pollutants in untreated public water conveyed into the distribution network *63*
Biological Pollutants *63*
Waste Water *63*
Annex 3. Indicative Outline of Subproject ESIA 66
Annex 4. Indicative Outline of an ESMP 68

Annex 5. Environmental and Social Requirements for Contractors 70
Contractor Environmental and Social Management Plan (C-ESMP) **70**
ESHS Training **70**
Orientation Training ***71***
Visitor Orientation ***71***
New Task Employee and Contractor Training ***71***
Construction Site Management **71**
Vegetation ***71***
Protection of the Existing Installations ***72***
Waste from Construction Activities ***72***
Air Quality ***72***
Hazardous and Toxic Materials ***73***
Area Signage ***73***
Borrow Pits and Quarries ***73***
Location of Worker Camps ***74***
Decommissioning of Camps, Worksites and Plant ***74***
Health and Safety **74**
Severe Weather and Facility Shutdown ***74***
Lavatories and Showers ***75***
Potable Water Supply ***75***
Clean Eating Area ***75***
Personal Protective Equipment (PPE) ***75***
Noise ***75***
Working in Sewers ***76***
First Aid and Accidents ***76***
Communicable Diseases ***77***
COVID-19 ..... ***78***
Vector-Borne Diseases ***78***
Road safety and Traffic Safety **79**
Cultural Heritage **79**
Emergencies **80**
Stakeholder Engagement **80**
Labour Force Management **80**
Labour Influx ***80***
Labor Conditions ***81***
Insurance ***81***
Grievance Mechanism for Workers ***82***
Protection from Sexual Exploitation and Abuse ***82***
Protection from Child Labor ***83***
Code of Conduct ***83***
Contractor Environmental and Social Reporting **85**
Annex 6. Grievance Complaint, and Suggestion Form 86

List of Tables

Table 1. Comparison of World Bank and Yemeni Environmental and Social Requirements relevant to the Project 24
Table 2. ESHS risks and impacts associated with the activities of YIUSEP II Contractors 38
Table 3. Potential impacts and matching mitigation measures for landfill subprojects 40
Table 4. Potential impacts and matching mitigation for urban water and sanitation subprojects 43
Table 5. Potential Impacts and matching mitigation measures for urban roads subprojects (Standard routine maintenance work) 46
Table 6. Potential impacts and matching mitigation for Electricity for Critical Services subprojects 46
Table 7. Monitoring plan 54
Table 8. Indicative costs of capacity building activities 57
Table 9. Permissible limits for key air pollutants 61
Table 10. Maximum noise level allowed in different environments (Decibel Unit dB) 61
Table 11. Physical Characteristics of drinking water 61
Table 12. Inorganic substances in drinking water 61
Table 13. Maximum limits for organic pollutants in drinking water 62
Table 14. Maximum limits for toxic substances in drinking water 62
Table 15. Bacterial Pollutants 63
Table 16. Maximum levels of chemical substances in industrial and commercial waste water discharged in the public sewerage network 63

Abbreviations

AWD	Acute Watery Diarrhea
CERC	Contingent Emergency Response Component
CSO	Civil Society Organization
DFID	Department for International Development ·
DLAs	District Local Authorities
DNA	Damage and Needs Assessment
ECRP	Yemen Emergency Crisis Response Project
EHS	Environmental, Health and Safety
EHNP	Emergency Health and Nutrition Project
EPL	Environmental Protection Law (26/1995)
ESF	Environmental and Social Framework of the World Bank
ESHS	Environment, Social (including labor), Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FMFA	Financial Management Framework Agreement
FCV	Fragility, Conflict and Violence
GBV	Gender Based Violence
GDP	Gross Development Product
GHS	General Health and Safety guidelines
GIIP	Good International Industry Practice
GIS	Geographic Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
GM	Grievance Mechanism
GRM	Grievance Redress Mechanism
GOAM	General Organization for Antiquities and Museums
HSSE	Health, Safety, Social and Environment
ICRC	International Committee of the Red Cross
IDA	International Development Association
IDP	Internally Displace Person
LC	Local Corporation
LED	Light Emitting Diode
LMP	Labor Management Procedures
LTI	Lost Time Injury
MoPIC	Ministry of Planning and International Cooperation
MoWE	Ministry of Water and Environment
NGO	Non-Governmental Organization
NWSSIP	National Water Sector Strategy and Investment Program
PAP	Project Affected People
PMU	Project Management Unit
PWP	Public Works Project
PV	Photovoltaic
RCA	Root Cause Analysis
RoY	Republic of Yemen
SCAP	Safeguards Corrective Action Plan
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SEP	Stakeholder Engagement Plan
SMP	Security Management Plan
TCC	Technical Coordination Committee

TPM	Third Party Monitoring
UNDP	United Nations Development Program
UNICEF	United Nations Children's Emergency Fund
UNOPS	United Nations Office for Project Services
UW-PMU	Urban Water Project Management Unit
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WSLC	Water and Sanitation Local Corporations
WSS	Water Supply and Sanitation
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
YIUSEP II	Second Yemen Integrated Urban Services Emergency Project

Glossary of Terms Used in the ESMF

Chance find procedure. A chance find is archaeological material encountered unexpectedly during project construction or operation. A chance find procedure is a project-specific procedure which will be followed if previously unknown cultural heritage is encountered during project activities. The chance finds procedure will set out how chance finds associated with the project will be managed. The procedure will include a requirement to notify relevant authorities of found objects or sites by cultural heritage experts; to fence off the area of finds or sites to avoid further disturbance; to conduct an assessment of found objects or sites by cultural heritage experts; to identify and implement actions consistent with national law; and to train project personnel and project workers on chance find procedures.

Child labor consists of work by children that is economically exploitative or likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

Compliance compares how well a process meet the requirements placed on the process.

Disposal. Final placement or destruction of wastes, polluted soils, and toxic or hazardous materials. Disposal may be accomplished through approved secure landfills, surface impoundments, or incineration.

Effluent. Wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall; generally, refers to wastes discharged into surface waters.

Environmental, Health, and Safety Guidelines (EHSGs) are technical reference documents with general and industry-specific statements of Good International Industry Practice. The EHSGs contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable cost. For complete reference, consult the World Bank Group Environmental, Health, and Safety Guidelines, http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/our+approach/risk+management/ehsguidelines.

Environment and Social Impact Assessment (ESIA) identifies and assesses the potential environmental risks impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.

Environmental and Social Management Plan (ESMP) details: (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures.

Environmental and Social Management Framework (ESMF) is an instrument that examines the risks and impacts when a project consists of a program and/or series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified.

Good International Industry Practice (GIIP) is defined as the exercise of professional skill, diligence, prudence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally or regionally. The outcome of such exercise should be that the project employs the most appropriate technologies in the project-specific circumstances.

Grievance. An issue, concern, problem, or claim (perceived or actual) that an individual or community group wants a project implementor or contractor to address and resolve.

Grievance Mechanism (GM) is a locally based, formalized way to accept, assess, and resolve community feedback or complaints from individuals or communities who believe they are adversely affected by the Project.

Hazardous wastes. By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Substances classified as hazardous

wastes possess at least one of four characteristics—ignitability, corrosivity, reactivity, or toxicity—or appear on special lists.

Lost Time Injury (LTI) is the incapacity to work for at least one full workday beyond the day on which the accident or illness occurred**.**

Lost workdays are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

Mitigation. Measures taken to reduce adverse impacts on the environment.

Monitoring. Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements or pollutant levels in various media or in humans, animals, and other living things.

Occupational Health and Safety deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards (WHO).

Sludge. A semisolid residue from any of a number of air or water treatment processes. Sludge can be a hazardous waste.

Solid wastes. Nonliquid, nonsoluble materials, ranging from municipal garbage to industrial wastes, that contain complex, and sometimes hazardous, substances. Solid wastes include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid wastes also refer to liquids and gases in containers.

Stakeholder. Persons or groups who are directly or indirectly affected by a project as well as those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively. They may include locally affected communities or individuals and their formal or informal representatives, national or local government authorities, politicians, religious leaders, civil society organizations and groups with special interests, the academic community, or other businesses.

Stakeholder Engagement is a broad, inclusive, and continuous process between a project proponent and those potentially affected by the project that usually spans the project's life. It includes consultations, information disclosure and dissemination, and participation.

Wastewater Treatment Plant. A facility containing a series of tanks, screens, filters, and other processes by which pollutants are removed from water.

Executive summary

This Environmental and Social Management Framework (ESMF) was prepared by UNOPS for the second Yemen Integrated Urban Services Emergency Project (YIUSEP II).

The World Bank is financing the YIUSEP II to support Yemen's reconstruction and recovery, under the provisions of World Bank OP 10.00, paragraph 12, *Projects in Situations of Urgent Need of Assistance or Capacity Constraints*. The Project aims to restore access to critical urban services in selected cities within the Republic of Yemen in four target sectors: (i) tertiary municipal services and solid waste management; (ii) urban water and sanitation; (iii) urban roads; and (iv) electricity for critical services.

The ESMF was prepared to meet the requirements of the World Bank's Environmental and Social Framework (ESF), most particularly the Environmental and Social Standard on the Assessment and Management of Environmental and Social Risks, including the World Bank Group Environment, Health and Safety (EHS) Guidelines. It also meets the UNOPS Environmental, Health and Safety (EHS) procedures and practices and complies with Yemeni environmental and social laws and regulations.

The use of a Framework is appropriate and necessary, given that the Project consists of a large number of subprojects in many different localities, and that the specific location and activities of each subproject will only be determined during implementation.

UNOPS has in parallel prepared a Labor Management Procedure (LMP) to meet the requirements of ESS2, a GBV/SEA/SH Plan and a Security Management Plan (SMP) to meet the requirements of ESS4, a Resettlement Framework to meet the requirements of ESS5, and a Stakeholder Engagement Plan (SEP) to meet the requirements of ESS10.

The United Nations Office for Project Services (UNOPS) is responsible for overall project implementation, in cooperation with three local Implementing Partners: the Public Works Project (PWP), the Road Maintenance Fund Implementation Unit (RMF-IU), and the Urban Water Project Management Unit (UW-PMU). UNOPS has recruited an Environmental and Social Safeguards Officer (ESSO) based in Sana'a, to oversee Project safeguards, as well as Gender Mainstreaming Officer, a Health and Safety Officer, and a part-time international expert to support the ESSO in the implementation of the ESMF. Each implementing partners will deploy and ESSO and a Health and Safety Officer.

The Project will only rebuild, restore, or rehabilitate existing infrastructure. There will be no expansion of existing facilities nor the creation of new ones, and rehabilitated facilities will be handed back to the competent authorities. The Project will not provide technical assistance to develop Operations and Maintenance (O&M) plans for the reconstructed or rehabilitated facilities. Thus, issues such as the siting of the facilities, and many of their operational impacts will be beyond the scope of the Project.

The bulk of the ESHS risks and impacts is directly associated with the construction and rehabilitation activities of the contractors who will rebuild, rehabilitate, and restore the targeted facilities. Although the risk profile might differ between specific activities, the overall risk profiles of construction activities are analogous for the four target sectors.

The ESMF details specific mitigation measures for each of the four target sectors.

The ESSOs will screen all subproject proposals prepared by UNOPS and its Implementing Partners to: (i) determine the environmental and social issues that might be triggered by the subproject, (ii) identify the relevant Environmental and Social Standards (ESS); (iii) determine the appropriate Environmental and Social risk rating for the subproject, and; (iv) specify the type of environmental and social assessment required, including specific instruments/plans.

UNOPS will prepare proportionate ESMPs for subprojects not requiring a full ESIA and ESMP,

according to the following table of content:

(i) Summary Sheet
(ii) Subproject Description
(iii) Environmental and Social Baseline
(iv) Consultations
(v) Mitigation Instruments

Subprojects that cause significant environmental and social impacts will require a full ESIA and ESMP, and might also require a Resettlement Plan. Guidance for resettlement planning is detailed in the Project's Resettlement Framework.

UNOPS and its Implementing Partners will apply the World Bank's requirements for **consultation and disclosure,** as detailed in the Project Stakeholder Engagement Plan. Consultations will be initiated as soon as subprojects screening has been completed and consultation records will be kept in the Project Office. Consultations will take into consideration the sociocultural context of Yemen, as well as the ongoing COVID-19 epidemic.

UNOPS and its Implementing Partners will incorporate **environmental and social requirements for contractors** in tender documentation and contract documents, so that potential bidders are aware of environmental and social performance requirements expected from them and are able to reflect that in their bids. The cost to contractors of meeting the ESHS requirements will be included in their respective contracts. UNOPS and its Implementing Partners will enforce compliance by contractors with these requirements.

The requirements include 10 sections:

(i) Contractor Environmental and Social Management Plan (C-ESMP)
(ii) ESHS Training
(iii) Construction Site Management
(iv) Occupational Health and Safety (OHS)
(v) Road safety and Traffic Safety
(vi) Chance Find Procedures
(vii) Emergency Preparedness and Response
(viii) Stakeholder Engagement
(ix) Code of Conduct

UNOPS will **monitor and report** on implementation of the ESMF, with inputs from implementation partners and the TPM agent. The UNOPS ESSO will ensure that safeguards monitoring is included in the Project's quarterly reports to the World Bank.

The Project will establish a **Grievance Mechanism (GM)**, as detailed in the Project Stakeholder Engagement Plan, that will be used for environmental, resettlement and social issues. The ESSO in UNOPS and the Implementing Partners will handle Project activity-related complaints.

UNOPS is fully covering, as part of the fee that it will charge the Bank, the cost of the ESSO, the Gender Mainstreaming Office, the health and Safety Officer, as well as any associated operational costs.

The Implementing Partners are covering the cost of their respective ESSOs and Health and Safety Officers as part of their respective Project Cooperative Agreement (PCA) with UNOPS. These staff might not work full time on YIUSEP II activities, as each Implementing Partners has partnered with several projects.

The cost of due diligence for specific subprojects (preparation of the screening form, consultations, GM, preparation of ESMPs, and monitoring) are included in the costs/budget for each subproject.

Chapter 1.
Introduction and Background

1.1 Introduction

1. This Environmental and Social Management Framework (ESMF) was prepared by UNOPS to meet the requirements of the World Bank's Environmental and Social Framework (ESF), as well as national environmental laws and regulations, for the second Yemen Integrated Urban Services Emergency Project (YIUSEP II; P175791). The use of an ESMF is appropriate and necessary, given that the Project consists of a large number of subprojects in many different localities, and that the specific locations and activities of each subproject will only be determined during implementation.

2. The Project ESMF will guide UNOPS and its Implementing Partners, to ensure that all subprojects meet the requirements of the ESF, including the preparation of subproject specific Environmental and Social Management instruments in accordance with the ESF. For this purpose, the ESMF details how UNOPS will screen each subproject to assess its environmental and social risks and impacts, identify the necessary mitigation measures, and monitor ESMP implementation, most particularly the environmental and social performance of Project contractors.

3. UNOPS has in parallel prepared a Labor Management Procedure (LMP) to meet the requirements of ESS2, a GBV/SEA/SH Plan and a Security Management Plan (SMP) to meet the requirements of ESS4, a Resettlement Framework to meet the requirements of ESS5, and a Stakeholder Engagement Plan, to meet the requirements of ESS10.

1.2 Background[1]

4. After five years of escalating conflict, the Republic of Yemen (RoY) continues to face an unprecedented humanitarian, social and economic crisis. In May 2015, the United Nations (UN) placed Yemen at level 3 of humanitarian distress, the highest categorization of countries in conflict. Since then, Yemen has been described as the worst humanitarian crisis in the world[2], with 24 million Yemenis requiring humanitarian assistance and 3.65 million internally displaced. More than 20 million people are food insecure, of which 10 million are suffering from extreme hunger. As per the UNDP estimates (2019), there have been 102,000 combat deaths and 131,000 indirect deaths due to lack of food, health services and infrastructure, and many more injuries. The country is also facing the worst cholera epidemic in modern history. The economy has been badly affected by the prolonged conflict, depriving millions of their livelihoods and jobs and driving poverty levels to over 80 percent. In 2018, Gross Domestic Product (GDP) was estimated at US$23 billion, and although official statistics are no longer available, evidence suggests that GDP has contracted by about 40 percent cumulatively since 2015[3].

5. Yemen's cities have been very badly impacted by the conflict, with widespread destruction of urban infrastructure. In January 2020, damage in the 16 cities covered by the World Bank's Yemen Dynamic Needs Assessment (DNA) was estimated between US$6.9 and US$8.5 billion.[4] The housing sector has experienced the most damage, with costs ranging between US$5.1 and US$6.2 billion, followed by the health (US$605–740 million) and power (US$541–662 million) sectors. Estimated damage to WASH, transport, and education infrastructure is also immense, estimated to be in the

[1] The Background section is borrowed from the Project Appraisal Document

[2] UN Secretary-General António Guterres in remarks to donor conference in Geneva on April 3, 2018

[3] World Bank Yemen Republic Overview, April 2018

[4] Yemen Dynamic Needs Assessment: Phase 3 (2020 Update) (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/490981607970828629/Yemen-Dynamic-Needs-Assessment-Phase-3-2020-Update.

hundreds of millions. Amongst the 16 DNA cities, Sana'a has suffered the greatest damage, followed by Taiz, with damages estimated at US$2.4–3.0 billion and US$1.4–1.7 billion respectively. Aden and Hodeidah have also been severely affected by the conflict.

6. The damage to Yemen's public institutions is causing widespread disruptions in basic urban services across the country. Agencies responsible for basic service delivery are disintegrating due to a lack of resources and arrears of civil servant salary payments for more than three years. Since the start of the conflict, waste collection services have been interrupted, urban roads have been wrecked, water, sanitation, and drainage infrastructure has been extensively damaged, and critical facilities have been left without electricity. Consequently, two-thirds of the population lack access to safe water and sanitation, and healthcare services are failing to meet the country's immense needs.

7. In addition, the country is affected by regular flash floods and heavy rainfall events that have compounded the severity of the situation in urban areas. From mid-April to August 2020, Sana'a, Hodeidah, Abyan, Marib, Amran, Sa'ada, Al Jawf, Ibb, Hajjah, Hadramout, and Al Dhale'e were badly flooded due to heavy rainfall. According to media reports, 172 people died, and many were injured[5]. In addition, an estimated 300,000 people in Yemen were reported to have lost their homes, crops, livestock and personal belongings.[6] Alongside drought and increased water stress, rainfall intensity and associated flooding, is projected to increase with climate change. There are high concentrations of risk and vulnerability in urban areas, particularly coastal cities, due to exposure to sea level rise and storm surge, flash floods, and epidemiological hazards enhanced by the flash floods and depletion of water resources for household consumption. Due to the ongoing multiple crises Yemen has very limited capacity to deal with the future impacts of a changing climate. The level of economic vulnerability to climate change is extremely high, as over 80% of the population are reliant on humanitarian assistance. Furthermore, the cumulative impact of conflict and climate change is exacerbating the health risks for vulnerable communities.[7]

8. The COVID-19 risk to Yemen is very high compared to other countries as the conflict has taken a heavy toll on the country's capacity to respond to crises. Lockdowns, quarantines and the closure of airports have been implemented sporadically, with unknown effect on containing the spread of COVID-19. According to the WHO's COVID-19 Dashboard, as of 23 November 2020, there were 2,073 confirmed cases and 605 COVID-19 related deaths in Yemen, suggesting a fatality rate as high as 30%[8]. While there is very little data available to quantify the problem, there is a general consensus among development agencies on the ground that the figures are underreported. COVID-19 is a threat multiplier as the Yemeni people are among the world's most malnourished, and evidence shows that malnourished individuals are at much higher risk of contracting, becoming seriously ill and dying from COVID-19[9]. COVID-19 is also devastating for Yemen's struggling economy and is compounding the impacts of recent urban flooding and a declining global oil price, which is the only significant export of the country.

9. Women are disproportionately affected by the hardships in Yemen due to pre-existing inequalities related to patriarchal systems and norms. Gender disparities are extreme[10] and economic opportunities are extremely limited, with a labor force participation rate of only 6.2%, compared to 65.4% for men (ILO, 2015). The conflict and recent flooding have extensively damaged water and sanitation

[5] More than 260 houses were damaged, including some in Sana'a's historic Old City which is a UNESCO World Heritage site.

[6] UNHCR, August 2020, https://www.unhcr.org/en-us/news/briefing/2020/8/5f3e7faf4/300000-people-lose-homes-incomes-food-supplies-belongings-due-catastrophic.html.

[7] http://www.emro.who.int/pandemic-epidemic-diseases/cholera/outbreak-update-cholera-in-yemen-12-january-2020.html

[8] https://covid19.who.int/region/emro/country/ye

[9] See 2020 Global Nutrition Report https://globalnutritionreport.org/reports/2020-global-nutrition-report/2020-global-nutrition-report-context-covid-19/

[10] The country ranks last globally in the World Economic Forum's Global Gender Gap Index (153rd place). Yemeni women are also largely absent from political life, and have very low literacy rates at only 35%, compared with 73% of men, which further limits their opportunities to be beneficially and professionally employed, impacting their earning potential.

infrastructure, with a particularly heavy burden on women, who spend three to six hours fetching water in parts of Yemen. Children (girls especially) have reportedly missed school to help their mothers[11]. The World Health Organization (2017) have also found that of acute watery diarrhea (AWD) and cholera cases deaths, 49% were women, and 34% were children under five[12]. Because Yemeni women are also largely absent from political life, and have very low literacy rates at only 35%, compared with 73% of men[13], their ability to influence resource allocation and decision-making is extremely limited.

1.3 Rationale

10. In line with ESS1, the Project uses an Environmental and Social Management Framework instead of an Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP) because the exact nature and location of subprojects and their impacts are not fully known at the time of Project appraisal. The subprojects will be selected after August 2021, once the Project team can carry out stakeholder consultations for investment selection.

11. As indicated in ESS1:

> *The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used.*

1.4 Lessons learned

12. The Project builds on the Yemen Integrated Urban Services Emergency Project (YIUSEP I; P164190) that is implemented by UNOPS and includes similar components.

- YIUSEP I implemented 154 subprojects: PWP (81); RMF-IU (25); UW-PMU (26), and UNOPS implemented 22 electricity sector subprojects.
- UNOPS and its Implementing Partners prepared ESMPs for all subprojects (Level 2), and jointly supervised their implantation by contractors.
- None of the subprojects required the preparation of an ESIA (Levels 3 and 4).
- UNOPS and its Implementing Partners conducted environmental, social, and OHS inspections usually on a weekly basis during subproject implementation. Noncompliance was addressed and corrected immediately by the contractor's team/safety officers.
- Contractor noncompliances included: (i) workers not wearing appropriate PPE: (ii) workers not fully aware of the worker's GRM; (iii) waste and debris not collected immediately and transported to the assigned landfill; (iv) one child labor case with a PWP contractor that was immediately addressed.
    - A flagman was slightly injured and treated on the site when he jumped over a footpath to avoid an oncoming car during the maintenance of a solar street light pole in Sana'a City in February 2019. UNOPS immediately conducted an incident review and identified lessons learned; the contractor was warned, and corrective measures taken, including defining safe distance requirements for safety cones, barriers and safety lights.
    - One worker and a relative died in a sewer at a PWP sanitation rehabilitation site in

[11] 2019 World Bank-UNOPS qualitative study.

[12] They most likely have higher "occupational exposure" through greater amount of household work.

[13] This also limits their opportunities to be beneficially and professionally employed, impacting their earning potential. World Economic Forum, 2020, Global Gender Gap Report 2020

March 2019. UNOPS conducted Root Cause Analysis (RCA), and prepared and implemented a Safeguards Corrective Acton Plan (SCAP), including more explicit contractor requirements for work in sewers. PWP terminated the contract. Compensation was paid by the contractor, not by the project.

- RMF-IU road maintenance in Dhamar City resulted in a death of one person. UNOPS conducted an RAC, and prepared an implemented a SCAP. A warning was issued to the contractor. Compensation was paid by the contractor, not by the project.

- These SCAPS were implemented to the satisfaction of the World Bank, and both UNOPS and the local partners were able to learn from these incidents and enhance their safeguards practices.
- Complaints received by the GRM included requests to: (i) repair or provide regular maintenance to installed generators or solar systems; (ii) immediately remove waste and debris from working sites; (iii) clean road maintenance and paving sites to ensure proper rainwater drainage; (iv) avoid making noise or generating dust; (v) avoid compromising other services such as electricity, telecommunication, or sanitation. when excavating and securing sites; (vi) maintain access; (vii) to shorten the duration of works affecting streets
- Many of complaints concerned procurement or labor issues, such as delayed payments to contractors, disputes on remaining due payment between contractors, subcontractors, suppliers of construction materials, contractor's engineers and workers and terms of payments.
- Most complaints were resolved immediately with the contractors to the satisfaction of the complainants, except for financial disputes between contractors and other parties where UNOPS was not a party. UNOPS advised contractors to solve these complaints amicably. If the complainant was not satisfied, they had the option to go for second level of legal process.

Chapter 2.
Project Description[14]

13. The World Bank is financing the second Yemen Integrated Urban Services Emergency Project (YIUSEP II), under the provisions of World Bank OP 10.00, paragraph 12, *Projects in Situations of Urgent Need of Assistance or Capacity Constraints*. The Project will be implemented by the United Nations Office for Project Services (UNOPS), in partnership with local Implementing Partners.

14. The overall objective of YIUSEP II is to restore access to critical urban services of selected cities within the Republic of Yemen.

2.1 Project Components

15. Building on the success of YIUSEP, the Project will be financed through an IDA grant of SDR xx million, in an amount equivalent to US$50 million. The Project will finance the restoration of critical urban infrastructure damaged by the conflict and recent flooding (Component 1), whilst strengthening the capacity of local institutions to provide continuity and sustainability of urban service delivery (Component 2). The Pre-Appraisal mission (December 8-9, 2020) allowed for the preparation of the tentative first year investment pipeline, based on technical and sustainability criteria, including: (a) ability to address the unmet needs in targeted cities; (b) impact on COVID-19 response; (c) potential to build resilience to urban flooding; (d) feasibility (considering access to goods and supply, conflict, capacities) and potential of integration with other activities; and (e) potential for local job creation. A core Project principle is to prioritize investments which offer the greatest value for money and maximize the number of beneficiaries, including vulnerable groups. Based on the lessons learned from YIUSEP, this is best achieved through a spatially targeted and integrated approach to investments, with multisectoral coordination and participatory identification and planning of interventions. To retain flexibility and adaptability, subproject selection will occur on an incremental basis to respond to changing needs on the ground[15]. Notwithstanding the above, fair distribution of resources across the different cities and sectors during the two years of Project implementation, is also a key consideration in Project design.

Component 1: Service Restoration (US$40 million)

Subcomponent 1.1: Tertiary Municipal Services and Solid Waste Management

16. The objective of this subcomponent is to restore basic neighborhood-level infrastructure in the selected Yemeni cities, and to address the critically urgent needs that could not be met under YIUSEP. This subcomponent will finance[16]: i) flood management interventions in Aden, Amran, Sada'ah and Taiz; ii) SWM initiatives in Sana'a, Dhamar, Mukhalla and Sada'ah (including supply contracts for equipment, rehabilitation of waste transfer stations, landfill rehabilitation measures); and iii) rehabilitation of neighborhood sanitation infrastructure in Amran, Aden, Hodeida, Taiz and Lahj. By rehabilitating drains and clearing blockages, this subcomponent helps to mitigate flooding in urban areas in response to increasing occurrences of flash floods and heavy rainfall related to climate change. Complementary spatially targeted investments will further contribute to climate change adaptation and mitigation, including stone paving of neighborhood streets, and rehabilitation of local parks and green spaces to better manage stormwater runoff and help reduce the urban heat island

[14] This Chapter is based on the Project description in the Project Appraisal Document (PAD) dated 10 April 2021 that was shared by the World Bank. It is not the final version.

[15] Selection criteria will be further detailed in the Project Operations Manual (POM).

[16] Subproject selection will be finalized in coordination with the relevant District Local Authorities (DLAs) and local communities.

effect.

Subcomponent 1.2: Urban Water and Sanitation

17. This subcomponent aims to support the COVID-19 response and build gender- related resilience by restoring access to clean water and sanitation. This subcomponent will finance small- to medium-scale goods and infrastructure works, including replacing pumps and repairing pipes, as well as critical supplies (such as fuel) to restore water and sanitation service delivery at the city level. The cities of Lahij, Taiz, Amran, Sana'a, Dhamar, Al Dhale'e, Al Mukalla and Al Hodeida will benefit from support to urban water supply, whilst investments in wastewater and sanitation are proposed for Aden, Al Mukalla, and Al Hodeida.[17] To support public health improvements, rehabilitation of the water and sanitation laboratories are proposed for Sa'ada and Zinjibar. The WASH interventions designed under this subcomponent will include climate- resilience measures such as flood drainage interventions to help reduce the impact of the flash flood events. Solar energy will also be used to operate key water facilities, providing safe and clear water, with lower emissions.

Subcomponent 1.3: Urban Roads

18. The subcomponent will improve access and mobility within the target cities of Sana'a, Aden, Lahij, Taiz, Al Mukalla, Dhamar and Amran, through rehabilitation and repair of selected major entrances and main streets in these cities, and neighborhood streets. Planned interventions include rehabilitation of road assets damaged by recent flooding in Sana'a and Amran. This subcomponent will have wider economic benefits as it will help revive national contracting and consulting industries and supply chains, supporting local livelihoods by maximizing the use of manual labor and creating short-term employment opportunities. Lack of road access has also partially contributed to increasing deforestation as rural populations do not have access to fuel[18] - a trend that is undermining the country's climate change adaptation and mitigation efforts. Activities under this subcomponent include spot and pothole repairs, crack sealing, patch works, asphalt resurfacing, road safety improvement works and intersection rehabilitation. All rehabilitation works will consider the climate risks that the roads are exposed to and will adopt build back better resilience principles.

Subcomponent 1.4: Energy for Critical Services

19. This component restores electricity supply to hospitals, clinics, and other medical facilities, in the cities of Sana'a, Dhamar, Amran, Sa'ada, Hodeida, Zinjibar, Al-Dhale'e, Taiz, Lahij and Al Mukalla. The subcomponent will be closely coordinated with relevant UN agencies, local partners, and subcomponent 1.2 (which restores electricity for critical water and wastewater assets). To contribute to climate change mitigation, renewable and clean power generation will be encouraged as far as possible. This includes rooftop or ground-mounted solar photovoltaic (PV) based generation (with battery storage), diesel- solar PV hybrid systems. Wherever feasible, energy efficient LED lights in buildings and solar water heaters will be integrated with the electricity supply interventions. Although preference will be given to installation of solar PV and hybrid generation technologies, given the severity and urgency of the situation on the ground in Yemen, rehabilitation of existing conventional diesel generators may be unavoidable in some instances. For instance, diesel generation systems will be required for some hospital buildings and health facilities (and a small number of educational facilities). Notwithstanding it is expected that renewable energy solutions under the Project can showcase their feasibility and path the way forward for increased use of renewables in future private construction and energy efficiency in public buildings.

[17] For investments in sanitation the team will ensure the entire supply chain from collection to final treatment is made functional.

[18] https://www.scidev.net/global/news/yemen-s-forests-another-casualty-of-war-amid-fuel-crisis/

Component 2: Implementation Support and Capacity Development

Subcomponent 2.1: Project Implementation and Management Support

20. This subcomponent will finance: (a) general management support (indirect) costs for UNOPS; (b) direct Project management and supervision costs required to support the implementation of the Project; (c) Project monitoring, evaluation and coordination at the city level; (d) operations and updates to the subproject tailored, global information system (GIS)-based expenditure tracking and subproject information dissemination platform created under YIUSEP to promote transparency and accountability; e) independent audits of Project activities, if required; and f) operation of the already existing Grievance Redress Mechanism (GRM) in the UNOPS Sana'a office to document any possible complaints and ensure follow-up.[19]

Subcomponent 2.2: Enhanced Capacity Building

21. YIUSEP focused on strengthening institutions' capacities to plan and implement the Project activities, including maintenance and sustainability of the infrastructure built. Responding to lessons from YIUSEP, this proposed operation will broaden the scope to include training on technical and non-project-related aspects to support local institutions[20] so they are better equipped to perform their service delivery functions beyond the scope of the Project. Training topics to be included are procurement and contract management, operational health and safety (OHS), social and environmental safeguards, low carbon and climate resilient infrastructure design approaches, grievance redress, gender-sensitive citizen engagement, and other critical capacity building needs which may be identified. Given the gap between men and women's labor force participation rates, and the absence of women from professional and technical roles within the local institutions, this component will also include gender-sensitive workplace training (including GBV) and capacity building and training on non-discriminatory hiring and recruitment, so as to create opportunities for prospective female employees.

22. **Capacity building action plan.** UNOPS is currently conducting a capacity building needs assessments for a variety of local partners, which will inform the development of a capacity building action plan under this subcomponent. In the water and sanitation sector, UNOPS has already conducted four rapid assessments on LWSCs to evaluate capacity needs. Additional rapid reviews will be conducted on the remaining seven LWSCs to review existing needs and propose suitable capacity building and training activities. Similar reviews will be conducted for PWP, RMF-IU, UW-PMU and selected local cleaning funds. Depending on availability of funds, these reviews will be completed before effectiveness or right after. Priority will be given to local partners that will be involved in the implementation of the first-year subprojects. Other international partners have also prepared a series of capacity assessments for local partners in Yemen, for example GIZ in the WASH sector in 2018 and 2019, which will support the finalization of the capacity building action plan.

23. This subcomponent will include traditional training activities to be delivered in person and/or virtually, preparation of operation manuals, handbooks and brief guidelines to support the training. This subcomponent will engage local partners and targeted operators in workshops, group discussions, and hands-on simulations, and will provide the necessary IT equipment and/or software to perform each activity. The capacity building activities will also be made available to interested private sector actors and local research and academic institutions. The task team is currently identifying potential partnerships with local research institutions to explore how capacity building activities initiated under the proposed Project could be institutionalized to improve sustainability. The subcomponent will be designed and delivered by international experts while tapping to existing local expertise. This subcomponent will also support citizen engagement, communication, and the Project Gender Action

[19] The GRM system will be focused on selection and implementation of subprojects under the Project.

[20] The beneficiaries of the training and capacity building include local implementing partners and agencies in the respective cities (e.g., local water and sanitation corporations (LCs), local offices of RMF-IU, DLAs, PWP, local CFs).

Plan (GAP), including facilitation of a bottom-up process for needs prioritization at the local level.

24. Beyond institutional capacity building, the Project will also provide training and support to local contractors, small and medium enterprises (SME's) and prospective entrepreneurs, including women owned businesses (WOB). The aim is threefold: i) reduce Project risks and improve local skills and competencies among local firms and contractors engaged in the Project, on topics such as OHS and GBV; ii) promote local economic development by providing training and support to prospective local businesses in the urban sector, including WOBs, on topics such as registering a business, procurement and financial management; and iii) reduce the gender gap by providing women with opportunities to start a business.

Subcomponent 2.3: Third Party Monitoring

25. UNOPS will engage a Third-Party Monitoring (TPM) agent to undertake independent results verification of subprojects funded under the Project. The TPM agent will include female staff. On a quarterly basis, the TPM agent will report on the activity outputs, the restoration of services for the intended beneficiaries, and the fiduciary and safeguard processes followed by the local partners. The Terms of Reference (TORs) for the TPM agent will be developed by UNOPS and agreed upon with the World Bank. To ensure the independence of the TPM agent, it will share its monitoring reports simultaneously with UNOPS and the World Bank. UNOPS will also share a report with the World Bank on the actions taken to address any implementation issues identified by the TPM agent within 2 weeks from the date of submission of the monitoring report.

Component 3: Contingent Emergency Response

26. The objective of this component is to support the country's response capacity in the event of an emergency, following the procedures governed by OP 10.00 paragraph 12 (Rapid Response to Crises and Emergencies). There is a possibility that, during Project implementation, a natural disaster, epidemic or another emergency may occur, which would cause a major adverse economic and/or social impact. In anticipation of such an event, the Contingent Emergency Response Component (CERC) allows UNOPS to receive support by reallocating funds from other Project components or serving as a conduit to process additional financing from other funding sources for eligible emergencies to mitigate, respond to and recover from the potential harmful consequences arising from the emergency. Disbursements under this component will be subject to the declaration of emergency by the RoY, the international community, or the UN.

2.2 Project Beneficiaries

27. The Project is expected to reach approximately 1.0 million beneficiaries. The beneficiaries include the residents and IDPs of cities where infrastructure investments are being implemented, where urban services are restored, and where the capacity of local institutions is being restored. The cities included in the project represent more than 60% of the urban pre-crisis population, and more than 20% of the total country pre-crisis population.

28. Of the above beneficiaries with access to urban services and assets restored, a subset of approximately 300,000 beneficiaries will be identified who are benefitting from enhanced resilience through interventions in the WASH, transport, and energy sectors in the same cities.

Chapter 3.
Institutional and Implementation Arrangements

29. The Project is an emergency operation processed under OP 2.30 and OP 10.00 paragraph 12. It uses UNOPS as the recipient of IDA funds and alternative implementation agency on an exceptional basis under the Financial Management Framework Agreement (FMFA) between the World Bank and UN agencies. The financial management arrangements will be governed by the FMFA, which provides for the use of the UN's Financial Regulations. UNOPS will follow its own procurement procedures as Alternative Procurement Arrangements allowed by the World Bank's Procurement Framework Policy Section III.F.

30. The project was designed to complement existing WBG emergency operations in Yemen, and to become an integral part of the World Bank emergency response for Yemen. The project also complements the Yemen Emergency Crisis Response Project (ECRP: P159053) that focuses on improving livelihoods, infrastructure, and services primarily in rural areas. Moreover, the project will coordinate closely with the proposed Yemen EHNP Fourth Additional Financing (P175532), by complementing the infrastructure-heavy approach of the EHNP in the water and sanitation sector with targeted small- and medium-scale investments that aim to restore WWTPs at the city level.

31. The Project is designed to work directly with independent local institutions, such as PWP, RMF-IU, UW-PMU, as implementers for the benefit of local communities and local service providers such as Local Water and Sanitation Corporations. Line Ministries (Central Government) in Sana'a or in Aden will not play a direct role in the design or the implementation of project activities.

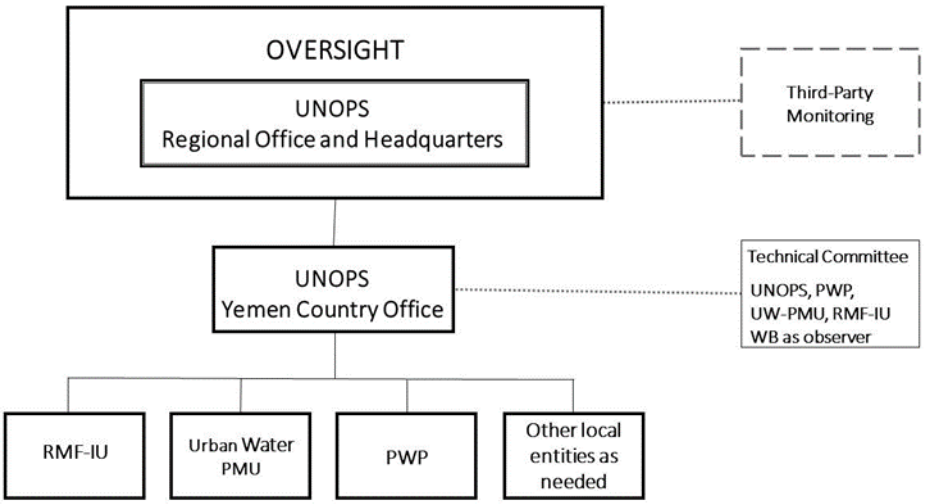
3.1 UNOPS

32. The project will be implemented by UNOPS through direct implementation as well as project cooperation agreements between UNOPS and three local Implementing Partners: (i) the Public Works Project (PWP); (ii) the Road Maintenance Fund Implementation Unit (RMF-IU) (RMF-IU), and; (iii) Urban Water Project Management Unit (UW-PMU). UNOPS will: (a) take responsibility for project implementation; (b) monitor the project targets and results in coordination with the local partners; (c) handle relevant procurement, financial management, and disbursement management including the preparation of withdrawal applications under the project; and (d) ensure that all reporting requirements for IDA are met per the Project Financing Agreement. Figure 2 below describes the project governance and management structure to be put in place under the project.

33. The Bank is currently exploring partnership modalities to implement Subcomponent 2.2. This subcomponent will be implemented by an experienced partner active in the field and with presence on the ground. This modality could involve subcontracting by UNOPS or direct engagement as a recipient of IDA funding. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)[21] is being considered as the strongest candidate to implement such activities because of: i) their track record in delivering effective capacity building programs in Yemen, in particular in the WASH sector which will be prioritized under this operation to help address the flood and COVID-19 emergencies; and ii) their presence in Yemen and ability to travel and reach cities in the North and South of the country.

[21] This is an direct quote from the PAD. Because of the uncertainty regarding its role, the ESMF could not assess GIZ's environmental and social risk management capacity in Yemen.

Figure 1. Project Governance and Management Structure



34. The UNOPS office in Sana'a hosts a project management and implementation support team consisting of international and national staff: project manager, procurement specialists, finance specialists, an Environmental and Social Safeguards Officer (ESSO), a Gender Mainstreaming Officer, a Health and Safety Officer, a logistics officer, and an administrative officer. This office has already successfully implemented the YIUSEP and has a significant presence in Yemen. UNOPS has a regional office and hub in Amman, Jordan, that provides support and advice as needed. The hub also hosts a Regional Oversight and Management Advisor that oversees the operations in the region and provides management advice to the Regional Director. The Regional Office is also supported by the UNOPS headquarters based in Copenhagen, Denmark, which provides global corporate oversight and program support.

3.1.1 TPM

35. UNOPS shall recruit a Third-Party Monitoring (TPM) agent (composed of international audit firm and an experienced technical firm) to undertake independent results verification of subprojects funded under the project, on the basis of ToRs developed by UNOPS and approved by the World Bank. The TPM will report simultaneously to the WB and to UNOPS on the Project's technical achievements and the environmental and social performance of the Project.

3.1.2 ESMF Implementation

36. UNOPS is responsible for the overall implementation of the ESMF. More specifically UNOPS will ensure that:

- site specific ESIAs and ESMPs are prepared in a timely manner, as needed.
- tender documents and construction contracts include effective and enforceable contractual clauses to manage environmental and social risks
- no activities start before the required environmental and social risk management measures are in place
- the environmental and social performance of contractors at all times meets the Project's environmental and social requirements.

37. The ESSO will be supported by a part-time international expert, who will assist in the management, monitoring and reporting of environmental and social risk management aspects throughout project implementation.

38. In addition, the Implementing Partners (PWP, RMF-IU, UW-PMU) will each designate an

ESSO and a Health and Safety Officer, who will monitor and control the on-site environmental and social performance at subproject level.

3.2 Implementing Partners

39. While retaining overall responsibility for implementation, fiduciary and safeguards aspects of the Project, UNOPS will work with local partners for the implementation of Project activities. These local partners have been created through World Bank and other international donor interventions, have years of experience in implementing IDA investments, and have a strong implementation record under YIUSEP. During the crisis, they have continued to support the implementation of donor-funded projects, leveraging their sector-specific knowledge, relationships with local entities, and on-the-ground experience. They have a good track record of successfully implementing safeguards requirements, in compliance with World Bank policies. Despite the conflict, these project management units have improved their safeguards capacities through YIUSEP and several capacity building and training programs. Given that they have not yet implemented projects under the ESF, UNOPS will ensure appropriate training, as indicated in Section 9.5 of this ESMF.

3.2.1 Public Works Project (PWP)

40. The World Bank and other regional, bilateral, and international development agencies have funded and supported PWP since its inception in 1996. Between 1996 and 2015, PWP implemented 5,149 projects in about 11,200 villages and 1,300 urban neighborhoods, totaling an estimated US$648 million. PWP has played a significant role in improving poor communities' access to education, water, sanitation, roads, and irrigation, among other services. Bank experience with PWP has shown that the organization has a good reputation for fiduciary due diligence, effective delivery of results and political neutrality. PWP, currently, is playing an important implementation role for implementing the Tertiary Municipal Services subcomponent of the YIUSEP. Its performance has been very satisfactory. PWP is headquartered in Sana'a with nine regional offices and a current core staff of 53.

3.2.2 Road Maintenance Fund Implementation Unit (RMF-IU)

41. The RMF-IU established as a special implementation unit responsible for most aspects of foreign-funded maintenance projects, in particular the fiduciary and safeguards as well as regular monitoring and reporting. Over the years, the RMF-IU has gained considerable experience in procurement and contract management. Created in 2005, it had implemented several road maintenance and road rehabilitation contracts with funding from the road maintenance budget as well as from various donors, including the World Bank. For these contracts, the unit had managed all procurement activities for goods, works and consulting services. It had accumulated extensive experience in preparing bids, requests for proposals from consultants, and tender documents. Currently, the RMF-IU is involved in implementing the Urban Roads subcomponent of the YIUSEP. It is headquartered in Sana'a with a small office in Aden. Prior to the crisis, it maintained four regional offices in Taiz, Ibb, Lahj and Al Hodeidah.

3.2.3 Urban Water Project Management Unit (UW-PMU)

42. The UW-PMU has implemented several water supply and sanitation projects in Yemen. It was established in 2002 as a financially and administratively independent PMU to manage all activities related to the implementation of the World Bank Urban Water Supply and Sanitation Adaptable Program Loan (P057602). During the implementation of this project, the UW-PMU attracted funds from various donors. It had implemented projects including 1,000 km of water supply networks, 250 km of sewer lines, reservoirs with a total capacity of 40,000 m^3, three wastewater treatment plants, drilling and construction of 65 production and investigation boreholes and several emergency rehabilitations works. The UW-PMU is the local Implementing Partner for the Urban Water and Sanitation subcomponent of the YIUSEP. It is based Sana'a and Aden cities and has close working relationships with LCs.

3.3 Other National Stakeholders

3.3.1 Local Water and Sanitation Corporations (LCs)

43. Local Water and Sanitation Corporations (LCs) are decentralized, corporatized and commercialized utilities established under Cabinet Decree 237 of 199, which serve the main cities and secondary towns in a given governorate. By law, LCs' Boards are responsible for all aspects of service development and provision in their area, including design and construction of water supply systems and their subsequent ownership, operation and monitoring, as well as tariff setting.

44. Prior to the escalation of the conflict, 23 LCs and 10 annexed autonomous utilities (AUs) had been established, and their service areas covered about 50 percent of the country's urban population, with the rest covered by private tankers. LCs provide services to large cities whereas AUs are utilities in secondary towns of the same governorate.

45. UNOPS will ensure that implementation activities under subcomponent 1.2 shall be in full cooperation and collaboration with respective LCs. For this purpose, the concerned LCs will sign partnership agreement with UNOPS

3.3.2 Local Councils

46. Local councils are the administrative body which have been elected by the local community for each governorate/ directorate. They cooperate with governmental offices in implementing, operating and supervision of projects. They approach donors for financing the demanded projects and facilitate handing over the different important infrastructure services projects to the related ministry office.

3.3.3 Local Cleaning Funds

47. Local Cleaning Funds are independent local entities for each governorate that have operational and maintenance procedures for the collection, separation, transport of solid waste, and for the management of landfills. They fall under local authorities (sub-national authorities) and were created a result of decentralization efforts following the Yemeni Local Authority Law of 2000. They are entitled to and usually receive certain local revenues for their operation.

48. Local Cleaning Funds are expected to have clear policies and procedures, but their capacity to implement these policies and procedures varies greatly between governorates and depends on the level of local funding they receive. They perform best in large cities such as Sana'a and Aden.

3.3.4 Civil Society Organizations (CSOs)

49. There are over 12,000 registered CSOs in Yemen, but only a few hundred CSOs have the capacity and resources to fulfill their mandates. As a consequence, UNOPS will be selective in engaging CSOs with the Project activities.

50. Nonetheless, under subcomponent 2.2 of the Project and starting with the second year of implementation, the Project will expand to include additional activities that will be based on community priorities identified through citizen engagement mechanisms and the community validation of investment options. UNOPS will implement these activities by engaging Civil Society Organizations or other relevant technical experts, as needed.

3.4 The World Bank

51. The World Bank will closely coordinate with UNOPS for the implementation and overall oversight of the of site-specific environmental and social risk management instruments, e.g., ESMPs and RAPs to ensure that their scope and quality are satisfactory to the Bank.

52. The World Bank will also monitor the implementation of the different prepared instruments through regular supervision missions (which will include an environmental and/or social specialist) during which document reviews, and site visits and spot-checks by TPM will be conducted as needed.

3.5 Project Technical Coordination Committee (TCC)

53. To facilitate the investment planning process and ensure cross-sectoral coordination, UNOPS will chair a TC composed of representatives from the local partners (PWP, RMF-IU and UW-PMU). Other members will be engaged during the project, if needed. The World Bank will join the TC as an observer. The TC will play an advisory role and will meet quarterly and on an as needed basis. Its main tasks will include a) conducting a periodic review of project implementation progress and providing recommendations for improvement, as necessary; b) reviewing proposed sub-projects for the yearly investment plans and recommending a shortlist; and c) strategically communicating the project and its investments to other donors and stakeholders.

Chapter 4.
Legal and Regulatory Framework

54. This ESMF is prepared to:

(i) meet the requirements of the World Bank's Environment and Social Standards (ESS), including the World Bank Group Environment, Health and Safety (EHS) Guidelines, and other guidelines and guidance
(ii) comply with national environmental and social laws and regulations.

4.1 World Bank Requirements

4.1.1 World Bank Environmental and Social Framework

55. The World Bank Environmental and Social Framework (ESF) sets out the World Bank's Commitment to sustainable development. It includes a set of ten Environmental and Social Standards that establish the mandatory requirements that the Borrower and the projects must meet through the project life cycle:

- **Environmental and Social Standard 1.** Assessment and Management of Environmental and Social Risks and Impacts
- **Environmental and Social Standard 2.** Labor and Working Conditions
- **Environmental and Social Standard 3.** Resource Efficiency and Pollution Prevention and Management
- **Environmental and Social Standard 4.** Community Health and Safety
- **Environmental and Social Standard 5.** Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- **Environmental and Social Standard 6.** Biodiversity Conservation and Sustainable Management of Living Natural Resources
- **Environmental and Social Standard 7.** Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
- **Environmental and Social Standard 8.** Cultural Heritage
- **Environmental and Social Standard 9.** Financial Intermediaries
- **Environmental and Social Standard 10.** Stakeholder Engagement and Information Disclosure.

56. All of the above standards are relevant to the Project, except for ESS7 and ESS9. The standards establish objectives and requirements to avoid, minimize, reduce and mitigate environmental and social risks and impacts, and to compensate for or offset any residual impacts. In the context of YIUSEP II, UNOPS shall address the Project's environmental and social risks as part of the environmental and social assessment process, in accordance with ESS1. ESS2–10 set out the obligations of UNOPS in identifying and addressing environmental and social risks and impacts that may require particular attention.

4.1.2 Environment, Health and Safety Guidelines

57. The ESF also requires all projects to apply the relevant requirements of the World Bank Group Environmental, Health and Safety Guidelines (EHSGs)[22]. These are technical reference documents, with general and industry specific examples of Good International Industry Practice (GIIP). They define acceptable pollution prevention and abatement measures and emission levels in World Bank

[22] A complete list of industry-sector guidelines can be found at: www.ifc.org/ifcext/enviro.nsf/Content/EnvironmentalGuidelines.

financed projects.

58. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them.

59. The application of the Guidelines to existing facilities may involve the establishment of site-specific targets with an appropriate timetable for achieving them. The environmental assessment process may recommend alternative (higher or lower) levels or measures, which, if acceptable to the World Bank, become project - or site-specific requirements.

60. If less stringent levels or measures than those provided in the EHS Guidelines are appropriate, in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific environmental assessment. This justification should demonstrate that the choice for any alternate performance levels is protective of human health and the environment. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent.

61. In the context of YIUSEP II, UNOPS will use the General EHS Guidelines[23], the Water and Sanitation EHS Guidelines[24], and the Waste Management Facilities EHS Guidelines. The General Guidelines cover environmental, occupational health and safety, and community health and safety related risks. Section 1.6 of the General Guidelines covers Waste Management

4.1.3 Environmental and Social Risk Classification

62. The World Bank classifies all projects into one of four classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk. This classification takes into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs. Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed. These could include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security.

63. The World Bank has classified the environmental and social risks of YIUSEP II as substantial. It will review the risk classification on a regular basis during implementation, and will change the classification where necessary, to ensure that it continues to be appropriate. Any change to the classification will be disclosed on the World Bank's website.

4.1.4 Environmental and Social Management Framework

64. The ESMF examines the risks and impacts when a project consists of series of subprojects, and their risks and impacts cannot be determined until the subproject details have been identified during implementation. The ESMF:

- sets out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts of subprojects
- contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the

[23] https://www.ifc.org/wps/wcm/connect/e22c050048855ae0875cd76a6515bb18/Final%2B-%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES)

[24] (https://www.ifc.org/wps/wcm/connect/e22c050048855ae0875cd76a6515bb18/Final%2B-%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES

agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts
- includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used.

65. In the context of YIUSEP II and given the conflict circumstances, the World Bank will review and approve all instruments prepared under the ESMF.

4.1.5 Labor Management Procedures

66. Under ESS2 on Labor and Working Conditions, UNOPS is required to develop labor management procedures (LMP) for YIUSEP II. The LMP was prepared as a standalone document according to the established template.

67. The purpose of the LMP is to facilitate planning and implementation of the project. The LMP identifies the main labor requirements and risks associated with the Project, and help UNOPS determine the resources necessary to address Project labor issues. The LMP is a living document, which is initiated early in Project preparation, and is reviewed and updated throughout the development and implementation of the project.

68. A concise and up to date LMP will enable different project-related parties, for example, staff of the project implementing unit, contractors and sub-contractors and project workers, to have a clear understanding of what is required on a specific labor issue. The level of detail contained in the LMP will depend on the type of project and information available. Where relevant information is not available, this should be noted and the LMP should be updated as soon as possible.

69. In preparing and updating the LMP, Borrowers refer to the requirements of national law and ESS2 and the Guidance Note to ESS2 (GN).

4.1.6 Stakeholder Engagement Plan

70. In the context of YIUSEP II, UNOPS, in consultation with the World Bank, have developed and will implement a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts. The SEP must:

- Describe the timing and methods of engagement with stakeholders throughout the life cycle of the project, distinguishing between project-affected parties and other interested parties.
- Describe the range and timing of information to be communicated to project-affected parties and other interested parties, as well as the type of information to be sought from them.
- Take into account the main characteristics and interests of the stakeholders, and the different levels of engagement and consultation that will be appropriate for different stakeholders.
- Set out how communication with stakeholders will be handled throughout project preparation and implementation.
- Describe the measures that will be used to remove obstacles to participation, and how the views of differently affected groups will be captured. Where applicable, the SEP will include differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable. Dedicated approaches and an increased level of resources may be needed for communication with such differently affected groups so that they can obtain the information they need regarding the issues that will potentially affect them.

71. When the stakeholder engagement with local individuals and communities depends substantially on community representatives, UNOPS will make reasonable efforts to verify that such persons do, in fact, represent the views of such individuals and communities, and that they are facilitating the communication process in an appropriate manner.

72. The SEP for YIUSEP II is a standalone document that is disclosed separately.

4.1.7 Grievance Mechanism

73. ESS10 requires that UNOPS propose and implement a grievance mechanism to receive and facilitate resolution of concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner.

74. The grievance mechanism required by ESS10 must *be proportionate to the potential risks and impacts of the project and will be accessible and inclusive. Where feasible and suitable for the project, the grievance mechanism will utilize existing formal or informal grievance mechanisms, supplemented as needed with project-specific arrangements.*

- *The grievance mechanism is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process or procedure will not prevent access to judicial or administrative remedies. The Borrower will inform the project-affected parties about the grievance process in the course of its community engagement activities, and will make publicly available a record documenting the responses to all grievances received*
- *Handling of grievances will be done in a culturally appropriate manner and be discreet, objective, sensitive and responsive to the needs and concerns of the project-affected parties. The mechanism will also allow for anonymous complaints to be raised and addressed.*

4.1.8 Environmental and Social Commitment Plan

75. In the context of YIUSEP II, UNOPS developed and will implement an Environmental and Social Commitment Plan (ESCP), which sets out the measures and actions required for the project to achieve compliance with the ESSs. The ESCP forms part of the legal agreement.

76. The ESCP took into account the findings of the environmental and social assessment, the World Bank's environmental and social due diligence, and the results of engagement with stakeholders. It is an accurate summary of the material measures and actions required to avoid, minimize, reduce or otherwise mitigate the potential environmental and social risks and impacts of the project. A completion date for each action is specified in the ESCP.

77. UNOPS will diligently implement the measures and actions identified in the ESCP in accordance with the timeframes specified, and will review the status of implementation of the ESCP as part of its monitoring and reporting.

78. UNOPS will notify the World Bank promptly of any proposed changes to the scope, design, implementation or operation of the project that are likely to cause an adverse change in the environmental or social risks or impacts of the project. The updated ESCP will be disclosed.

4.1.9 Information Disclosure

79. The World Bank requires that all documents provided to it by UNOPS meet the requirements of the World Bank Policy on Access to Information.

80. The World Bank will require UNOPS to provide sufficient information about the potential risks and impacts of the project for UNOPS' consultations with its stakeholders. Such information will be disclosed in a timely manner, in an accessible place, and in a form and language understandable to project-affected parties and other interested parties as set out in ESS10, so they can provide meaningful input into project design and mitigation measures.

81. The World Bank will disclose documentation relating to the environmental and social risks and impacts of YIUSEP II prior to project appraisal. This documentation will reflect the environmental and social assessment of the project, and be provided in draft or final form (if available). The documentation will address, in an adequate manner, the key risks and impacts of the project, and will provide sufficient detail to inform stakeholder engagement and World Bank decision making. Final or updated documentation will be disclosed when available.

4.1.10 Contingent Emergency Response Components (CERC)[25]

82. The World Bank requires all activities financed through the CERC to meet ESF requirements, keeping in mind that this requirement only applies once the CERC is triggered. CERC activities will rely as much as possible on the Project's environmental and social instruments.

83. If the CERC is activated, the World Bank will advise UNOPS on the following elements:

- Confirming which activities can proceed on the basis of the provisions of the CERC-ESMF, with no additional environmental or social assessment, and which ones require assessment (and at what level) prior to being initiated.
- Rapidly assessing the environmental and social baseline of the planned CERC activities and locations based on readily available information.
- Determining the sequencing and implementation plan for:
  - Mobilizing technical assistance and funding to prepare any additional safeguard instruments, e.g., Environmental and Social Management Plan, Resettlement Action Plan, etc.
  - Preparing the safeguards instruments and carrying out their Bank review, revisions, clearance, and approval.
  - Consultations and disclosure.
  - Establishing roles and responsibilities for safeguards implementation, and monitoring.
  - Estimating the costs for safeguards preparation and implementation.

84. In the event that CERC activities exceed the scope of the original PDO and thus this ESMF, UNOPS might be called on to prepare a supplemental CERC-ESMF as part of an eventual Project restructuring. The CERC-ESMF would include a screening process for the potential activities, the institutional arrangements for environmental and social due diligence and monitoring, any needed capacity-building measures, and generic guidance on emergency small-scale civil works. It would also indicate which kinds of emergency response actions can proceed with no additional environmental or social assessment, and which ones would require assessment (and at what level) prior to being initiated. It may also identify trade-offs, where required short-term responses could create longer-term risks that need to be managed.

85. Given the uncertainties and rapid changes inherent in emergency situations and responses, the CERC-ESMF would be built around a flexible, "adaptive management" approach, i.e., with emphasis on monitoring of key outcomes and mechanisms to feed information rapidly and effectively into decision- making and management.

86. UNOPS will use the same institutional framework and the same screening process and criteria for the CERC as for the other Project components.

4.2 UNOPS Requirements

87. UNOPS is in the process of developing a comprehensive set of environmental and social safeguards that will be applicable to all of the Project's it implements. The safeguards will be based on the Model Approach to Environmental and Social Standards for UN Programming[26]. The Model Approach represents a key step in moving towards a common approach among UN entities for addressing environmental and social standards for UN programming.

88. UNOPS has already adopted a policy on Health & Safety and Social & Environmental (HSSE) Management, and developed a General Environmental Management (GEM) Guidelines[27], a General

---

[25] This section is based on Paragraphs 17 of the World Bank Guidance on Contingent Emergency Response Components (CERC) (16 October 2017)

[26] https://unemg.org/wp-content/uploads/2019/07/FINAL_Model_Approach_ES-Standards-1.pdf

[27] The 6 UNOPS Environmental Management Guidelines are:
GEM 01 Generic Register of Environmental Impacts
GEM 02 Waste Management and Hazardous Substances

Health and Safety (GHS) Guidelines[28], and accompanying templates. It has also set up an HSSE Unit based in Copenhagen.

89. When applied to contractors, the GEM and GHS can provide clear and comprehensive instructions to contractors, particularly regarding work safety issues. The templates accompanying the guidelines are practical and can easily be operationalized. Overall, the guidelines are more than equivalent with the EHS Guidelines where they overlap.

90. The available UNOPS guidelines do not yet cover certain critical issues, such as Labor Management, Sexual Exploitation and Sexual Harassment (SE/SH), Community Health and Safety, and Stakeholder Engagement and Disclosure. They are also not yet publicly available. In addition, although the UNOPS guidelines are referenced in the bidding document for the contracts that UNOPS manages, they are generally not included as technical clauses of contracts. As a consequence, UNOPS will default for the purpose of this Project to a set of Environment, Social (including labor), health, and safety requirements derived from World Bank requirements and guidelines (see Annex 5) that UNOPS will include as technical clauses in the contracts they prepare for this Project. The option is available for UNOPS to use some of their procedures at the operational level, where they go beyond Bank requirements.

4.3 National Requirements and Policies

91. The Republic of Yemen (RoY) has drafted policies, developed sectoral legislation and implementation procedures, established institutions responsible for environmental management, and joined international conventions. The ongoing conflict has considerably weakened the capacity of the assigned institutions to implement policies and existing laws. **As a consequence, the use of Yemen's environmental and social management framework is not considered for the Project.**

4.3.1 National Environmental Action Plan

92. The foundational document for environmental management in Yemen is the National Environmental Action Plan (NEAP) that the ROY prepared in 1995, with the support of the UNDP and the World Bank. The NEAP defines priority actions regarding key environmental issues such as water resources, land resources, natural habitats, and waste management.

4.3.2 Environmental Protection Law

93. The Environmental Protection Law (Law 26/1995; EPL), was enacted in 1995 in the wake of the NEAP. It constitutes the framework environmental legislation for Yemen, including provisions for environmental protection, the issuance of permits, and the requirement to prepare Environmental

GEM 03 Protection of Water
GEM 04 Wastewater
GEM 05 Borrow Pit Management
GEM 06 Preservation of Historical, Archeological and Cultural Remains

[28] The 14 UNOPS Health and Safety Guidelines are:
GHS 01 General Site Rules
GHS 02 Lifting
GHS 03 Electrics
GHS 04 Excavation
GHS 05 Fire Safety
GHS 06 Noise
GHS 07 Scaffold
GHS 08 Underground Services
GHS 09 Working at Heights
GHS 10 Significant Accident or Incident Response
GHS 11 Confined Space
GHS 12 Site Establishment
GHS 13 Welfare Facilities
GHS 14 Construction Camp

Impact Assessments (EIAs). The provisions of the law are implemented through By-Law 148/000.

94. The law is also designed to: (i) incorporate environmental considerations in economic development plans at all levels and stages of planning, (ii) protect the national environment from activities practiced beyond national boundaries, and; (iii) implement international commitments ratified by the RoY in relation to environmental protection, pollution control, the conservation of natural resources, and global environmental issues such as the depletion of the ozone layer depletion and climate change.

Environmental Protection Authority[29]

95. The EPL established an Environmental Protection Council (EPC)and granted it power to take all measures necessary to protect and improve the quality of environment and to prevent pollution of the environment. Decree 101/2005 established the Public Environmental Protection Authority (EPA) to replace the EPC and lays down its objectives, tasks and management. The functions assigned to the EPA include:

- preparing and executing appropriate policies/strategies/plans to protect the environment
- conducting environmental surveys
- assessing areas/resources/species to be protected through necessary measures conserving the ecosystem including flora and fauna, wild and marine life as per existing laws and monitoring their application
- developing legislative proposals for environment protection in coordination with other agencies involved
- developing a National Emergency Plan to combat natural disaster and environmental pollution in consultation with the agencies concerned implementing environmental protection law and other relevant laws/regulations
- reviewing EIA studies for public /private sector projects for giving clearance and monitoring their execution
- coordinating relevant programs/activities with national, regional and international agencies and organizations
- recommending necessary laws, regulations and systems to protect the environment, in accordance with regional and international agreements on environmental protection.
- collecting data, assessing and evaluating the status of the environment, and setting up suitable monitoring systems
- laying down appropriate standards for protecting the environment from pollution and formulating policy guidelines to combat industrial pollution and protect animal, plant and marine ecology

Environmental Impact Assessments

96. The EPL requires the preparation of EIAs for projects proposed by the public and private sectors. The proponent is responsible to undertake the EIA, but the report may be prepared by the proponent or the competent authority or both. Line ministries and Government bodies commission EIA studies at the request of funding agencies and seek the advice of the EPA.

97. The EPA is responsible for implementing screening procedures, assisting in scoping, evaluation and approval of the Environmental Impact Statement (EIS). However, there is still no regulatory framework to support the implementation of the EPL and the provision of undertaking EIAs for projects is not strictly enforced, particularly for project that are not internationally funded.

98. Given the current context, modifications to the EIA procedures are not expected during the project. Current procedures will be taken into account, but there is no expectation at this point that the

[29] The information regarding the Environmental Protection Authority is purely indicative, as the EPA will not play any role during Project implementation.

EPA will review the Project's safeguard instruments.

National Environmental Standards and Specifications

99. The former Environment Protection Council (EPC) issued environmental standards and specifications as annexes to the Executive Regulations, covering potable water quality, wastewater quality for agriculture, and ambient air quality, emissions, noise, biodiversity and protected areas. These include standard application forms intended for use by all relevant government bodies.

100. The EPC has released draft standards for wastewater quality and air quality but a comprehensive set of standards is not yet available. In their place international standards, primarily those of the World Health Organization (WHO) are used.

101. Decree 148/2000 sets permissible limits for pollutants for use by all government bodies (see Annex 2).

4.3.3 Water Law[30]

102. The Water Law (Law 33/2002, updated by Law 41/2006)) regulates water supply and sanitation. The structure of water sector institutions consists of two national-level ministries (MoWE and MAI) and an intermediate-level water authority (NWRA). According to the amended water law and its by-law, the MoWE/NWRA are jointly responsible for organizing and developing water resources. The MAI is responsible for formulating policies and legislation that regulate the use of the irrigation water in line with the national water policies and plans and under the umbrella of the National Water Sector Strategy and the Investment Program (NWSSIP). The MoWE is the lead ministry for the oversight of water resources and water service provision, including in rural areas. The MoWE also supervises local water companies/corporations (public utilities) and all water suppliers (including private) to the domestic and industrial sectors.

103. Each water supply and sanitation Local Corporation has a Decree issued at the date of its establishment that stipulates the provisions and rules to govern and manage the LC, as well as the functions, tasks and responsibilities of interrelated public bodies. Thus, each of the five cities targeted by the Project (Sana'a, Aden, Taiz, Ibb, and Mukalla) has its own decree. Each LC provides water supply and sanitation service to all customer groups in a specified area.

Water Supply

104. Under Article 54 or the updated Water Law, MoWE has *"the authority to protect the water resources from contamination, preserve its standard quality, and prohibit activities that lead to its contamination or deterioration of its standards and combat cases of emergency contamination in cooperation with the relevant and competent authorities."*

105. The Water Law also *"provides a legal basis for controlling groundwater abstractions. It includes measures like licensing and registration requirements for wells and rigs, and more strict control regimes in water stressed catchments. The Water Law also supports decentralization in the form of encouraging the formation of basin committees and requires working closely with Local Councils in implementation of water management measures*." The government has worked to put in place a system of water rights, and to enforce contracts involving voluntary transfers of such rights between consenting parties. The NWRA (through its branch offices) is authorized to implement water laws and regulation and to allocate surface and groundwater resources to the most compelling needs.

Wastewater

106. The Water Law specifies that treated wastewater shall not be disposed of or allowed to be used except after coordination with the MoWE and the relevant authorities, and after consultation and

[30] Based on the National Water Sector Strategy and Investment Program (original NWSSIP, 2004), and Dire Straits: The Crisis Surrounding Poverty, Conflict, and Water in the Republic of Yemen (World Bank, 2017)

coordination with its users and those who are affected by its use. Article

107. Article 54 of the Water Law indicates that the concerned competent agencies shall, in coordination with the MoWE, issue licenses for; (i) the disposal of waste, sludge, waste water, oils and specify locations and methods of their disposal and construction of their facilities; (ii) reuse of treated water sewerage effluents according to the approved standards and specifications, and; (iv) construction of sewerage networks and desalination plants according to the relevant laws

108. The NWSSIP Update defines acceptable sanitation systems, taking into account that Yemeni topography, and the low flow of waste water can make centralized sewage treatment systems uneconomic.

4.3.4 Resettlement

109. The law most directly relevant to Project resettlement issues is the Public Eminent Domain Law (Law 1/1995), most particularly Articles 12-16 on temporary acquisition, and Articles 21-27 defining provisions for land acquisition. The Yemeni laws and regulatory framework are presented extensively in the Resettlement Framework (RF), which outlines the key issues and procedures for involuntary land acquisition under this Law.

4.3.5 Labor

110. The Labor Law (Law 5/1995) requires employers to address Occupational Health and Safety issues, including ventilation and lighting of workspaces; protection from emissions (gas, dust, etc.) hazards; protection from machine accidents and hazards; provision of gender-specific toilet facilities; provision of safe drinking water for workers; basic firefighting equipment and emergency exits; provision of appropriate personal protection equipment; fair compensation; access to periodic medical examinations; availability of first aid.

111. The Labor Law regulates the rights and wages of workers, their protection, occupational health and safety. In addition, the Social Insurance Law regulates retirement compensation.

Gender

112. The Labor Law states that women are equal to man in all aspects without any discrimination, and that equality should be maintained between women and men workers in recruitment, promotion, wages, training, social insurance. It also regulates work time for pregnant women.

113. Yemen also ratified the Convention on Elimination of all Forms of Discriminations Against Women (CEDAW) in 1984, and prepared a National Strategy for Women Development in 1997, which was updated in 2015. Implementation of CEDAW is delegated to relevant ministries and authorities (Decree 55/2009). Based on amendments proposed by the Women National Committee, 24 laws were amended to ensure building gender balance in accordance with the convention.

ILO Fundamental Conventions

114. Yemen has ratified ILOs eight "fundamental" Conventions, covering subjects that are considered to be fundamental principles and rights at work:

1. Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87)
2. Right to Organize and Collective Bargaining Convention, 1949 (No. 98)
3. Forced Labour Convention, 1930 (No. 29) (and its 2014 Protocol)
4. Abolition of Forced Labour Convention, 1957 (No. 105)
5. Minimum Age Convention, 1973 (No. 138)
6. Worst Forms of Child Labour Convention, 1999 (No. 182)
7. Equal Remuneration Convention, 1951 (No. 100)
8. Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

115. Law 7/2001 ratified ILO Convention Number 138 on Minimum Age for Admission to Employment. ILO Convention 182 on the Worst Forms of Child Labor refers to child labor as work

that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by depriving them of the opportunity to attend school, by obliging them to leave school prematurely; or by requiring them to attempt to combine school attendance with excessively long and heavy work. Nonetheless, drawing a line between "acceptable" forms of work by children and child labor can prove difficult, as it depends on the child's age, the types of work performed, the conditions under which it is performed and national.

4.3.6 International Conventions

116. The RoY is party to a number of international environmental agreements, the most important of which are:

- World Heritage Convention (UNESCO)
- International Convention on Civil Liability for Oil Pollution Damage (CLC)
- The Convention on Biodiversity (CBD)
- The Convention on the Conservation of Migratory Species (CMS)
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- The United Nations Framework Convention on Climate Change (UNFCCC)
- Kyoto Protocol (Yemen is not yet a party to the Paris Climate Agreement)
- The United Nations Convention on Combating Desertification (UNCCD)
- The Environmental Modification Convention (ENMOD)
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat
- Law of the Sea
- The Montreal Protocol on Substances that Deplete the Ozone Layer
- Stockholm Convention on Persistent Organic Pollutants

117. In general, national agencies are not currently in a position to handle the technical complexities and reporting requirements of international agreements. Project activities are not expected to be in breach of any international agreement to which the RoY is a party.

4.4 Comparison between World Bank Requirements and Yemeni Requirements

118. The following table compares World Bank environmental and social requirements with Yemeni Requirements, identifies gaps and suggests recommended actions.

Table 1. Comparison of World Bank and Yemeni Environmental and Social Requirements relevant to the Project

World Bank Requirements	*Yemeni Requirements*	*Recommended Action*
ESS1. Environmental Assessment		
Identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs.	The Environment Protection (EPL, 26/1995) requires the preparation of an EIA during the preparation of all projects and the inclusion of mitigation measures in the project's capital and recurrent costs (Cabinet Decree 89/1993). The EIA should describe: (i) proposed project activities, design of activity, the surrounding environment that may be affected, including a land use map of the adjacent areas, the requirement and types and source of energy, raw material and infrastructure services and roads emergency plan and safety, waste disposal etc.; (ii) and (iii) alternatives using less polluted inputs, as well as consideration of the 'no-project' alternative (EPL Article 37 Para (b)). The EIA guidelines require that ESIAs consider the social acceptability or refusal of the local communities to the proposed project, with evidence and record of public consultations and, if it is accepted, should include baseline data, indicators and monitoring plan. It also includes requirements for monitoring, capacity building, verification of monitoring results and findings (EPL Article 60).	National requirements and ESF objectives are aligned, an complement each other. UNOPS will apply both the ESF and national requirements
To adopt a mitigation hierarchy approach to anticipate and avoid risks and impacts; Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; Once risks and impacts have been minimized or reduced, mitigate; Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.	Yemeni law has no equivalent to the mitigation hierarchy. National law gives priority to the principle of environmental protection and pollution prevention, and not only to the mitigation or compensation of impacts. All new projects must carry out EIAs to prevent adverse impact and must obtain an environmental permit. No project or new structure that could harm, pollute or deteriorate the environment and natural resources is allowed and all new projects should use best available practices for clean production and apply environment protection/pollution prevention measures.	UNOPS will apply the ESF requirements
To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.	Included in the EPL (26/1995)	National requirements and ESF objectives are aligned, an complement each other. UNOPS will apply both ESF and national requirements

World Bank Requirements	Yemeni Requirements	Recommended Action
To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate.	The Environmental Protection Council must inform the proposed projects proponents of the screening results within three months from submission of the project proposal and determines the appropriate EA instrument and required studies required to assess potential risks and impacts. The EIA guideline provides the possibility of using regional and international assessment procedures and norms when applicable. If the project is rejected, the rejection note should indicate the basis for the rejection, as well as the relevant sections of the regulatory framework. The EIA guideline also provides the possibility for project proponents to contest any rejection and to appeal to the special court, within a period of 60 days. The court is required to make a final judgment within six months (Chapter 1 Article 3, EPL 26/1995 - By-law 148/2000).	UNOPS will take into account national laws and regulations when applying the ESF requirements
To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.	Include in the Environmental Protection Law No. 26/1995.	UNOPS will take into account national laws and regulations when applying the ESF requirements
ESS2. Labor and Working Conditions		
No equivalent in ESS2	To provide every employee with written particulars of employment Included in Yemen Labour Law Number 5/1995, Articles Number 27, 28, 29, 30, 31, 32, 33, 34	Contractors will be required to comply with national legislation when recruiting workers.

World Bank Requirements	Yemeni Requirements	Recommended Action
To promote safety and health at work.	Included in Yemen Labor Law Number 5/1995, Articles 113, 114, 115, 116, 117 and 118, Chapter 9 of the Labor Law (5/1995), Law Number 25/1997 and Law Number 25/2003 address Occupational Health and Safety and work environment in Articles 113 to 118. Chapter 10 covers worker's insurance. Employers are required to provide necessary occupational safety and health conditions, including: ventilation and lighting of workspaces; protection from emissions (gas, dust, etc.) hazards; protection from machine accidents and hazards; provision of gender-specific toilet facilities; provision of safe drinking water for workers; basic firefighting equipment and emergency exits; provision of appropriate personal protection equipment; fair compensation; access to periodic medical examinations; availability of first aid. The competent authority shall ensure the availability of the appropriate work environment and conditions for occupational safety and health. The Ministry of Labor is charged with advising employers in the field of occupational health and safety; organize and implement accident prevention training programs; exchange of technical information; identify and evaluate the means of accident prevention measures; etc. The Minister may establish sub-committees for occupational health and safety in the governorates and in the sectors and industries, which include the relevant bodies. The composition decision shall determine the functions of these committees, their terms of reference and the rules governing their work. Where employers fail to implement labor protection and labor safety regulations, they could receive a one week stop order from the Minister, until the reasons for the breach are explained. The Minister must refer the matter to the competent arbitration committee if the partial suspension is extended or if a total suspension is requested. If the risk is still not removed by the employer, the workers who have stopped working are entitled to full wages.	Each contractor will be required to have an OHS Officer and First Aider. Contractors required to keep logs of incidents and should be reported and investigated regularly. Contractors will do daily toolkit talk, and UNOPS will conduct weekly induction talks to workers and contractors.
To promote the fair treatment, non-discrimination and equal opportunity of project workers.	Included in Yemen Labor Law Number/1995, Articles 5, 42, and 67.	Contractors will be required to comply with national legislation when recruiting workers.

World Bank Requirements	Yemeni Requirements	Recommended Action
To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.	Included in Yemen Labor Law Number (5/1995), Articles 5, 15, 42, 43, 44, 45, 46, 47a, 47b and 89; the Law for the Organization of Workers' Unions (35/2002); the Law for Social Insurance (26/1991). The Labor Law regulates the rights and wages of workers, their protection, occupational health and safety. In addition, the Social Insurance Law regulates retirement compensation. **Gender** Yemen ratified the Convention on the Elimination of all Forms of Discriminations Against Women (CEDAW) in 1984, and prepared a National Strategy for Women Development in 1997, which was updated in 2015. Implementation of CEDAW is delegated to relevant ministries and authorities (Decree 55/2009). Based on amendments proposed by the Women National Committee, 24 laws were amended to ensure building gender balance in accordance with the convention. The Labor Law (Law 5/1995) states that women are equal to man in all aspects without any discrimination, and that equality should be maintained between women and men workers in recruitment, promotion, wages, training, social insurance. It also regulates work time for pregnant women.	National legislation will be applied. However, the World Bank standards will be enforced where there are gaps. The higher standard between the national legislation and World Bank standards will always prevail in case of uncertainty in applicable requirements.
To prevent the use of all forms of forced labor and child labor.	**Forced Labor** Included in Yemen Labor Law Number 5/1995, Articles 55 **Child Labor** Included in Yemen Labor Law Number 5 /1995, Article 49 Yemen has also ratified ILO Convention Number 138 on Minimum Age for Admission to Employment (Law 7/2001). The Convention establishes a minimum age for admission to employment. Yemen has also ratified the ILO Convention 182 on the Worst Forms of Child Labor. It refers to child labor as work that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by depriving them of the opportunity to attend school, by obliging them to leave school prematurely; or by requiring them to attempt to combine school attendance with excessively long and heavy work. Drawing a line between "acceptable" forms of work by children and child labor can prove difficult, as it depends on the child's age, the types of work performed, the conditions under which it is performed.	**Forced Labor** Contractors will be required to comply with national legislation and as precautionary measure to conduct an induction and random inspection will be done on a regular basis to ensure compliance **Child Labor** Contractor will be prohibited to employ anyone under the age of 18 years. Monitoring will be done through the National ID system that every employee is required to produce on employment. If a contractor is found to have engaged under age children in the project: - a formal case will be reported and the contract will be terminated.

World Bank Requirements	Yemeni Requirements	Recommended Action
To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.	Included in Yemen Labor Law (5/1995) Articles 151 and 152, and the Law for the Organization of Workers' Unions (35/2002)	Contractors must inform workers of their right to organize according to the law.
To provide project workers with accessible means to raise workplace concerns.	Included in Yemen Labor Law (5/1995) Articles 129, 130, 132 and 136.	Contractors will be required to comply with national legislation in this regard. Contractors will be required to have a grievance procedure and inform workers of the same during induction. UNOPS and TPM will require contractors to log worker's grievances in monthly reports
ESS3. Resource Efficiency and Pollution Prevention and Management		
To promote the sustainable use of resources, including energy, water and raw materials.	Included in the EPL, the Water Law (33/2002), the Law for Mines and Quarries (24/2002), the Electricity Law (1/2009), and the Renewable Energy Strategy.	National requirements and ESF objectives are aligned, an complement each other.
To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.	National law gives priority to the principle of environmental protection and pollution prevention, and not only to the mitigation or compensation of impacts. All new projects must carry out EIAs to prevent adverse impact and must obtain an environmental permit. No project or new structure that could harm, pollute or deteriorate the environment and natural resources is allowed and all new projects should use best available practices for clean production and apply environment protection/pollution prevention measures. Yemeni Law encourages related sectors and projects to provide institutional capacity and training for projects to enhance their capacity and knowledge in handling environmental issues. It also encourages research and development in all environmental aspects (EPL, Article 90).	UNOPS will apply both ESF and National requirements to the Project
To avoid or minimize project-related emissions of short and long-lived climate pollutants	Included in the EPL (26/1995), and is a Yemeni commitment under the Climate Change Convention.	Both World Bank ESF objectives and National requirements will apply to the Project
To avoid or minimize generation of hazardous and non-hazardous waste.	Included in the EPL (26/1995), the Pesticide Law (25/1999), the Public Cleaning Law (39/1999), and the Law Establishing Cleaning Funds (20/1999)	Both World Bank ESF objectives and National requirements will apply to the Project
To minimize and manage the risks and impacts associated with pesticide use	Included in the Pesticide Law (25/1999), and the EPL (26/1995)	Both World Bank ESF objectives and National requirements will apply to the Project

World Bank Requirements	*Yemeni Requirements*	*Recommended Action*
ESS4. Community Health and Safety		
To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances.	Yemeni Law does not specifically address community health and safety	UNOPS will follow ESF requirements
To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.	No equivalent in Yemeni law. However, IPCC National Contribution commitments and other various national laws (EPL Chapter 2 Article 5 and 7) address global environmental concerns, such as the ozone layer and climate change	UNOPS will follow ESF requirements
To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials.	No equivalent in Yemeni law	UNOPS will follow ESF requirements
To have in place effective measures to address emergency events	Included in Yemen Labour Law Number 5 for 1995, Articles 119, 121	National requirements and ESF objectives are aligned, and no significant gaps are noted. Both World Bank ESF objectives and National requirements will apply to the Project.
To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.	No equivalent in Yemeni Law	UNOPS will follow ESF requirements
ESS5. Land Acquisition, Restrictions on Land Use and Involuntary Resettlement		
To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives	Included in Yemeni laws, e.g., urban planning law	Both ESF and national requirements will be applied
To avoid forced eviction	Included in the Yemeni Constitution, and Civil Law.	Both ESF and national requirements will be applied

World Bank Requirements	Yemeni Requirements	Recommended Action
To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher	Public Eminent Domain Law addresses involuntary land taking resulting in relocation or loss of shelter and loss of assets or livelihood and fair and timely compensation. There is no measure for livelihood restoration in Yemeni law.	UNOPS will follow ESF requirements
To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.	Payment is made for disturbance, loss of accommodation, loss of profit and transport allowances. Compensation is on monetary basis only. Yemeni law does not recognize any vulnerable groups, but it does recognize squatters.	UNOPS will follow ESF requirements
To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant.	The Civil Law and Local Administration Law requires the prompt and fair payment of compensation on monetary basis to replace the lost land within a distance not more than 20 km from the project site. The governments in Sana'a and Aden provide adequate housing, access to service facilities, and security of tenure, to improve living conditions of poor and vulnerable persons who are physically displaced.	UNOPS will follow ESF requirements
To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.	In Yemeni law, PAPs must be informed about resettlement decisions through the compensation committees that negotiate with them and gather information about asset inventory, number of family members, etc. PAPs are to be informed about their rights, consulted on, provided FULL, FAIR and PROMPT compensation based on market value of the Property for lost assets attributable directly to the project. PAPs can dispute the amount to the Land Tribunal through the district commissioner to choose alternatives PAPs can first seek satisfaction through local customary practices for resolving conflicts. They can then initiate legal proceedings in accordance with national law.	UNOPS will follow ESF requirements
ESS6. Biodiversity Conservation and Sustainable Management of Living Natural Resources		
To protect and conserve biodiversity and habitats.	Included in the Environmental Protection Law No. 26/1995 and Yemen is a party in the Conservation of Biodiversity Convention.	No major gap between national, international requirements and ESF objectives. Both will be applied.

World Bank Requirements	*Yemeni Requirements*	*Recommended Action*
To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity.	Included in the Environmental Protection Law No. 26/1995 and Yemen is a party in the Conservation of Biodiversity Convention.	No major gap between national, international requirements and ESF objectives. Both will be applied.
To promote the sustainable management of living natural resources.	Included in the Environmental Protection Law No. 26/1995 and Yemen is a party in the Conservation of Biodiversity Convention.	No major gap between national, international requirements and ESF objectives. Both will be applied.
To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.	Included in the Environmental Protection Law No. 26/1995 and Yemen is a party in the Conservation of Biodiversity Convention.	No major gap between national, international requirements and ESF objectives. Both will be applied.
ESS7. Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities		
Not Relevant		

World Bank Requirements	Yemeni Requirements	Recommended Action
ESS8. Cultural Heritage		
To protect cultural heritage from the adverse impacts of project activities and support its preservation.	EPL (26/1995, Chapter 3 Article 37) requires the establishment of a national list of all sites with important cultural heritage or environmental sensitivity such as wetland sites, coral reefs, protected areas and national parks. During projects planning in urban and rural areas, projects should plan for the protection of cultural heritage. If there is an indication of existence of any cultural heritage, the relevant authority must be consulted before commencement of project works. Project works should be located no closer than 500 m from the nearest known cultural heritage (Presidential Decree 21/1994, Parliament Decree 14/1994 and Law 8/1997 Amending the Antiquities Law 21/1994, Article 12). In the event of a chance find of above ground or underground cultural heritage, government authorities must be consulted and the site must be guarded safely until the related governmental authority experts came, investigate and have a hold on it, in return the finder is entitled to suitable reward regardless of the value and age of the cultural heritage. The General Organization for Antiquities and Museums (GOAM) has the mandate to stop any works that could damage antiquities and cultural heritage areas and to preserve cultural field work and excavation findings (Presidential Decree 21/1994, Parliament Decree 14/1994 and Law 8/1997 Amending article 9 of the Antiquities Law 21/1994). UNESCO, the Doha Office of GOAM and Oxford University agreed to jointly launch the Yemeni Heritage Management Platform Database in 2017	The Yemeni requirements are more specific. UNOPS will ensure that any cultural heritage encountered during the work will be reported to the GOAM and the Yemeni Heritage Management Platform Database National requirements and ESF objectives are aligned, and no significant gaps are noted. Both World Bank ESF objectives and National requirements will apply to the Project.
To address cultural heritage as an integral aspect of sustainable development	To conduct field-based surveys by specialists and describe the proposed site for project including map, borders and neighborhoods with design of infrastructures, facilities and services and all inputs and outputs (EPL and EIA Guideline).	National requirements and ESF objectives are aligned and complementary. UNOPS will apply both ESF and national requirements
To promote meaningful consultation with stakeholders regarding cultural heritage.	No comparable requirement under Yemeni law	UNOPS will apply ESF requirements
To promote the equitable sharing of benefits from the use of cultural heritage.	No comparable requirement under Yemeni law	UNOPS will apply ESF requirements
ESS9. Financial Intermediaries		
Not Relevant		

World Bank Requirements	Yemeni Requirements	Recommended Action
ESS10. Stakeholder Engagement and Information Disclosure		
To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties.	Article 35 of the Yemeni Constitution declares that Environment protection is the responsibility of the state and the community and that it is a duty for every citizen. Community and NGO participation are considered an essential part of consultation while planning proposed projects, and is a continuous process before, during and after project implementation (EPA EIA Guideline). Furthermore, NGOs and individuals can directly sue any person or entity who causes harm to the environment and natural resources or participate in its deterioration and pollution (EPL Article 4, para 4 and Article 82).	UNOPS will follow ESF requirements
To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.	Included in the Local Administration Law	UNOPS will follow ESF requirements
To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.	Included in the Local Administration Law	UNOPS will follow ESF requirements
To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.	ESIAs should include a reference list and a non-technical summary for public use and disclosure in a form and language understandable to general public (EPA EIA guideline).	National requirements and ESF objectives are aligned, and no significant gaps are noted. Both World Bank ESF objectives and National requirements will apply to the Project.
To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances	Article 51 of the Constitution allows for recourse to the courts. The Public Eminent Domain Law and the Local Administration Law provide for the right of grievance before the Estimation Committee/courts. To address grievances, PAPs can first seek satisfaction through local customary practices for resolving conflict. They can then initiate legal proceedings in accordance with provincial national law.	National requirements and ESF objectives are aligned, and no significant gaps are noted. Both World Bank ESF objectives and National requirements will apply to the Project.

Chapter 5.
Environmental and Social Baseline

5.1 Tertiary Municipal Services[31] and Solid Waste Management

119. Basic municipal urban services have significantly deteriorated due to the ongoing conflict. Neighborhood roads, local sanitation networks, and public spaces, which were damaged during the conflict, remain unrepaired. Given the low capacity and lack of resources at the municipal level, rehabilitation of the urban environment remains limited in most cities. YIUSEP has funded basic public works in 8 cities, including the collection of over a million cubic meters of accumulated waste and repair of local sanitation networks. Despite these efforts, untreated sewage water overflow in streets and garbage accumulation blocking drains remains common in most cities, contributing to the cholera crisis and the spread of other communicable diseases. The lack of provision of basic municipal services is a critical challenge in most cities and will continue to be addressed under the proposed project.

120. Urban flooding is a major issue in Yemen's cities because of a combination of climate change and the ongoing conflict, which has destroyed municipal drainage infrastructure and has left local authorities with very limited capacity to repair or maintain infrastructure. Urban flooding also creates major pressure on the healthcare system, as it provides a perfect vector for waterborne diseases, and can prevent the population from reaching medical care due to roads being submerged under water. Recent flooding has also likely contributed to the spread of COVID-19 in Yemen, as it has forced thousands of people to flee from their homes as well as internally displaced persons (IDPs) to move from settlements. YIUSEP has helped address urban flooding through investments in stormwater flood protection, including box culverts, stormwater pumps and suctioning of stagnant floods water from urban areas in Aden. Amran city, whose urban infrastructure has been continuously damaged during monsoonal rains in recent years, benefited significantly from stormwater investments under YIUSEP, averting loss of life and assets. Since climate change is projected to increase rainfall variability, intensity and flooding in Yemen, building resilience to urban flooding is a priority of the proposed project and will contribute to important public health and economic benefits.

5.2 Urban Water and Sanitation

121. Even before the ongoing conflict, Yemen suffered from acute water scarcity. The urban water crisis has been exacerbated during the last three decades due to rapid population growth and excessive withdrawal of the limited fossil groundwater for irrigation use. This is a consequence of many factors including government policy that encourages farmers to shift from traditional rain-fed to irrigated agriculture, mismanagement of scarce water resources. Before the conflict started, the public water supply covered approximately half of the urban population. The other half of the population was supplied water through unstructured private sector interventions, at a high cost, and with poor water quality.

122. The systemic water and sanitation crisis in Yemen has been exacerbated by the ongoing conflict, internal displacement, COVID-19 pandemic, and natural disasters. According to UNICEF, as of October 2020, about 18 million people lack adequate access to clean water and sanitation in Yemen. Only about one third of the population is connected to piped water. The armed conflict has seriously affected infrastructure and led to an almost complete stoppage of water service delivery. In addition, according to the 2020 Update of the Yemen DNA, an estimated 38 % of water and sanitation facilities in major cities are currently damaged and have lost functionality. An assessment conducted in 2016[32]

[31] Tertiary refers to neighborhood-level municipal services, for example, neighborhood streets, sanitation, drainage, parks, etc.

[32] Conducted by Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ).

also demonstrated how the inability to pay basic salaries of Water and Sanitation Local Corporations' (WSLCs)[33] staff has further limited the operation of water facilities and services. Although the WSLCs, their branch offices, and associated utilities have maintained a skeleton staff, they continue to face significant challenges, including financial sustainability, infrastructure replacement or repair, customer demands and work force remuneration. Thus, a significant portion of the urban population is relying on unregulated private water tankers. Due to the lack of functioning water and sanitation services, many cities in Yemen, including Aden and Sana'a, are currently confronted with a significant cholera outbreak.

5.3 Urban Roads and Transport

123. Yemen's road sector has gone through a significant transformation in the past three decades, albeit challenges remain. The road network grew from only about 5,000 km in 1990 to about 16,000 km in 2015, a 220 % increase over 25 years. These changes have had a major impact on the population and the economy, promoting internal and external trade, connecting a growing share of the population to public services and markets, and ensuring that food imports reach remote areas. In addition, several private road construction and maintenance companies as well as engineering firms have emerged. The main challenges to the road sector include underfunding, insufficient maintenance, poor planning and budgeting, and low civil service salaries.

124. Urban roads in major cities in Yemen, such as Sana'a, Aden, Ibb, Taiz, Al Hodeidah, Saadah and Amran, have been severely damaged. Major road links and bridges have also been destroyed. According to the 2020 Update of the Yemen DNA, more than half of intra-urban roads have been damaged in Sa'ada and Taiz. The damage to urban roads has rendered large segments of the road network inaccessible for people and vehicles with negative impacts on trade, mobility and access to localized services (e.g., markets, health facilities and schools). The recent floods have caused additional extensive damages to urban roads infrastructure, and several locations along key lifeline road corridors were severely damaged. While the storm's impact was felt across the country, Amran, Ma'rib, the Capital Sana'a, Hodeidah, Ad Dali', and Aden have been the worst hit. The proposed project will help restore road access to critical infrastructure and vulnerable communities.

5.4 Energy

125. Even before the conflict, Yemen had one of the lowest per capita levels of electricity consumption and the lowest electricity access in the Middle East and North Africa (MENA) region, with estimates of access from either on-grid or off-grid sources ranging between 52 % and 72 % in 2014. The national electricity authorities, such as local Public Electricity Corporations, lacked the resources, infrastructure and capacity to supply adequate electricity to meet the country's power needs and requirements for maintaining economic growth.

126. The conflict in Yemen has significantly worsened the already low electricity access level with severe impacts on urban public services as well as commercial and industrial activities, which rely heavily on a functioning power supply system. Fuel is scarce and many electricity generation facilities have been damaged and destroyed. The national grid has disintegrated into several subnational systems because transmission links were destroyed, damaged, or ceased operations due to the conflict. Consequently, public electricity supply has been completely shut down in large areas of the country, including major cities such as Sana'a, Al Hodeidah and Taiz. Only an estimated ten % of the population has access to reliable electricity. A recent phone survey commissioned by the World Bank found that, as of end-2019, around 12 % of the population relied solely on public electricity[34]. Light emissions visible from satellite imagery indicate that electricity consumption has decreased by about 75%. The impact on facilities dependent on reliable electricity has been devastating. Hospitals, schools, water pumping stations, water treatment stations, industry and commercial facilities have all

[33] In the water and sanitation sector in Yemen, the Local Corporations are the utility providers operating in various urban centers.

[34] World Bank Group. Yemen Dynamic Needs Assessment: Phase 3 2020

had to cut back operations or find alternative power sources.

127. Yemen's healthcare system is struggling to deal with the COVID pandemic because many of the country's hospitals and clinics have been damaged or destroyed by the conflict, and those remaining face frequent shortages of electricity. Under the YIUSEP, 60,000-megawatt hour as energy generation supported through the project will be achieved in which solar photovoltaic (PV)-based electricity supply systems have been installed in 208 health, education, and water wells facilities in the project target cities to help overcome the shortage of electricity. Where urgent intervention was required rental generators and rental power were also made available for general hospitals, schools, and municipal water wells. In addition to the rooftop solar PV, the rental power, and electrical generators have also been provided to 97 health, schools, and WASH facilities. The interventions under this subcomponent also include solar PV-based energy-efficient light-emitting diode (LED) streetlights, indoor LED bulbs and solar water heaters. The provision of clean energy through the project is also helping avoid CO_2 emissions. To support the fight against COVID-19 this proposed project will prioritize provision of off-grid energy supply to the country's critical medical infrastructure.

5.5 Climate

128. Yemen is a largely arid sub-tropical country with rainfall characterized by seasonally intense and short-lived heavy storms that often lead to flash floods with implications for soil erosion and degradation of agricultural terraces. Heavy rainfall is frequently followed by long dry periods. Although high year-to-year variability makes it difficult to detect a trend in precipitation, summer precipitation totals appear to have declined across the Yemen Highlands since the 1950s, although local data for Yemen are lacking, and there are inconsistencies between data sets.

129. Climate-related hazards in Yemen include extreme temperatures, floods, landslides, sea level rise, sea water intrusion and drought. Most of these risks exacerbate the country's water scarcity, pose serious threats to development and food security, and their intensity and frequency are likely to increase due to climate change.

5.6 Climate change-related cross-sector challenges [35,36,37]

130. Climate change poses a significant threat to Yemen's development across many sectors. Challenges include: (a) Short-burst, intense rainfall which often leads to flash floods, which can result in significant damage and high losses in urban areas due to their concentrated physical assets and population. Rainfall intensity, and therefore flooding, is projected to increase with climate change; (b) Greater rainfall variability could result in prolonged drought periods. Yemen's water crisis ranks among the worst in the world, and water stress is observed to be increasing, with groundwater reserves likely to be mostly depleted in two to three decades regardless of climate change; (c) A vast majority of the urban poor is vulnerable to rockslide and landslide risk as they typically live on marginal and environmentally sensitive land; and (d) A rise in sea levels would result in increased coastal flooding and possible damage to infrastructure and groundwater quality and supply. In response to these threats, improved urban infrastructure, water and waste management are key priorities. The project will help mitigate the potential impacts of these threats in relevant activities.

[35] World Bank Group. Climate Change Country Brief: Yemen. Retrieved from http://globalpractices.worldbank.org/climate/Pages/CountryBriefs/Yemen.aspx

[36] World Bank Group. Climate Change Knowledge Portal: Yemen Dashboard. Retrieved from http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisRegion=Asia&ThisCCode=YEM

[37] World Bank Group. (2011, April). Climate Risk and Adaptation Country Profile: Yemen.

Chapter 6.
Potential Environmental and Social Risks and Mitigation

131. This chapter identifies the potential Environmental, Social (including labor), Health, and Safety (ESHS) risks and impacts associated with Project activities, and the matching mitigation measures. Project activities will have strong positive environmental, social, and health impacts by reestablishing urban services. Health and environmental impacts are generally of small size and should cause only minor negative environmental that can be readily addressed through proper design, construction, and operation and maintenance.

132. The Project will not finance activities that involve permanent land acquisition causing physical or economic displacement. Moreover, local contractors are expected to conduct all works using workers that already reside in the cities where the works are conducted. Subprojects should trigger minimal labor influx, and contractors are not expected to build or operate residential labor camps to host such workers.

133. The selection of activities will be based on the priority needs to be identified by UNOPS, in consultation with the LCs, relevant DLAs, and local communities. The Project will only rebuild, restore, or rehabilitate existing infrastructure. There will be no expansion of existing facilities nor the creation of new ones, and rehabilitated facilities will be handed back to the competent authorities. The Project will not provide technical assistance to develop Operations and Maintenance (O&M) plans for the reconstructed or rehabilitated facilities. Thus, issues such as the siting of the facilities, and many of their operational impacts will be beyond the scope of the Project.

134. Nonetheless, the environmental and social risk rating of the Project is substantial because Component 1 involves reconstruction and rehabilitation works that will involve excavation and earthworks. These activities might cause risk and impacts on workers, communities, as well as the environment, if sufficient mitigation measures do not accompany their implementation.

6.1 Selection, design and siting risks

135. A first tier of risks concerns the selection, design, and siting of subprojects. These risks include inherent security risks, the risk that that the targeted infrastructure might carry social or environmental legacy issues, the risk that contract awards might disadvantage certain groups, and the risk that the rehabilitated services do equally provide services, particularly to vulnerable groups or persons. These risks would be addressed by avoiding insecure areas, identifying legacy issues during the screening process, inclusive contracting, and ensuring equal access to subproject benefits. No legacy issues are anticipated, and none were encountered during YIUSEP1.

6.2 Contractor Related Risks and Impacts

136. The second tier of risks is directly associated with the construction and rehabilitation activities of the contractors who will rebuild, rehabilitate, and restore the targeted facilities. These risks represent the ***bulk of the ESHS risks and impacts risks and impacts of Project activities***. Although the risk profile might differ between specific activities, the overall risk profiles of construction activities are analogous for the four subcomponents of Component 1: (i) Tertiary Municipal Services and Solid Waste Management; (ii) Urban Water and Sanitation; (iii) Urban Roads; and (iv) Electricity for Critical Services. These risks and the relevant ESSs are detailed in the following table.

Table 2. ESHS risks and impacts associated with the activities of YIUSEP II Contractors

Construction Site Management	
Vegetation	
• Construction activities can unnecessarily destroy, scar, or deface the natural surroundings in the vicinity of the construction site	ESS6
Damage to Existing Installations	
• Existing installations, such as buildings, structures, works, pipes, cables, sewers, or other services may be damaged	ESS4
• Owners, tenants or occupiers of properties may be disturbed or inconvenienced by the construction works	ESS4
Waste from Construction Activities	
• Construction debris and spoils might contaminate soils and groundwater	ESS3
• Transport of waste might litter roads	ESS3
• Solid waste and debris might be disposed improperly	ESS3
Air Pollution	
• Air pollution due to emissions from dust, construction vehicles and equipment	ESS3
• Dust generation during excavation, backfilling, compaction, or transportation of construction materials can affect the wellbeing of neighboring communities	ESS4
Hazardous and Toxic Waste	
• The production of liquid wastes can lead to soil or groundwater pollution	ESS3
• Hazardous, or potentially hazardous, wastes from construction debris or the use of chemicals can spill into the environment	ESS3
Area Signage	
• The absence of appropriate signage and precautionary measures can lead to accidents	ESS2, ESS4
Borrow Pits and Quarries	
• Quarry operations will produce noise and dust that will impact on nearby inhabitant	ESS4
• Quarries used by primary suppliers could lead to the significant conversion or degradation of natural or critical habitats	ESS6
• Improperly sited quarries can pollute the ground and surface water	ESS3
• Unfenced borrow pits and quarries are a hazard to people and livestock	ESS4
• Blasting operation can damage property.	ESS4
• Borrow pits and quarries can deface the landscape	ESS3, ESS4
Location of Worker Camps	
• Poorly located camps can be prejudicial to local communities, and cause conflicts	ESS4, ESS5
Decommissioning of Camps, Worksites and Plant	
• Construction sites might include contaminated patches, waste, and abandoned equipment that are a health hazard to neighboring communities	ESS3, ESS4
Health and Safety	
Severe Weather and Facility Shutdown	
• Workers can be injured or become ill if required to work in severe weather	ESS2
Lavatories and Showers	
• Inadequate lavatories and showers can lead to worker illness or disease	ESS2
Potable Water Supply	
• Inadequate supply of potable water on site can lead to worker illness and disease	ESS2
Clean Eating Area	
• The absence of a clean eating area can lead to worker illness and disease	ESS2
Personal Protective Equipment (PPE)	
• The lack of appropriate PPE, and of training in its use, can lead to injuries	ESS2

Noise	
• High noise levels can permanently affect the hearing of workers • Increased levels of noise and vibration due to heavy vehicles and construction equipment, which are a nuisance to the community around the site	ESS2
Working in Sewers	
• Working in sewers can lead to suffocation and even death, if the necessary precautions are not taken	ESS2
Communicable Diseases	
• Construction site can facilitate the spread of communicable diseases	ESS2, ESS4
COVID-19	
• Construction sites can increase the spread of COVID-19	ESS2, ESS4
Vector-Borne Diseases	
• Poorly managed construction site can favor vector borne diseases, particularly if pools of stagnant water are not avoided	ESS2, ESS4
Road safety and Traffic Safety	
• Project related traffic can cause accidents	ESS2, ESS4
Cultural Heritage	
• Project activities might unearth unknown cultural heritage (chance finds) • Project activities might indirectly affect existing cultural heritage, for example by cracking masonry	ESS8 ESS8
Emergency Preparedness and Response	
• Lack of preparation can seriously increase the negative impact of an emergency	ESS4
Stakeholder Engagement	
• The lack of engagement with neighboring communities affected by Project activities might cause tensions, and result in complaints	ESS10
Labour Force Management	
Labour Influx	
• Labor influx to work on Project activities can have major negative impacts on local communities	ESS2, ESS4
Labor Conditions	
• Contractors might not provide workers with the terms and conditions they are entitled to under Yemeni Labor Legislation, most particularly Decree 5/1995, and applicable International Labour Organization conventions on workplace conditions.	ESS2
Insurance	
• Contractors might not compensate workers and their families for workplace injuries or deaths	ESS2
Grievance Mechanism for Workers	
• Contractors might not act on worker grievances	ESS2
Protection from Sexual Exploitation and Abuse	
• Workers might sexually abuse of exploit women or children	ESS2, ESS4
Protection from Child Labor	
• Contractors might unknowingly employ workers under the age of 18.	ESS2
Code of Conduct	
• The behavior of workers can be prejudicial to neighboring communities, and to fellow workers	ESS2

137. These construction-related risks will be mitigated by requiring that contractors meet a detailed set of Environmental, Social, Health, and Safety (ESHS) requirements[38] that match the risks and impacts listed in the above table, as detailed in Annex 5. The Requirements are largely based on the General

[38] Some of the ESHS requirements might not become relevant during Project implementation, for example the requirements for the management of worker camps or labor influx

EHS Guidelines, and other World Bank Guidelines. UNOPS and its Implementing Partners will include the Project's ESHS requirements in all bidding documents and contracts for works. UNOPS will also prepare safety manuals or handbooks for contractors as required.

6.3 Sector Specific Risks and Impacts

138. The third tier of risks are sector specific and not related to contractor led activities. Some are associated with the technical design of the facilities, while some are potential risk and impacts associated with the operation of the facilities once they are rehabilitated.

6.3.1 Solid Waste Management

139. Solid waste management is the riskiest type of activity that the Project might finance. Non-contractor related risks include landfill rehabilitation and solid waste collection. Landfills are managed by the local Cleaning Fund in each city. UNOPS, PWP and the concerned Local Cleaning Fund will ensure that waste management activities are implemented in accordance to the requirements spelled out in the EHS Guidelines for Waste Management Facilities.

140. UNOPS prepared and submitted to the World Bank landfill assessments for Aden, Sana'a, Lahj, Amran, Sa'adah, Mukalla, Dhamar, and Hodeida, during YIUSEP 1 implementation. Similar assessments will also be prepared for any other landfill before the Project becomes involved.

141. The following table details some of the non-contractor related risks and impacts that UNOPS and PWP might need to address, as well as matching mitigation measures, if the Project was to finance a landfill subproject. These sector specific risks and impacts are additional to the generic contractor related risks and impacts described in Table 2.

Table 3. Potential impacts and matching mitigation measures for landfill subprojects

Potential impact	Mitigation measures
The formation of breeding sites for disease vectors	• Cover solid waste with soil; • Take necessary actions to fight vectors • Ensure proper utilization or disposal of separated solid waste for reuse.
The spread of diseases because of improper disposal of medical waste	• Dispose of medical waste separately from other waste • Agreement with health authorities to better implement of their healthcare waste management systems within facilities
The risk of disproportional impacts on vulnerable groups dependent on waste picking such as the Al Mahamasheen[39]	• Assess waste pickers (numbers, types, and roles, such as collection, sorting, or recycling) • Plan the role of waste pickers and provide necessary training • Provide appropriate PPE • Ensure that vulnerable groups are included • Give special consideration to the most vulnerable groups
The risk that waste collection workers, pickers and members of neighboring communities might get ill because of pollution or catch a disease	• Train waste collection workers, pickers and selected members of the community on health and hygiene • Conduct cleaning and awareness campaigns and provide waste pickers with safety and hygienic materials as well as the labor
The risk of child labor, particularly waste picking	Prevent child labor.

[39] Based on the landfill assessments prepared during YIUSEP 1, no physical or economic displacement of waste pickers is anticipated because the proposed interventions mainly focus on the provision of waste collection and disposal equipment.

Methane emissions and other toxic gases, resulting from: • poor construction resulting in leakage of leachate • inappropriate assessment of accumulated methane gas could cause fired or explosions • odor and emissions of hydrogen sulphide or ammonia could have public health impacts	• Landfill gas control and collection system should be implemented for more efficient utilization and to prevent the gas accumulation even where the case is not economically feasible. • Leachate collection and gas flaring must be built into the rehabilitation design
Groundwater and watershed pollution as a result of poor leachate treatment	• Test the characteristics of leachate and the treated effluent • Test groundwater quality at source development at regular intervals. • Upgrade the performance of the leachate treatment facility • Provide training for local NGOs and members of the community on O&M of the system • Discuss the use of the effluent for irrigating non-edible crops, such as garden nurseries, palm trees, or cotton
The use of effluent from unsegregated waste with high concentrations of heavy metals, such as mercury, or PCBs	• Regular monitoring of effluents • Segregation of chemical pollutants at urban wastewater facilitates • Establish effluent standards combined with incentives or enforcement
Disputes over the use of treated concentrate for irrigation	• Discuss effluent use, potential crops and disposal of treated concentrate with land owners downstream of the landfill
Poor operation and management of the landfill might aggravate underlying environmental issue	• Support training of local authority, local NGOs and members of the community on O&M of the system. • Support training on the administrative and financial management of the project
Complaints by adjacent residents/beneficiaries	• Provide appropriate mitigation measures to remedy complaints • Instigate public awareness and communication campaigns

142. The following is a list of additional environmental mitigation measures[40] that UNOPS and PWP will consider when designing landfill subprojects:

Long Term Remedial Measures

- Landfills should be designed, located and operated based on national, international guidelines, environmental impact analyses (EIA), and take into consideration the local climate (precipitation, evaporation, and temperature, wind direction), groundwater levels, and nearby residential areas.
- The landfill should be designed and managed to maintain a perennial water deficit within the landfill by maximizing runoff and minimizing infiltration into the waste.
- Authorities must allocate suitable land in their long-term strategies for future landfills needs.
- Operational standards (guidelines) for landfill practices needed to provide the requirements for environmentally sound design and operation which considers all site-specific conditions (especially climatic data, hydrologic and geologic factors).
- Avoid the co-disposal of waste water from septic tanks into the landfill body, to minimize the leachate generated and groundwater contamination
- Responsible authorities should provide the basic facilities needed for sorting and source separation of waste

[40] Adapted from: Mohammad Aljaradin,1 and Kenneth M. Persson. 2012. Environmental Impact of Municipal Solid Waste Landfills in Semi-Arid Climates, Case Study - Jordan. The Open Waste Management Journal 5: 28-39.

- Increase the knowledge and awareness between residences for the importance of waste sorting and source separation and it is beneficial effect on social, economic and environmental aspects
- Declare and organize scavenger work through merging it formally in the system. Scavenging can be an effective way for managing waste, because the reduction whereas it reduces the cost of formal waste management systems as it reduces the quantity of waste for collection
- Encourage the private sector to invest in all forms of waste recycling and management projects
- Reducing the quantity of the biodegradable waste that is landfilled which is considered with encouraging landfill methane recovery the major strategies for reducing the methane emissions, by implementing special standards starting with industries, companies and big waste generators

Short Term Remedial Measures

- Ensure that daily covers are practiced. Leachate problem could be minimized by limiting the water getting into the landfill through surface water diversion to ensure that no water can enter the landfill and also to ensure a low water table within the landfill by frequent pumping that should be coupled with the daily soil cover. A low-permeability cover affects the water content of the landfill.
- Improve access roads
- Build the basic infrastructure, fencing and weighbridge.
- Stop open burning inside landfills.
- Establish surface drainage system for limiting the infiltration of the water through the landfill cover
- Raise the awareness and competences of the employees
- Build leachate collection and gas venting facilities
- Ensure that no disposal of hazardous and medical waste takes place; it is important that only municipal waste is disposed in landfill, and no industrial or hazardous waste. Waste should be sorted and sites should be carefully selected to especially avoid negative impacts on groundwater resources.

6.3.2 Urban Water and Sanitation

143. UNOPS will ensure that UW-PMU and the Local Cleaning Funds implement urban water and sanitation subprojects in accordance with the EHS Guideline for Water and Sanitation. The following table details the main non-contractor related risks and impacts that UW-PMU might need to address, as well as matching mitigation measures, if the Project was to finance an urban water and sanitation subprojects. The sector specific risks and impacts are additional to the generic contractor related risks and impacts described in Table

144. 2.

Table 4. Potential impacts and matching mitigation measures for urban water and sanitation subprojects

Potential Impact	Mitigation Measure
Improved water supply can increase the quantities of wastewater	UNOPS will ensure that the water supply subprojects are accompanied by sanitation subprojects, if the increased wastewater exceeds current capacity
Improvements in the sewerage system could, in the absence of sufficient treatment, increase the discharge of untreated or inadequately treated wastewater (domestic, municipal and industrial), contaminate ground, surface and coastal waters, or increase the incidence of cholera and dysentery	UNOPS will ensure that subprojects that result in an increase in collected wastewater are accompanied by measures to handle the increase UNOPS will ensure that its sanitation subprojects provide for the safe final disposal of effluents from treatment ponds or reuse with extreme precaution to avoid direct contact with humans or animals. As necessary, UNOPS and its Implementing Partners will provide training to selected members of the community on health and hygiene issues
The rehabilitation of wastewater treatment plants will produce fecal sludge that must be properly managed and disposed of	UNOPS will ensure that any subproject resulting in increased fecal sludge includes measures to properly dispose of the sludge
Stagnant effluent ponds might be breeding sites for disease vectors	UNOPS will take necessary actions to fight disease vectors for any stagnant effluent pool resulting from one of its subprojects, including the use of insecticides, and providing nets for windows and beds
Temporary loss of income and disruption of economic activities/ businesses because of Project activities.	UNOPS will take all appropriate measures to compensate affected parties, as per the Project Resettlement Framework
Untreated or inadequately treated wastewater might be reused for agriculture, particularly by the poorer segments of the population.	UNOPS will only go forward with the subproject if the risk can be addressed as recommended by the World Health Organization's (WHO)[41].
Because of limited availability, increased water supply to cities might affect existing agricultural use	UNOPS will not go forward with a water supply subproject if it creates a water conflict.
Demand side management and efficient allocation of water by the LCs might be necessary to conserve scarce water resources, but could lead to higher prices for poorer segments of the population. Furthermore, cost recovery for sanitation and wastewater treatment services may adversely impact the poorer segments of the society	UNOPS will ensure that any Technical Assistance regarding tariffs for water supply (production distribution and maintenance) or sanitation (including sewer networks, wastewater treatment, and maintenance) promotes measures that do not adversely impact the poorer or vulnerable segments of the population.
Rehabilitated wastewater treatment plants might negatively impact neighboring communities that have expanded over the years, for example by increasing unpleasant odors or reducing property values	• Depending on the scope of the issues, UNOPS will explore whether it can implement sufficient mitigation measures to address the concerns of these neighboring communities. • UNOPS will not go forward with the subproject if it cannot implement sufficient mitigation measures. • UNOPS will Instigate public awareness and communication campaigns

Water Distribution

145. UNOPS will ensure that UW-PMU apply the following measures during the rehabilitation of water distribution systems that is supported by the Project.

[41] Health guidelines for the use of wastewater in agriculture and aquaculture (WHO Technical Report Series, No. 778, 1989).

- Maintain adequate pressure to protect water quality in the system
- Implement a leak detection and repair program (including records of past leaks and unaccounted-for water to identify potential problem areas)
- Consider replacing mains with a history of leak
- Prevent, minimize, and control impacts from flushing of mains

Waste Water Treatment

146. UNOPS will ensure that UW-PMU apply the following measures during the rehabilitation of waste water treatment plants that is supported by the Project.

- Minimize bypass of the treatment system by using separate storm water and wastewater systems, if possible, and providing capacity sufficient to treat peak flows;
- Implement an industrial source control program which includes monitoring and effective regulatory enforcement
- Consider discharge of treated wastewater to natural or constructed wetlands, which can buffer the impact f from discharge on the aquatic environment, unless the wetland itself would be degraded by the discharge
- Treat greywater, if collected separately from sewage, to remove organic pollutants and reduce the levels of suspended solids, pathogenic organisms and other problematic substances to acceptable levels based on applicable national and local regulations
- Greywater lines and point of use stations should be clearly marked to prevent accidental use for potable water quality applications
- Based on an assessment of risks to human health and the environment, consider re-use of treated effluent, especially in areas with limited raw water supplies. Treated wastewater quality for land application or other uses should be consistent with the relevant public health-based guidance from the World Health Organization (WHO) and applicable national requirements.
- Select appropriate sludge treatment technologies, considering, for example, the quantity and sources of sludge; available resources for capital expenditures, training, operations and maintenance; availability of skilled operators, maintenance personnel, etc.; and the desired disposal methods or end uses of the treated solids.
- Consider land application or other beneficial re-use of wastewater treatment plant residuals, but only based on an assessment of risks to human health and the environment. The Quality of residuals for land application should be consistent with the relevant public health-based guidance from the World Health Organization (WHO)[42] and applicable national requirements
- Process, dispose of and re-use wastewater treatment plant residuals in a manner consistent with applicable national requirements or, in their absence, internationally accepted guidance and standards
- Cover emission points (e.g., aeration basins, clarifiers, sludge thickeners, tanks, and channels), and vent emissions to control systems (e.g., compost beds, bio-filters, chemical scrubbers, etc.) as needed to reduce odors and otherwise meet applicable national requirements and internationally accepted guidelines
- Where necessary, consider alternate aeration technologies or process configurations to reduce volatilization

Sanitation

147. UNOPS will ensure that UW-PMU apply the following measures during the rehabilitation of sewers:

[42] WHO Guidelines for the Safe Use of Wastewater, Excreta and Greywater (2006).

- If greywater is managed separate from sewage, implement greywater source control measures to avoid use and discharge of problematic substances, such as oil and grease, large particles or chemicals.
- Investigate upstream sources of pollutants causing treatment plant upsets or interference;
- Consider the installation of separate sewer systems for domestic wastewater and storm water runoff in the overall planning and design of new sewerage systems;
- When on-site sanitation systems where excreta are mixed with water predominate, consider use of small-diameter sewerage system to collect water effluent from septic systems or interceptor tanks;
- Limit the sewer depth where possible (e.g., by avoiding routes under streets with heavy traffic). For shallower sewers, small inspection chambers can be used in lieu of manholes;
- Use appropriate locally available materials for sewer construction. Spun concrete pipes can be appropriate in some circumstances but can suffer corrosion from hydrogen sulfide if there are blockages and/or insufficient slope;
- Ensure sufficient hydraulic capacity to accommodate peak flows and adequate slope in gravity mains to prevent buildup of solids and hydrogen sulfide generation;
- Design manhole covers to withstand anticipated loads and ensure that the covers can be readily replace if broken to minimize entry of garbage and silt into the system;
- Equip pumping stations with a backup power supply, such as a diesel generator, to ensure uninterrupted operation during power outages, and conduct regular maintenance to minimize service interruptions. Consider redundant pump capacity in critical areas;
- Conduct repairs prioritized based on the nature and severity of the problem. Immediate clearing of blockage or repair is warranted where an overflow is currently occurring or for urgent problems that may cause an imminent overflow (e.g., pump station failures, sewer line ruptures, or sewer line blockages);
- Review previous sewer maintenance records to help identify “hot spots” or areas with frequent maintenance problems and locations of potential system failure, and conduct preventative maintenance, rehabilitation, or replacement of lines as needed;
- When a spill, leak, and/or overflow occurs, keep sewage from entering the storm drain system by covering or blocking storm drain inlets or by containing and diverting the sewage away from open channels and other storm drain facilities (using sandbags, inflatable dams, etc.). Remove the sewage using vacuum equipment or use other measures to divert it back to the sanitary sewer system.

6.3.3 Urban Roads

148. The following table details the potential impacts and risks that UNOPS and RMF-IU might need to address, as well as matching mitigation measures, if the Project was to finance urban road maintenance subprojects. Similar to YIUSEP, YIUSEP II will only support the routine maintenance of road, i.e., works are usually non-structural in nature and are meant to extend the life of the pavement. These include fixing the cobbles of stone roads, patching pot holes, surface patching with surface dressing or thin asphalt, crack sealing and filling, re-graveling of shoulders, cleaning of drains and culverts; installing traffic signs and signals; replacing damaged signs and road markings, controlling roadside brush and vegetation, cleaning roadside, and repairing sidewalks.

149. The sector specific risks and impacts are additional to the generic contractor related risks and impacts described in Table 2.

Table 5. Potential Impacts and matching mitigation measures for urban roads subprojects (Standard routine maintenance work)

Potential Impact	Mitigation Measure
Filling or blockage of culverts, drainage ditches and canals as a result of maintenance	• Side slope roads to prevent the accumulation of water on the road surface • Periodically clean and maintain ditches and culverts
Temporary loss of income and disruption of economic activities/ businesses because of Project activities.	UNOPS and its Implementing partners will take all appropriate measures to avoid the disruption of economic activities, and will compensate affected parties, as per the Project Resettlement Framework

6.3.4 Electricity for Critical Services

150. The following table details the potential impacts and risks that UNOPS might need to address, as well as matching mitigation measures, if the Project was to finance electricity related subprojects.

151. YIUSEP II will not be involved in transmission or distribution, or in any way interface with the assets owned by the Local Public Utility Corporations (PECs). UNOPS does not have the authority to affect such assets, or the authorization from the PECs.

152. As was done during YIUSEP, all activities and equipment will be off grid, mainly within the premises of existing health or educational facilities, and will consist of the repair of existing generators or the installation of mainly rooftop photovoltaic panels. The connection of off-grid facilities supported by the Project to neighboring businesses was envisaged at one hospital during YIUSEP, but was abandoned because of the liabilities that would ensue vis-à-vis the PEC.

153. The sector specific risks and impacts are additional to the generic contractor related risks and impacts described in Table 2.

Table 6. Potential impacts and matching mitigation measures for Electricity for Critical Services subprojects

Potential Impact	Mitigation Measure
Electric shock can cause death or injury to the public	• Build security fences around facilities • Put in place warning signs • Carefully design using appropriate technologies to minimize hazards
Impacts of hazardous wastes resulting from the disposal of batteries and panels used in solar PV systems	• Ensure proper recycling and disposal paths exist for batteries • Contract with appropriate experienced recycling contractor for disposal of solar PV panels
Emission due to fossil fuel	• Ensure that generators are well-maintained and meet the Small Combustion Facilities Emissions Guidelines

154. Given that the cumulative maximum power rating of the fossil fuel power generation facilities that might be rehabilitated might exceed 3MWth, UNOPS will ensure that the small combustion facilities emissions guidelines[43] are followed, as indicated in Table 7, if the installations operates more than 500 hours per year, and if their annual capacity utilization exceeds 30 percent.

[43] General EHS Guidelines, Small Combustion Facilities Emissions Guidelines

Table 7. Small Combustion Facilities Emissions Guidelines (3MWth – 50MWth) – (in mg/Nm3 or as indicated)

Combustion Technology / Fuel/ Engine	Particulate Matter (PM)	Sulfur Dioxide (SO2)	Nitrogen Oxides (NOx)	Dry Gas, Excess O2 Content (%)
Gas	N/A	N/A	200 (Spark Ignition) 400 (Dual Fuel) 1,600 (Compression Ignition)	15
Liquid	50 or up to 100 if justified by project specificconsiderations (e.g., Economic feasibility of using lower ash content fuel, or adding secondary treatment to meet 50, and available environmental capacity of the site)	1.5 percent Sulfur or up to 3.0 percent Sulfur if justified by project specific considerations (e.g., Economic feasibility of using lower S content fuel,or adding secondary treatment to meet levels of using 1.5 percent Sulfur, and available environmental capacity of the site)	If bore size diameter [mm] < 400: 1460 (or up to 1,600 if justified to maintain highenergy efficiency.) If bore size diameter [mm] > or = 400: 1,850	15
Turbine				
Natural Gas =3MWth to < 15MWth	N/A	N/A	42 ppm (Electric generation) 100 ppm (Mechanical drive)	15
Natural Gas =15MWth to < 50MWth	N/A	N/A	25 ppm	15
Fuels other than Natural Gas =3MWth to < 15MWth	N/A	0.5 percent Sulfur, or lower percent Sulfur (e.g., 0.2percent Sulfur) if commercially available without significant excess fuel cost	96 ppm (Electric generation) 150 ppm (Mechanical drive)	15
Fuels other than Natural Gas =15MWth to < 50MWth	N/A	0.5% S or lower % S (0.2% S) if commerciallyavailable without significant excess fuel cost	74 ppm	15
Boiler				
Gas	N/A	N/A	320	3
Liquid	50 or up to 150 if justified by environmental assessment	2000	460	3
Solid	50 or up to 150 if justified by environmental assessment	2000	650	6

Notes: -N/A/ - no emissions guideline; Higher performance levels than these in the Table should be applicable to facilities located in urban / industrial areas with degraded airsheds or close to ecologically sensitive areas where more stringent emissions controls may be needed.; MWth is heat input on HHV basis; Solid fuels include biomass; Nm^3 is at one atmosphere pressure, 0□C.; MWth category is to apply to the entire facility consisting of multiple units that are reasonably considered to be emitted from a common stack except for NOx and PM limits for turbines and boilers. Guidelines values apply to facilities operating more than 500 hours per year with an annual capacity utilization factor of more than 30 percent.
Lower emission values may apply if the proposed facility is located in an ecologically sensitive airshed, or an airshed with poor air quality.

Chapter 7.
Procedures to Address Environmental and Social Issues

155. This section sets out in detail the procedures to be followed in addressing the environmental and social risks and impacts of subprojects

7.1 Exclusion List

156. The first step in addressing a subproject's environmental and social risks and impacts is for the ESSO to exclude as **ineligible for UNOPS support all** subprojects that include any of the following attributes:

- Production or activities involving harmful or exploitative forms of forced labor/harmful child labor;
- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements;
- Production or trade in weapons and munitions;
- Gambling, casinos and equivalent enterprises;
- Trade in wildlife or wildlife products regulated under CITES;
- Production or trade in radioactive materials;
- Production or trade in or use of un-bonded asbestos fibers;
- Production or trade in wood or other forestry products from unmanaged forests;
- Production or trade in products containing PCBs;
- Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals;
- Production or trade in pharmaceuticals subject to international phase outs or bans;
- Production or trade in pesticides / herbicides subject to international phase outs or bans
- Production or trade in ozone depleting substances subject to international phase out;
- Production or activities that impinge on the lands owned, or claimed under adjudication, by indigenous peoples, without full documented consent of such people.
- Power plants,
- Large-scale transport infrastructure such as highways, expressways, urban metro-systems, railways, and ports,
- Investments in extractive industries; commercial logging,
- Dams, or projects involving allocation or conveyance of water, including inter-basin water transfers or activities resulting in significant changes to water quality or availability,
- Activities that would significantly convert natural habitats or significantly alter potentially important biodiversity and/or cultural resource areas, and
- Activities that would require the relocation of residential households and/or significant involuntary land acquisition,
- Activities in disputed areas.

7.2 Screening

157. Within one week of receiving a draft subproject proposal from UNOPS' technical staff or UNOPS' Implementing Partners, the ESSO will prepare, sign, and pass on to the Project Manager, a subproject specific screening form (Template in Annex 1), indicating:

(i) The proposed environmental and social risk rating (High, Substantial, Moderate or Low), with justifications

(ii) The proposed environmental and social risk management instruments to be prepared.

7.3 Environmental and Social Risk Management Instruments

Subprojects requiring a full ESIA and ESMP

158. The ESSO will determine if the subproject requires a full Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP). When this is the case, the ESSO, in collaboration with the ESSO of the concerned Implementing Partner, will prepare draft ToRs for the ESIA and ESMP as per the templates in Annex 3 and 4. He will then pass on the ToRs to the Program Manager who will submit them to the World Bank for review and clearance.

159. UNOPS will competitively select consultants to prepare full ESIAs and ESMPs for subprojects that require them. The ESSO will supervise their preparation and interact with the consultants. On completion of the instruments, the Program Manager will submit the draft ESIAs and ESMPs to the World Bank for their review, clearance and disclosure.

Subprojects only requiring an ESMP

160. Proportionate ESMPs for subprojects not requiring a full ESIA and ESMP will be prepared either by the UNOPS ESSO, for subprojects directly implemented by UNOPS, or by the ESSO of each Implementing Partner, for the subprojects they will implement. A subproject's ESMPs must be prior reviewed and cleared by the World Bank before a subproject can be implemented. The UNOPS ESSO will review and ensure the quality of all ESMPs before they are sent to the Bank by the Project Manager.

161. The proportionate ESMPs will be prepared according to the following table of content:

Summary Sheet

Subproject Name	
Subproject Location	
Implementing Partner	
Risk level (low, moderate, substantial or high)	
Date of the field visit	
Consultation Summary	
Observations/Comments	
Signature of responsible ESSO	
Date	

Subproject Description

- Nature and scope of activities, particularly construction and rehabilitation works. Include all the technical details that are relevant to understand the environmental and social risks and impacts of the subproject
- Location, including a map. If the subproject includes multiple locations, then the particulars of each location must be provided.

Environmental and Social Baseline

- Provide all the necessary information required to understand the environmental and social risks and impacts of the subproject.

- Provide enough pictures to illustrate environmental and social issues, with appropriate legends.

Consultations

- Document all consultations with stakeholders likely to be affected by the subproject (date, location, list of participants, topics discussed, conclusions). The consultations must include the persons that might be negatively affected, and not only beneficiaries or interested and concerned parties.
- Join photos of the consultations
- Detail the grievance mechanism procedures specific to the subproject

Mitigation Instruments

- Refer to the Environment, Social (including labor), Health, and Safety requirements (Annex 5) and attach them to the ESMP
- Highlight the ESHS requirements to which subproject contractors must pay the greatest attention. If necessary, the ESMP will "proportionalize" the ESHS requirements to the subproject's nature, scope, the specific environmental and social risks, and the number of workers involved. For example, UNOPS might need to specify for small contracts the type of PPE, or the contents of First Aid Boxes.
- If necessary, indicate additional requirements that will be applicable to the subproject contractor.
- Indicate the mitigation measures that UNOPS and its Implementing Partners will be implementing to address the environmental and social risks and impacts not associated with contractors (see section 6.2 of this ESMF), including legacy issues, and technical assistance.
- Provide a subproject specific monitoring plan that indicates what parameters will be monitored, how they will be monitored, who will monitor them, and how frequently they will be monitored.
- Detail any training provided by UNOPS to the contractors and their workers.

Budget

- Provide a budget for the mitigation measures to be implemented by UNOPS and its implementing partners. The cost to contractors of meeting the ESHS requirements will be included in their respective contracts.

7.4 Incorporating ESHS requirements in contracts[44]

162. UNOPS or its Implementing Partner will ensure that:

- Requests for Proposals reference the ESHS requirements in Annex 5
- Bidders submit a preliminary environmental and social plan as part of their bids, describing the principles and methodology they will use to address environmental, social, health and safety issues under the contract, and will include all costs associated with managing environmental and social issues in their bids.
- The quality of the preliminary environmental and social plan, the bidders' past environmental and social performance, and their ability to manage environmental and social issues will be considered in the selection of contractors.
- The selected contractors will prepare a Contractor Environmental and Social Management Plan (C-ESMP), detailing how the ESHS requirements will be implemented, including personnel
- It approves the C-ESMP before the start of activities

[44] UNOPS will also require all contractors to meet its GHS guidelines, although they might not be explicitly mentioned in contract conditions.

- C-ESMPs will serve as the benchmark for monitoring and evaluating the contractor's environmental and social performance

7.5 Consultation and Disclosure Requirements

163. Despite the emergency situation and the current COVID-19 pandemic, UNOPS consulted with public authorities and the Implementing Partners (PWP, RMF-IU, and Urban PMU), to ensure that YIUSEP II responds to the needs identified during the implementation of YIUSEP I. Further detail regarding consultations during Project preparation are found in the Project Stakeholder Engagement Plan (SEP).

164. For each subproject, the ESSO of the concerned Implementing Partners will engage with affected communities, including host communities, through the process of stakeholder engagement described in the Project Stakeholder Engagement Plan (SEP). UNOPS and its Implementing Partner will initiate consultations with individuals and communities that might be affected by the subproject, as soon as subproject screening has been completed. The purpose of the consultations will be to: (i) inform them about the activities to be undertaken, their timetable and possible impacts, and; (ii) document and address their concerns. Consultation summaries should be included in safeguard instruments, including who was consulted, where and when, what concerns were expressed, and how these concerns were addressed. The records of consultations are kept in the Project Office.

165. The consultation process will take in account the sociocultural context of Yemen. Consultations can take the form of focus groups, discussions with elders/community leaders, or interviews. Separate consultations will be done for women in order to ensure that any special concerns and needs are taken into account during the preparation of the safeguard instruments. In light of the fragility, conflict, and violence (FCV) context, the ESSO of the concerned Implementing Parwill ensure that PAPs are not exposed to risks as part of their participation in subproject consultations, for example by avoiding large meetings, and not disclosing personal information/photos.

7.6 Grievance Mechanism

166. UNOPS will apply the Project Grievance Mechanism[45] detailed in Section 5 of the Project Stakeholder Engagement Plan, to all subprojects. Each ESMP will include a subproject specific Grievance Mechanism, with procedures relevant to its specific context.

167. Subproject related grievances can be brought up by affected people in case of: (i) non-fulfillment of contracts or agreements; (ii) compensation entitlements; (iii) types and levels of compensation; (iv) disputes related to destruction of assets or livelihoods; or (v) disturbances caused by construction activities, such as noise, vibration, dust or smell. Anonymous complaints will be admissible.

168. The UNOPS Program Manager based in the Sana'a Office will have the overall responsibility to address Project activity-related complaints and inquiries from Project affected communities or individuals regarding any environmental or social impacts due to subproject activities. The UNOPS ESSO in its Sana'a Office will handle Project activity-related complaints, who will be assisted by UNOPS' City Engineers in the target cities. The ESSO in each of the Implementing Partners will handle complaints related to their activities. UNOPS will coordinate with the local Implementing Partners and will set a unified timeframe for reporting grievances. UNOPS and the Implementing Partners will present and explain the mechanism to all subproject affected persons subproject preparation.

169. UNOPS is providing multiple access points to the ESSO for beneficiaries to voice their concerns. These access points will be advertised at subproject level, and include: complaint box at Project activity sites, at UNOPS' offices in Sana'a, Aden and Mukalla, by directly contacting Project affiliated staff, and by mail, telephone, email, and UNOPS 'website:

[45] The Project Grievance Mechanism described in the Project Stakeholder Engagement Plan (SEP) is distinct from the Workers Grievance Mechanisms described in the Project Labor Management Procedures (LMP)

Address	Haddah Street, former European Union Office Building, Sana'a
Telephone	+967 1 504914 and +967 1 504915
Email	gm-yemen@unops.org
Website	www.unops.org

7.7 Implementation of Subproject Mitigation Measures

170. UNOPS and the Implementing Partners are responsible for implementing the necessary mitigation measures that are beyond the control of contractors. In addition, subprojects should regularly consult with project affected persons and communities throughout subproject implementation, as indicated in the Project's Stakeholder Engagement Plan.

Chapter 8.
Monitoring and Reporting

171. The UNOPS ESSO will monitor the overall implementation of the ESMF[46] by UNOPS and its Implementing Partners, most particularly the:

(i) timely preparation of environmental and social screening forms for all subprojects (list of subprojects by risk category by date)
(ii) timely preparation and clearance of subproject ESIAs and ESMPs, as needed (list of instruments with dates)
(iii) management of prior review requirements of the World Bank (non-objection requests with dates)
(iv) preparation and monitoring of ESMP implementation, including monitoring of mitigation measures and monitoring of contractors environmental and social performance (indicators)
(v) training of Project staff, of Implementing Partners, and contractors (list of persons, dates and places)

172. The ESSO will prepare:

(i) bi-annual reports summarizing monitoring results, to be included in the Project's bi-annual Reports to the World Bank
(ii) reports that aggregate and analyze monitoring results ahead of regular "reverse" World Bank implementation support missions with UNOPS
(iii) an annual evaluation of all environmental and social monitoring results, which will be submitted to the World Bank as part of overall project implementation reporting

173. Environmental and social risk management aspects are also part of the scope of the Third-Party Monitoring (TPM) services contracted by UNOPS. As per their Terms of Reference, the:

"Specific Requirements for Safeguards Compliance Verification include two phases of subprojects' implementation:

- *Phase 1 includes compliance check with the environmental and social safeguards requirements per Project documents (PAD; ESMP; RAP; other) in regard to the subprojects preparation/design and existence of these requirements in the bid and contract documents or other related implementation arrangements;*
- *Phase 2 includes verification of conformity with safeguards' requirements during implementation of subprojects; and compliance check with all environmental and social safeguards requirements per the Project documents (PAD; ESMP; RAP; other)."*

8.1 Subproject Environmental and Social Database

174. The ESSO will establish, maintain, and update a database of all subprojects that will be shared with the Implementing Partners. The database will include for each subproject:

(i) type of subproject, name of subproject, Implementing Partner
(ii) environmental and social risk level
(iii) timeline (clearance of screening form, clearance of ToRs, clearance of safeguard instruments)
(iv) supervision reports by ESSOs during implementation
(v) contractor reports
(vi) noncompliance by contractors
(vii) cross references to the Grievance Redress Mechanism's log of complaints.

[46] In addition to the subproject ESMP, the ESSO will monitor any Resettlement Plan as well as the status of resolution of grievances/complaints. The ESSO will also evaluate that the livelihoods of PAPs were restored as per the Resettlement Plan.

8.2 Monitoring of ESMPs

175. The ESSOs within UNOPS and the Implementing Partners will conduct onsite visits to large water and sanitation subprojects at least once a week, or more often as needed, to monitor the implementation of their ESMPs. Smaller subprojects will be monitored every two weeks, or more often as needed.

176. The following table provides an indicative monitoring plan in the event of a large water and sanitation subproject, to be included in subproject ESMPs.

Table 8. Monitoring plan

What	How	Who	When

• Proper operation of the network.
• Efficiency of treatment ponds. Effluent quality tests for:
  ○ BOD
  ○ PH
  ○ Conductivity
  ○ Fecal Coliforms
• Reuse of effluent and types of irrigated crops.
• Disposal/reuse of sludge
• Health and safety of workers and farmers
• Capacity building programs.
• Training of members of community or local NGOs on health & hygiene awareness
	• Monitoring checklists
	• Visual inspection at the scheme routes and at manholes.
	• Samples collected from outlet of treatment works
	• Focus groups with communities to evaluate the effectiveness of health and hygiene awareness campaigns
	• Checks on courseware qualities for capacity building programs (Administrative, financial and O&M)
	• Interviews with awareness teams
		Environmental Specialist
		Local Authorities
		Local NGOs
		Communities
		UW/UNOPS
			Semi-annually (for one year after the start of operation)

• Complaint handling	• Checking logs	GM personnel	monthly

8.3 Monitoring of Contractors

177. As part of their regular activities, the ESSOs will monitor and document (including pictures) the environmental and social performance of contractors for each subproject throughout the contract period. This will involve both spot check visits to work locations, and reviews of records kept by the contractor and of reports submitted by the contractor. The frequency of site visits should be commensurate with the magnitude of activities and their associated environmental and social impacts. Overall, each construction site should be visited at least once during subproject implementation.

178. For any incident or accident that causes or has the potential to cause material or significant environmental and/or social harm, the site supervisor/designated officer shall notify the responsible party's senior management and the Project Manager as soon as possible, and no later than 24 hours. UNOPS or its Implementing Partner will visit sites where a serious accident is recorded within one working day of the accident or incident, and report any significant accident or incident to the World Bank within 48 hours.

179. UNOPS and its Implementing Partners will document in the database each visit and interaction with a contractor, including identification of contractor noncompliance, the significance of the non-compliance, and guidance provided on actions to be taken. The ESSOs within UNOPS and Implementing Partners will follow up as needed to ensure timely resolution of issues of noncompliance with environmental and social clauses. This may include additional visits to the contractor's site or offices, further communications with contractor personnel, issuance of notices of deficiency or warnings to the contractor, and other actions as needed.

180. At any stage of construction or other work, if the contractor has not taken appropriate action to achieve compliance with the environmental and social clauses after repeated notices of violation and warnings of noncompliance, and significant environmental or social impacts are occurring or

imminent, UNOPS should order the contractor to stop work until environmental and social performance is brought under control and up to acceptable standards.

8.4 Completion Reports

181. Upon subproject completion, the ESSOs will prepare a subproject completion report that flags any unresolved environmental or social issue, with recommended remedial action. This report will be shared with the Program Manager who will decide the way forward. For subprojects with significant environmental or social impacts, the completion report might recommend periodic routine inspections/monitoring during operation of the facility by dedicated environmental and social specialists.

Chapter 9.
Capacity

182. This chapter reviews the capacity and skills available within UNOPS and its Implementing Partners to implement and monitor the ESMF, and proposes measures to enhance this capacity.

9.1 UNOPS

183. UNOPS' Environmental and Social Standards Officer (ESSO) based in the UNOPS Sana'a Office will oversee the management of environmental and social risks for the Project. The ESSO will:

- Review and clear environmental and social screening forms for all subprojects that are prepared by the Implementing Partners
- Prepare ToRs for all full ESIAs and ESMPs that might be required
- Provide the draft ToRs for full ESIAs and ESMPs to the World Bank for their prior review
- Supervise the preparation of ESIAs and ESMPs by the consultants selected by UNOPS
- Provide draft full ESIAs and ESMPs to the World Bank for review and clearance
- Monitor subproject compliance with their ESMP, including field visits and spot checks
- Work closely with UNOPS engineers and procurement officers to incorporate environmental and social requirements into subproject design, appraisal and resource mobilization
- Closely coordinate with ESSOs in the Implementing Partners.
- Compile quarterly, biannual and annual reports on environmental and social risk management performance of the Project that will be incorporated into the Project reports
- Provide assistance and deliver capacity building trainings to UNOPS staff, Implementing Partners, and contractors
- Organize and oversee the preparation, production and distribution of training manuals and awareness materials

184. UNOPS will also deploy a Gender Mainstreaming Officer and a Health and Safety Officer based in its Sana's office.

185. UNOPS will also recruit a part time international expert to be available - on a needs basis - to oversee the overall implementation, monitoring, and reporting of environmental and social risk management aspects.

9.2 Public World Projects (PWP)

186. PWP currently employs an environmental expert and a social expert who cover environmental and social issues in PWP' s current portfolio of projects. These two experts will jointly serve as the ESSO for the subprojects implemented by PWP, including the preparation of environmental and social screening forms, the preparation of proportionate ESMPs for subprojects that do not require a full ESIA and ESMP, and the monitoring of contractor compliance with subproject ESMP requirements. As necessary, PWP will recruit additional staff or employ local consultants.

9.3 RMF-IU

187. RMF-IU currently employs two environmental and social experts, who will jointly serve as its ESSO. The Project will provide them with on-the-job training and guidance to raise their capacity. The ESSO will prepare the environmental and social screening forms for all subprojects, and monitor on-site contractor compliance with subproject ESMP requirements and any Resettlement Plans.

9.4 UW-PMU

188. The environmental and social officer in UW-PMU will serve as its ESSO for the Project. The

ESSO will prepare the environmental and social screening forms for all subprojects implemented by UWS, and monitor on-site contractor compliance with subproject ESMP requirements, including the Environmental and Social Requirements for contractors.

9.5 Capacity Development

189. UNOPS will ensure that the ESSO, the Gender Mainstreaming Officer, and the Health and Safety Officer within UNOPS, as well as the ESSOs and Health and Safety Officers of the Implementing Partners receive training on the ESF and its implementation.

190. The UNOPS ESSO, jointly with the ESSOs in the Implementing Partners, will organize training for the persons involved in Project implementation, including:

- A launch workshop to operationalize the ESMF and agree on roles and responsibilities moving forward
- A workshop with UNOPS engineers and technical staff to explain the ESMF and its implementation.
- Environmental and social risk management training and capacity enhancement for the Implementing Partners, participating contractors, and Local Councils.
- Toolbox talks for contractors to explain the ESMF and the ESHS requirements, including the grievance mechanism for workers, sexual exploitation and abuse (SEA)/sexual harassment (SH) and the associated grievance management, and worker OHS, including:
    - On-site risk identification and mitigation
    - Use of PPEs
    - Emergency Prevention and Preparedness
- Sessions to sensitize the local councils to the ESMF and its implementation
- Training of UNOPS staff and Implementing Partners on land acquisition and resettlement management

191. The UNOPS HSSE Unit might be involved in the capacity building activities.

192. UNOPS will also finance the production of training manuals and awareness materials as needed.

Table 9. Indicative costs of capacity building activities

Capacity Building Measures	Unit Cost (USD)	Costs (USD)
5 X 2-day training on ESMF for Implementing Partners and their consultants	2000/session	10,000
10 X 1-day consultation with local councils and key stakeholders	1000/session	10,000
70 X 1-day training on ESMP and contractual clauses for contractors	1000/session	70,000
Production of environmental and social awareness materials (brochures, posters, fliers)	5000	5,000
	TOTAL	**95,000**

9.6 Budget

- UNOPS is fully covering, as part of the fee that it will charge the Bank, the cost of the ESSO, the Gender Mainstreaming Officer, and the Health and Safety Officer, as well as any associated operational costs.
- The Implementing Partners are covering the cost of their respective ESSOs and Health and Safety Officers as part of their respective Project Cooperative Agreement (PCA) with UNOPS. These ESSOs might not work full time on YIUSEP II activities, as each Implementing Partners has partnered with several projects.
- The cost of due diligence for specific subprojects (preparation of the screening form, consultations, GM, preparation of ESMPs and Resettlement Plans , and monitoring) are included in the costs/budget for each subproject. These costs are scalable to the level and scope of the potential risks and impacts, and might include the costs of consultants recruited

by UNOPS or an Implementing Partner to assist on specific tasks. Specifics will be required for the two larger solid waste management activities that were prepared under YIUSEP but will be implemented under YIUSEP II, given that they will require full ESIAs and ESMPs.

UNOPS

Annex 1.

Template for Subproject Screening

Screening Form for Potential Environmental and Social Issues

UNOPS will use this form to screen for the potential environmental and social risks and impacts of a proposed subproject. The form will allow UNOPS to: (i) identify the relevant Environmental and Social Standards (ESS); (ii) establishment an appropriate Environmental and Social risk for the subproject, and; (iii) specify the type of environmental and social assessment required, including specific instruments/plans.

The Screening Form is not a substitute for subproject-specific environmental and social assessments or specific mitigation plans.

Subproject name	
Subproject location	
Implementing Partner	
Estimated Investment	
Was the site visited beforehand	
Estimated Start/Completion Date	
Observations/Comments	
Signature of UNOPS ESSO	
Signature of Program Manager	

Question	**Answer**		**ESS relevance**	**Due diligence/ Actions**
	Yes	no		
Does the subproject involve civil works including new construction, expansion, upgrading or rehabilitation of existing infrastructure?			ESS1	ESIA/ESMP, SEP
Does the subproject involve land acquisition and/or restrictions on land use?			ESS5	Resettlement Plan, SEP
Is the subproject associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant?			ESS3	ESIA/ESMP, SEP
Does the subproject have an adequate system in place (capacity, processes and management) to address waste?			ESS1, ESS3	ESMP
Does the subproject involve the recruitment of workers including direct, contracted, primary supply, and/or community workers?			ESS2	LMP, SEP
Does the subproject have appropriate OHS procedures in place, and an adequate supply of PPE (where necessary)?			ESS2	LMP

Does the subproject have a GM in place, to which all workers have access, designed to respond quickly and effectively?			ESS10	SEP
Does the subproject involve use of security or military personnel during construction and/or operation of healthcare facilities and related activities?			ESS4	ESIA/ESMP, SEP
Is the subproject located within or in the vicinity of any ecologically sensitive areas?			ESS6	ESIA/ESMP, SEP
Is the subproject located within or in the vicinity of any known cultural heritage sites?			ESS8	ESIA/ESMP, SEP
Does the project area present considerable Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risk?			ESS1	ESIA/ESMP, SEP

Conclusions of the screening:

1. **Indicate the proposed environmental and social risk ratings[47] (High, Substantial, Moderate or Low), and provide justifications.**

2. **Indicate the proposed environmental and social risk management instruments that must be prepared.**

[47] **High Risk** subprojects are likely to generate a wide range of significant adverse risks and impacts on human populations or the environment, because of the complex nature of the Project, their large to very large scale, or the sensitivity of the subproject locations. Impacts are likely to be long term, permanent, irreversible, and impossible to avoid entirely due to the nature of the Project

Medium Risk subprojects are likely to generate some significant adverse risks and impacts on human populations or the environment, because of their large to medium scale. They are not located in a highly sensitive area. Impacts are likely to be mostly temporary, predictable and reversible.

Moderate Risk subprojects have adverse risks and impacts on human populations and/or the environment that are not likely to be significant, because the subproject is not complex or large, do not involve activities that have a high potential for harming people or the environment, and are located away from environmentally or socially sensitive areas.

Low Risk subprojects have potential adverse risks to and impacts on human populations or the environment that are likely to be minimal or negligible. These subprojects do not require further ES assessment following the initial screening.

UNOPS

Annex 2.

Yemeni Environmental Quality Standards

Table 10. Permissible limits for key air pollutants

Pollutant	Time Period	Value
Carbon Monoxide and Dioxide gas (CO/CO_2)	8 hours	10 micrograms\m^3
Nitrogen oxide (NO_x)	24 hours	150 micrograms\m^3
Sulphur oxide (SO_X)	24 hours	250 micrograms\m^3
Ozone (O_3)	8 hours	120 micrograms\m^3
Particulate Matter (PM)	24 hours	70 micrograms\m^3
Lead (Pb)	Annually	1 micrograms\m^3

The Yemeni standards for air quality do not specify sources of industrial emissions; they are also less strict than those in the World Bank Group EHS Guidelines.

Table 11. Maximum noise level allowed in different environments (Decibel Unit dB)

Environment	Time		
	7h00-18h00	18h00-23h00	23h00-07h00
Rural housing and entertainment places	45	40	25
Suburban housing areas	50	45	40
Urban housing areas	55	50	45
Housing areas in city centers	60	55	50
Industrial and commercial areas	70	70	70

Table 12. Physical Characteristics of drinking water

Characteristic	Unit	Optimal limit	Maximum limit
Taste		Acceptable to consumers	
Odor		Acceptable to consumers	
Color	Platinum Cobalt	5	25
Turbidity (NTU)	Turbidity Unit	1	5
Temperature	Degree Celsius	-	25
pH (Potential of hydrogen)		6.5-8.5	5.5- 9
Electrical Conductivity EC	Micro mohs/cm	450-1000	2500

Table 13. Inorganic substances in drinking water

Substance	Symbol	Optimal limit (mg/L)	Maximum limit (mg/L)
Total Dissolved Salts	TDS	650	1500
Bicarbonate	HCO_3	150	500
Chloride	Cl^-	200	600
Sulphate	SO_4	200	600
Fluoride	F^-	0.5	1.5
Calcium	Ca	75	200
Magnesium	Mg	30	30-150

Barium	Ba	0.1	0.15
Sodium	Na	200	400
Potassium	K	0-12	12
Nitrate	NO_3	10	50
Iron	Fe	0.3	1
Manganese	Mn	0.1	0.5
Copper	Cu	0 1	1.5
Zinc	Zn	5	15
Total Hardness (as Calcium Carbonate)	TH	100	500
Aluminum	Al	0.2	0.3
Nickle	Ni	0.05	0.1
Boron	B	0.50	1
Silica	SiO_2		40

Total residual chlorine concentration in treated water reaching the consumers should be between 0.2 to 0.5 ppm. It might be increased in the event of an epidemic to the level determined by the related authorities and international organizations.

Table 14. Maximum limits for organic pollutants in drinking water

Substance	Maximum limit (mg/L)
Aldrin	0.0002
Lindane	0.004
Methoxine	0.01
Toxaphene.	0.002
2,4 Dichlorophenoxy acetic acid	0.1
Propionic acid	0.01
Malathion	0.19
Parathion	0.035
Permethrin	0.01
Dimethoate	0.002
Diazinon	0.002

Table 15. Maximum limits for toxic substances in drinking water

Substance	Unit	Maximum limit
Lead (Pb)	mg/L	0.05
Selenium (Se)	//	0.01
Arsenic (As)	//	0.01
Chromium (Cr)	//	0.05
Cyanide (CN)	//	0.01
Cadmium (Cd)	//	0.005
Mercury (Hg)	//	0.001
Antimony (Sb)	//	0.005
Barium (Ba)	//	0.5-1.0
Silver (Ag)	//	0.01-0.1
Halogenated methane group (TTHM) includes: Chloroform, Bromoform, Bromodichloromethane and Dibromochloromethane	µg/L	150

The amount of radioactive materials in water should not exceed the limits mentioned below:

The microbiological pollutants in treated public water supplied through the distribution network or any other distribution means must be free of Total Coliform and Colon Bacillus form as mentioned below:

Table 16. Bacterial Pollutants

Bacteria	Unit	Maximum limit
Total coliforms	CFU/100 ml	Zero
Fecal coliform	CFU/100 ml	Zero

Microbiological pollutants in untreated public water conveyed into the distribution network

- 98% of the annually tested samples must be free of total coliforms.
- The fecal coliform must not exceed three in any one isolated sample and not successive samples.
- Water not supplied through the distribution network such as: wells, springs, rain water reservoirs the Fecal coliform that found in a 100 ml water sample must not exceed 10-15 coliform.

Biological Pollutants

The drinking water must be free from the following:

- Protozoa harmful to health.
- Parasitic worms (Helminths) that can involve human as a host during its life cycle and transfer infection to human.
- Parasites including fungi that affect health or produces toxic materials that affect human health.

Waste Water

Physical Standard physical requirements:

- Maximum temperature should not exceed 45 C^o
- Should not contain substances susceptible to freezing, settling or become viscous in temperature ranging from 0-40 C^o
- Should not contain solid or liquid hazardous and explosive materials

Table 17. Maximum levels of chemical substances in industrial and commercial waste water discharged in the public sewerage network

Compound/Substance	Symbol	Unit	Maximum limit
Chemical Oxygen Demand	COD	mg/L	2100
Biochemical Oxygen Demand	BOD	mg/L	800
Power of Hydrogen	pH	---	5.5-9.5
Maximum Temperature Degree	C^o	C	45
Total Suspended Solids	TSS	mg/L	1100
Total Dissolved Solids	TDS		2000
Oil and Grease	---		100
Phenolic Compounds	---		10
Sulphate	$S0_4$		1000
Phosphorus	P		50
Cyanide	CN		5
Sulphur	S		1
Hydrogen Sophie	H_2S		10

Iron	Fe		50
Chloride	Cl		600
Fluoride	F		8
Arsenic	As		5
Tin	Sn		10
Barium	Ba		5
Boron	B		5
Cadmium	Cd		1
Chromium (VI)	Cr		5
Copper	Cu		5
Lead	Pb		0.6
Mercury	Hg		0.01
Nickel	Ni		5
Selenium	Se		0.1
Silver	Ag		1
Manganese	Mn		10
Beryllium	Be		5
Zinc	Zn		15
Cobalt	Co		0.05
Lithium	Li		5
Vanadium	V		0.1
Aluminum	Al		5

Wastes that must be handled with control set up by the administration under the competent authority of which wastes lie:

Clinical wastes generated from medical care in hospitals, clinics and medical centers.

1. Wastes generated from pharmaceutical preparations and products.
2. Wastes generated from medicaments and drugs.
3. Wastes generated from production of biological insecticides, preparation of medicaments from plants and shrubs and its usage.
4. Wastes generated from wood chemical protective materials and their preparation and utilization.
5. Wastes generated from organic solvent materials and their preparation and usage.
6. Wastes generated from thermal processing and printing processes which contains cyanide.
7. Wastes from unusable mineral oil.
8. Wastes from oil/water and mixes of hydrocarbons etc.
9. Wastes from substances and compounds containing alkaline phenol with multitude bonds (PCBs) and/or phenyls of multiple chlorine bonds.
10. Wastes from tar sediments resulting from refining and distillation and any thermal processing analysis.
11. Wastes from production of links, paints, coloring materials, lacquers, varnishes and their preparation and usage.
12. Wastes left from the production of resins, gingival, plastics, furs, sticking materials and their preparation and usage.
13. Wastes from chemical materials generated from research and development activities or from any uncategorized/ or new educational activities the effects of which on human beings and the environment are not known.
14. Wastes of explosive nature not subjected to any other legislation.
15. Wastes left from production of chemical, processing and photographic materials and their usage and preparation and usage.
16. Wastes from surface treatment of plastics and metals.

17. Residues resulting out of disposing of industrial wastes.

Hazardous wastes for which transportation and handling is prohibited except with a permission from the Competent Authority include:

- Wastes that include the following materials in their composition:
    1. Carbonic metal.
    2. Barium and barium compounds.
    3. Chrome hexa equivalence compounds.
    4. Copper compounds.
    5. Zinc compounds.
    6. Arsenate, arsenic compounds.
    7. Selenium, selenium compounds.
    8. Cadmium, cadmium compounds.
    9. Antimony, antimony compounds.
    10. Tellurium, tellurium compounds.
    11. Mercury, mercury compound.
    12. Thallium, thallium compounds.
    13. Lead, lead compounds.
    14. Fluorine inorganic compounds except calcium fluoride.
    15. Cyanide inorganic compounds.
    16. Acid solutions or acids in solid state.
    17. Alkaline solutions or alkalines in solid state.
    18. Rock silk (Asbestos) (fiber dust)
    19. Phosphorous organic compounds.
    20. Cyanide organic compounds.
    21. Phenol, phenol organic compounds including chlorophenol.
    22. Organic compounds of Ether/air.
    23. Halogenic organic solvents.
    24. organic solvents expect halogenic solvents.
    25. Any similar substance to bi-benzene of multiple chlorine bonds.
    26. Any substance similar to dioxin-pho-bi-benzene of chloride bonds.
    27. Most organic halogen compounds
- Pesticides and home insecticides.
- Petroleum substances.
- Substances from which ionic radiations are emitted.
- Inflammable and explosive substances.

Annex 3.

Indicative Outline of Subproject ESIA

Where an environmental and social impact assessment (ESIA) must be prepared as part of the environmental and social assessment of a subproject, it will include the following:

Executive Summary

- Concisely discusses significant findings and recommended actions.

Legal and Institutional Framework

- Analyzes the legal and institutional framework for the project, within which the environmental and social assessment is carried out, taking into account in an appropriate manner all issues relevant to the project, including: (a) the country's applicable policy framework, national laws and regulations, and institutional capabilities (including implementation) relating to environment and social issues; variations in country conditions and project context; country environmental or social studies; national environmental or social action plans; and obligations of the country directly applicable to the project under relevant international treaties and agreements; (b) applicable requirements under the ESSs; and (c) the EHSGs, and other relevant GIIP.
- Compares the Borrower's existing environmental and social framework and the ESSs and identifies the gaps between them.
- Identifies and assesses the environmental and social requirements of any co-financiers.

Subproject Description

- Concisely describes the proposed subproject and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS1 through 10.
- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

Baseline Data

- Sets out in detail the baseline data that is relevant to decisions about project location, design, operation, or mitigation measures. This should include a discussion of the accuracy, reliability, and sources of the data as well as information about dates surrounding project identification, planning and implementation.
- Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions.
- Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- Takes into account current and proposed development activities within the project area but not directly connected to the project.

Environmental and Social Risks and Impacts

- Takes into account all relevant environmental and social risks and impacts of the project. This will include the environmental and social risks and impacts specifically identified in ESS2–8, and any other environmental and social risks and impacts arising as a consequence of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.

Mitigation Measures

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assesses the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.
- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.

Analysis of Alternatives

- Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including the "without project" situation—in terms of their potential environmental and social impacts.
- Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the alternative mitigation measures.
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

Design Measures

- Sets out the basis for selecting the particular project design proposed and specifies the applicable EHSGs or if the EHSGs are determined to be inapplicable, justifies recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.

Key Measures and Actions for the Environmental and Social Commitment Plan (ESCP)

- Summarizes key measures and actions and the timeframe required for the project to meet the requirements of the ESSs. This will be used in developing the Environmental and Social Commitment Plan (ESCP).

Appendices

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—setting out the written materials both published and unpublished, that have been used.
- Record of meetings, consultations and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
- Tables presenting the relevant data referred to or summarized in the main text.
- List of associated reports or plans.

Annex 4.

Indicative Outline of an ESMP

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a subproject to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. UNOPS will (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements.

The content of the ESMP will include the following:

Mitigation

- The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels.
- The plan will include compensatory measures, if applicable. Specifically, the ESMP:
  - (i) identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
  - (ii) describes - with technical details – each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
  - (iii) estimates any potential environmental and social impacts of these measures;
  - (iv) takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage).

Monitoring

- The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

Capacity Development and Training

- To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

Implementation Schedule and Cost Estimates

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project,

showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

Integration of ESMP with Project

- The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

Annex 5.

Environmental and Social Requirements for Contractors

Contractors shall meet the following Environmental, Health, Safety and Social (including labor) requirements – thereafter called ESHS requirements[48].

The ESHS requirements include 10 sections

1. Contractor Environmental and Social Management Plan (C-ESMP)
2. ESHS Training
3. Construction Site Management
4. Occupational Health and Safety (OHS)
5. Road safety and Traffic Safety
6. Chance Find Procedures
7. Emergency Preparedness and Response
8. Stakeholder Engagement
9. Labor force management, including the Code of Conduct
10. Contractor Environmental and Social Reporting

Contractor Environmental and Social Management Plan (C-ESMP)

The Contractor shall:

- Prepare and submit to UNOPS for approval a Contractor Environmental and Social l and Social Management Plan (C-ESMP).
- Include in the C-ESMP a detailed explanation of how the contractor's performance will meet the ESHS requirements
- Ensure that sufficient funds are budgeted to meet the ESHS requirements, and that sufficient capacity is in place to oversee, monitor and report on C-ESMP performance.
- Put in place controls and procedures to manage their ESHS performance.
- Get prior written approval from UNOPS Engineers before starting construction or rehabilitation activities.

ESHS Training

The Contractor shall

- Determine ESHS training needs in collaboration with UNOPS
- Maintain records of all ESHS training, orientation, and induction.
- Ensure, through appropriate contract specifications and monitoring that service providers, as well as contracted and subcontracted labor, are trained adequately before assignments begin.
- Demonstrate that its employees are competent to carry out their activities and duties safely. For this purpose, the Contractor shall issue a Competence Certificate for every person working on site (relative to trade and aspect of work assignment) that specifies which tasks can be undertaken by which key personnel.

[48] The ESHS requirements build on the General EHS Guidelines of the World Bank Group, but also take into account other World Bank guidelines, and good practice notes

Orientation Training

The Contractor shall:

- Provide ESHS orientation training to all employees, including management, supervisors, and workers, as well as to subcontractors, so that they are apprised of the basic site rules of work at/on the site and of personal protection and preventing injury to fellow employees.
- Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

Visitor Orientation

The Contractor shall:

- Establish an orientation program for visitors, including vendors, that could access areas where hazardous conditions or substances may be present.
- Visitors shall not enter hazard areas unescorted.
- Ensure that visitors shall always be accompanied by an authorized member of the contractor, or a representative of UNOPS or of its Implementing Partners, who has successfully fulfilled the ESHS orientation training, and who is familiar with the project site construction hazards, layout, and restricted working areas.

New Task Employee and Contractor Training

The Contractor shall:

- Ensure that all workers and subcontractors, prior to commencement of new assignments, have received adequate training and information enabling them to understand work hazards and to protect their health from hazardous ambient factors that may be present. The training should adequately cover the step-by-step process that is needed for Project activities to be undertaken safely, with minimum harm to the environment, including:
  - Knowledge of materials, equipment, and tools
  - Known hazards in the operations and how they are controlled
  - Potential risks to health
  - Precautions to prevent exposure
  - Hygiene requirements
  - Wearing and use of protective equipment and clothing
  - Appropriate response to operation extremes, incidents and accidents

Construction Site Management

Vegetation

The Contractor shall:

- Prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the construction site
- Protect all trees and vegetation from damage by construction operations and equipment, except where clearing is required for permanent works, approved construction roads, or excavation operations
- Revegetate damaged areas on completion of the Works, and for areas that cannot be revegetated, scarifying the work area to a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion
- Use, as much as possible, local species for replanting and species that are not listed as a noxious weed

- Repair, replant, reseed or otherwise correct, as directed by UNOPS or its representative, and at the Contractor's own expense, all unnecessary destruction, scarring, damage, or defacing of the landscape resulting from the Contractors operations
- Transport labor and equipment in a manner to avoid as much as possible damage to grazing land, crops, and property

Protection of the Existing Installations

The Contractor shall:

- Safeguard all existing buildings, structures, works, pipes, cables, sewers, or other services or installations from harm, disturbance or deterioration during construction activities
- Coordinate with local authorities to identify existing infrastructure that might not be visible
- Repair any damage caused by the Contractor's activities, in coordination with concerned authorities.
- Take all reasonable precautions to prevent or reduce any disturbance or inconvenience to the owners, tenants or occupiers of properties to the construction activities, and more generally to the public
- Maintain safe access to public and private properties that might be affected by construction activities. If necessary, provide acceptable alternative means of passage or access to the satisfaction of the persons affected.
- Avoid working during night hours

Waste from Construction Activities

The Contractor shall:

- Collect and properly manage all solid wastes resulting from the construction activities, including construction debris and spoils, to prevent the contamination of soil and groundwater
- Remove unneeded excavation material from construction sites as soon as possible
- Agree with relevant municipalities about construction waste disposal
- Carefully select waste disposal sites, to be approved by UNOPS or its Implementing Partner
- Minimize littering of roads by ensuring that vehicles are licensed and loaded in such a manner as to prevent falling off or spilling of construction materials, and by sheeting the sides and tops of all vehicles carrying mud, sand, other materials or debris
- Transfer construction waste to assigned places in the selected waste disposal sites with documented confirmation.
- Properly dispose of solid waste and debris at designated permitted sites waste disposal sites allocated by the local authorities, and obtain a receipt of waste from the authorized landfill authority.

Air Quality

The most common pollutant involved in fugitive emissions is dust or particulate matter (PM) that is released during the transport and open storage of solid materials, and from exposed soil surfaces, including unpaved roads. Accordingly, the Contractor shall:

- Use dust control methods, such as covers, water suppression, or increased moisture content for open materials storage piles, or controls, including air extraction and treatment through a baghouse or cyclone for material handling sources, such as conveyors and bins;
- Use water suppression for control of loose materials on paved or unpaved road surfaces. Oil and oil by-products are not a recommended method to control road dust.
- Use wheel washes at quarries, ready-mix plants, construction sites, and other facilities to prevent track-out of mud, dust and dirt on to public road.
- Regularly clean road surfaces within the construction sites to remove accumulated fine material, and regularly clean transportation vehicles.

- Cover open bodied trucks handling sand, gravel or earth.
- Minimize smoke from diesel engines by regular and proper maintenance, in particular by ensuring that the engine, injection system and air cleaners are in good condition.

Hazardous and Toxic Materials

Toxic and deleterious wastes resulting from the Contractor's activities require special attention in order to forestall their introduction into the natural environment which could result in harm to people, aquatic life or natural growth of the area. Accordingly, the Contractor shall:

- Train workers regarding the handling of hazardous materials
- Label using easily understandable symbols, and provide material safety data sheets, for chemical substances and mixtures according to the Globally Harmonized System (GHS) of classification and labelling of chemicals.
- Store hazardous materials as per the statutory provisions of the Manufactures, Storage and Import of Hazardous Chemicals Rules (1989), under the Environment (Protection) Act, 1986.
- Provide adequate secondary containment for fuel storage tanks and for the temporary storage of other fluids such as lubricating oils and hydraulic fluids,
- Use impervious surfaces for refueling areas and other fluid transfer areas
- Train workers on the correct transfer and handling of fuels and chemicals and the response to spills
- Provide portable spill containment and cleanup equipment on site and training in the equipment deployment
- Deposit or discharge toxic liquids, chemicals, fuels, lubricants and bitumen into containers for salvage or subsequent removal to off-site locations.
- Treat hazardous waste separately from other waste
- Avoid the storage or handling of toxic liquid adjacent to or draining into drainage facilities.
- Keep absorbent materials or compounds on Site in sufficient quantities corresponding to the extent of possible spills.
- Locate landfill pits for the disposal of solid waste at least 100 m from water courses, and fencing them off from local populations.
- Ensure adequate primary treatment of sanitation effluents and installing septic tanks away from village watering points.

Area Signage

The Contractor shall:

- Appropriately mark hazardous areas.
- Install warning signs
- Ensure that signage is in accordance with international standards and is well known to, and easily understood by workers, visitors and the general public as appropriate.
- Demarcate work sites with safety tape, fencing or barricades, as appropriate, to prevent unauthorized access to the construction sites
- Safeguard public safety by covering holes and by installing guardrails along temporary pathways.

Borrow Pits and Quarries[49]

Materials required for site fill, backfill or the construction of permanent works that are not available from the surface will be obtained from borrow areas and quarries that the Contractor will identify,

[49] Contractors should consider doing borrow pits on a a willing-buyer willing-seller (renter) basis to avoid involuntary land acquisition.

subject to approval by the UNOPS or its Implementing Partners.

The Contractor shall adhere to the following standards when siting, developing, operating, and reinstating borrow pits and quarries:

- Obtain all necessary permits for borrow pits and quarry operations.
- Locate quarry sites as far away from settlements as possible. Quarry operations will produce noise and dust that will impact on nearby inhabitants even if controls are imposed.
- Fence and secure quarry sites. Steep quarry faces are a hazard to people and livestock.
- Locate borrow pits and quarries at least 100 m from watercourses or human habitations.
- Conduct a pre-blasting inspection/survey, in consultation with residents/property owners, prior to operating a quarry, to document the existing condition of buildings and identify any sensitive structures, building components or contents. The site conditions and the inspection information should be used to design the blasting operation to avoid any effects to property.
- Locate, to the extent possible, borrow pits on land that is not used for cultivation and is not wooded.
- Avoid areas of local historical or cultural interest and locate pits more than 25 m of grave sites.
- Hide, to the extent possible, pits from the road. Quarries and borrow pits should be designed to minimize visible scarring of the landscape.
- Develop a borrow pits and quarry management plan, including a plan to reinstate borrow pits and quarry sites as closely as possible to their original state

Location of Worker Camps

The Contractor shall:

- Consult and negotiate with local stakeholders before proposing a location for its camps.
- Submit the proposed locations to UNOPS or its Implementing Partner for approval, including a justification for their location, as well proposed measures to mitigate the environmental and social risks and impacts around the camp and to enhance social benefits.

Decommissioning of Camps, Worksites and Plant

The Contractor shall:

- Clear construction sites of any equipment or waste, and ensuring that the sites are free from contamination.
- Dispose of or recycle any equipment or waste in an appropriate and environmentally sound manner.
- Hand construction sites over to the original owners, taking into account his/her wishes and national legislation.

Health and Safety

Contractors will collaborate with other contractors in applying health and safety requirements, when workers from more than one contractor are working together in one location, without prejudice to the responsibility of each party for the health and safety of its own workers.

Severe Weather and Facility Shutdown

The Contractor shall:

- Design and build work place structures to withstand the expected elements for the region and designate an area designated for safe refuge, if appropriate.
- Develop Standard Operating Procedures (SOPs) for project or process shut-down, including an evacuation plan.

Lavatories and Showers

The Contractor shall:

- Provide adequate lavatory facilities (toilets and washing areas) for the number of people expected to work at the construction sites, and make allowances for segregated facilities, or for indicating whether the toilet facility is "In Use" or "Vacant".
- Provide toilet facilities with adequate supplies of hot and cold running water, soap, and hand drying devices.
- Where workers may be exposed to substances poisonous by ingestion and skin contamination may occur, provide facilities for showering and changing into and out of street and work clothes.

Potable Water Supply

The Contractor shall:

- Provide adequate supplies of potable drinking water from a fountain with an upward jet or with a sanitary means of collecting the water for the purposes of drinking
- Ensure that water supplied to areas of food preparation or for the purpose of personal hygiene (washing or bathing) meets drinking water quality standards

Clean Eating Area

The Contractor shall:

- Where there is potential for exposure to substances poisonous by ingestion, make suitable arrangements to provide clean eating areas where workers are not exposed to the hazardous or noxious substances

Personal Protective Equipment (PPE)

The Contractor shall:

- Identify and provide at no cost appropriate PPE to workers, the workers of subcontractors, as well as to visitors, which gives adequate protection without incurring unnecessary inconvenience to the individual
- Ensure that the use of PPE is compulsory.
- Provide sufficient training in the use, storage and maintenance of PPE to its workers and workers of its subcontractors.
- Properly maintain PPE, including cleaning when dirty and replacement when damaged or worn out;
- Determine requirements for standard and/or task-specific PPE based on of Job specific Safety Analysis (JSA);
- Consider the use of PPE as a last resort when it comes to hazard control and prevention, and always refer to the hierarchy of hazard controls when planning a safety process.

Noise

The Contractor shall institute appropriate measures to reduce the exposure of workers to construction noise, including but not limited to:

- Avoid exposure to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).
- Enforce the use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110 dB(A).

- Provide hearing protective devices capable of reducing sound levels at the ear to at most 85 dB(A).
- Reduce the "allowed" exposure period or duration by 50 percent for every 3 dB(A) increase in in excess of 85 dB(A).
- Perform periodic medical hearing checks on workers exposed to high noise levels.
- Rotate staff to limit individual exposure to high levels.
- Install practical acoustical attenuation on construction equipment, such as mufflers.
    - Use silenced air compressors and power generators
    - Keep all machinery in good condition
    - Install exhaust silencing equipment on bulldozers, compactors, crane, dump trucks, excavators, graders, loaders, scrapers and shovels.
- Post signs in all area where the sound pressure level exceeds 85 dB(A).
- Shut down equipment when not directly in use
- Provide advance notice to occupants if an activity involving high level impact noise is in close proximity to buildings.

Working in Sewers

The Contractor shall:

- Ensure that a safety supervisor/officer is onsite at all times.
- Supervise and control all access to sewers, and maintain logbook of all workers working in sewers, including worker's names, start time and finish time,
- Control access to each sewer that is worked on, to ensure that only workers with a specific written permission and Permit to Work (PTW) in confined spaces can enter
- Ensure that: (i) all workers in a sewer are in continuous communication with an above ground safety watcher at the top of the manhole and a safety supervisor; (ii) a trained first aid responder is always available on site, with ready access to a first aid kit and oxygen; (iii) the above ground crew has the means to rescue workers in the sewer in the event of an emergency and to transport affected workers ; (iv) the nearest well-equipped health facility has been identified, and the time required to reach it has been assessed.
- Rotate all workers in a sewer after one shift
- Properly ventilate sewers and confirm that each sewer is free from any toxic and harmful gases, or any other risks, before allowing access to it.
- Ensure that all workers entering a sewer are properly trained regarding the risks of working in a sewer and the required safety measures
- Ensure that all workers entering a sewer or other confined spaces wear appropriate PPE, including: (i) for above ground work: full face respiratory cartridge, disposable coverall/overall, safety footwear with disposable boat cover.) for upper ground work; (ii) for underground work; a Self-Contained Breathing Apparatus, eye protection (safety goggles), hard hat/helmet, gloves, disposable overalls and boot cover, full body harness, and lifeline.
- Provide proper access and egress to sewers through sanitation manholes.
- Limit work in sewers to daytime only. Work in sewers at night is proscribed.
- Never allow a worker to be in a sewer by himself.
- Provide suitable lighting inside the sewers during work hours.
- Vaccinate all workers working in sewers against the diseases that might infect them because of working in sewers

First Aid and Accidents

The Contractor shall:

- Ensure that qualified first-aid by qualified personnel is always available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work.
- Provide workers with rescue and first-aid duties with dedicated training so as not to inadvertently aggravate exposures and health hazards to themselves or their co- workers.

Training would include the risks of becoming infected with blood–borne pathogens through contact with bodily fluids and tissue.

- Provide eye-wash stations and/or emergency showers close to all workstations where immediate flushing with water is the recommended first-aid response.
- Provide dedicated and appropriately equipped first-aid room(s) where the scale of work or the type of activity being carried out so requires.
- Equip first aid stations and rooms with gloves, gowns, and masks for protection against direct contact with blood and other body fluids.
- Make widely available written emergency procedures for dealing with cases of trauma or serious illness, including procedures for transferring patient care to an appropriate medical facility.
- Immediately report all accidental occurrences with serious accident potential such as major equipment failures, contact with high-voltage lines, exposure to hazardous materials, slides, or cave-ins to UNOPS.
- Immediately investigate any serious or fatal injury or disease caused by the progress of work by the Contractor, and submit a comprehensive report to UNOPS.

Communicable Diseases

Sexually-transmitted diseases (STDs), such as HIV/AIDS, are the communicable diseases of most concern because of labor mobility. Recognizing that no single measure is likely to be effective in the long term, the Contractor shall implement a combination of behavioral and environmental modifications to mitigate communicable diseases:

- Conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all construction site staff (including all the Contractor's employees, all subcontractors of any tier, consultants' employees working on the site, and truck drivers and crew making deliveries to the site for Works and Services executed under the Contract, concerning the risks, dangers and impact, and appropriate avoidance behavior of communicable diseases.
- Provide for active screening, diagnosis, counselling and referral of workers to a dedicated national STD and HIV/AIDS program, (unless otherwise agreed) for all Site staff and labor.
- Provide male or female condoms to all Site staff and workers, as appropriate.
- Provide treatment through standard case management in on-site or community health care facilities.
- Ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers.
- Promote collaboration with local authorities to enhance access of workers families and the community to public health services and ensure the immunization of workers against common and locally prevalent diseases.
- Provide basic education on the conditions that allow the spread of other diseases such as COVID-19, Lassa Fever, Cholera and Ebola. The training should cover sanitary hygiene education.
- Prevent illness in immediate local communities by:
    - Implementing an information strategy to reinforce person-to-person counselling addressing systemic factors that can influence individual behavior as well as promoting individual protection, and protecting others from infection, by encouraging condom use
    - Training health workers in disease treatment
    - Conducting immunization programs for workers in local communities to improve health and guard against infection
    - Providing health services
    - Contracting an HIV service provider to be available on-site

COVID-19[50]

In the context of the COVID-19 pandemic, Contractors shall develop and implement measures to prevent or minimize an outbreak of COVID-19, and develop procedures indicating what should be done if a worker gets sick. The Contractor shall:

- Assess the characteristics of the workforce, including those with underlying health issues or who may be otherwise at risk
- Confirm that workers are fit for work, including temperature testing and refusing entry to sick workers
- Consider ways to minimize entry/exit to site or the workplace, and limit contact between workers and the community/general public
- Train workers on hygiene and other preventative measures, and implement a communication strategy for regular updates on COVID-19 related issues and the status of affected workers
- Treat workers who are or should be self-isolating and/or are displaying symptoms
- Assess risks to continuity of supplies of medicine, water, fuel, food and PPE, taking into account international, national and local supply chains
- Reduce, store and dispose of medical waste
- Adjust work practices to reduce the number of workers and increase social distancing
- Expand health facilities on-site compared to usual levels, develop relationships with local health care facilities and organize for the treatment of sick workers
- Build worker accommodations further apart, or have one worker accommodation in a more isolated area, which may be easily converted to quarantine and treatment facilities, if needed
- Establish a procedure to follow if a worker becomes sick (following WHO guidelines)
- Implement a communication strategy with the community, community leaders and local government in relation to COVID-19 issues on the site.

Vector-Borne Diseases

Reducing the impact of vector-borne disease on the long-term health of workers is best accomplished by implementing diverse interventions aimed at eliminating the factors that lead to disease. The Contractor, in close collaboration with community health authorities, shall implement an integrated control strategy for mosquito and other arthropod-borne diseases that includes the following measures:

- Prevent of larval and adult propagation through sanitary improvements and elimination of breeding habitats close to human settlements
- Eliminate unusable impounded water
- Increase water velocity in natural and artificial channels
- Consider the application of residual insecticide to dormitory walls
- Implement integrated vector control programs
- Promote the use of repellents, clothing, netting, and other barriers to prevent insect bites
- Use chemoprophylaxis drugs by non-immune workers and collaborating with public health officials to help eradicate disease reservoirs
- Monitor and treat circulating and migrating populations to prevent disease reservoir spread
- Collaborate and exchange in-kind services with other control programs in the project area to maximize beneficial effects
- Educate project personnel and area residents on risks, prevention, and available treatment
- Monitor communities during high-risk seasons to detect and treat cases
- Distribute appropriate education materials
- Follow safety guidelines for the storage, transport, and distribution of pesticides to minimize the potential for misuse, spills, and accidental human exposure

[50] Based on the World Bank COVID-19 LMP Template, April 16, 2020

Road safety and Traffic Safety

The Contractor shall ensure traffic safety by all project personnel during displacement to and from the workplace, and during the operation of project equipment on private or public roads. The Contractor shall adopt best transport safety practices across all aspects of project operations with the goal of preventing traffic accidents and minimizing injuries suffered by project personnel and the public, including:

- Emphasize safety aspects among drivers
- Improve driving skills and requiring licensing of drivers
- Institute defensive driving training for all drivers prior to starting their job
- Adopt limits for trip duration and arranging driver rosters to avoid overtiredness
- Avoid dangerous routes and times of day to reduce the risk of accidents
- Use speed control devices (governors) on trucks, and remote monitoring of driver actions
- Require that drivers and co-passengers wear seatbelts, and duly sanction defaulters.
- Regularly maintain vehicles and use manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.

Where the project may contribute to significant changes in traffic along existing roads the Contractor shall:

- Commence activities that affect public motorways and highways, only after all traffic safety measures necessitated by the activities are fully operational.
- Arrange diversions for providing alternative routes for transport and/or pedestrians
- Minimize pedestrian interaction with construction vehicles, particularly at crossing points to schools, markets, and any animal crossing points of significance, through appropriate signage, engineered footpaths or traffic slowing devices.
- Organize meaningful road accident awareness events at all roadside schools and communities within 150 meters of the road centerline, covering safe road crossing, road accident hazards from weather conditions and vehicle roadworthiness, overloading and driver alertness, dangers posed by parked and broken-down vehicles, etc.
- Collaborate with local communities and responsible authorities to improve signage, visibility and overall safety of roads, particularly along stretches located near schools or other locations where children may be present.
- Collaborate with local communities on education about traffic and pedestrian safety (e.g., school education campaigns).
- Coordinate with emergency responders to ensure that appropriate first aid is provided to all affected persons in the event of accidents.
- Use locally sourced materials, whenever possible, to minimize transport distances, and locate associated facilities such as worker camps close to project sites.
- Employ safe traffic control measures, including road signs, traffic cones, removable barriers, and flag persons to warn of dangerous conditions.

Cultural Heritage[51]

The Contractor shall:

- Develop and adopt a Chance Find Procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered, including:
  - determine whether cultural heritage is expected to be found, either during construction or operations
  - train construction crews and supervisors to spot potential archaeological finds
  - keep records and ensure expert verification
  - provide chain of custody instructions for movable finds

[51] Particular care must be taken when opening or operating quarries

  - notify the Department of Archaeology at the Ministry of Culture or a local university, for quick assessment and action
  - define clear criteria for potential temporary work stoppages required for rapid disposition of issues related to the finds.
- Avoid indirect damage to existing cultural heritage, such as affecting masonry through vibration

Emergencies

The Contractor shall:

- Establish and maintain an emergency preparedness and response system, in collaboration with appropriate and relevant third parties including to cover: (i) the contingencies that could affect personnel and facilities of the project to be financed; (ii) the need to protect the health and safety of project workers; (iii) the need to protect the health and safety of the Affected Communities. The emergency preparedness and response system shall include:
  - Identification of the emergency scenarios
  - Specific emergency response procedures
  - Training of emergency response teams
  - Emergency contacts and communication systems/protocols (including communication with Affected Communities when necessary)
  - Procedures for interaction with government authorities (emergency, health, environmental authorities)
  - Permanently stationed emergency equipment and facilities (e.g., first aid stations, firefighting equipment, spill response equipment, personal protection equipment for the emergency response teams)
  - Protocols for the use of the emergency equipment and facilities
  - Clear identification of evacuation routes and muster points
  - Emergency drills and their periodicity based on assigned emergency levels or tiers
  - Decontamination procedures and means to proceed with urgent remedial measures to contain, limit and reduce pollution within the physical boundaries of the project property and assets to the extent possible.

Stakeholder Engagement

As part of the overall Project Stakeholder Engagement[52], the Contractor will undertake a process of stakeholder engagement with representative persons and communities directly affected by the activities it undertakes, including if necessary, the public disclosure of its C-ESMP. The Contractor shall also maintain throughout the Project good relations with local communities and will give these communities prior notice of plans and schedules as they might affect local people.

The stakeholder engagement process will also be applicable in the event of land acquisition associated with changes in the footprint of activities.

Labour Force Management

Labour Influx

The Contractor shall:

- Establish worker camps when accommodation supply is insufficient for workers, including subcontractors and associated support staff
- Locate worker camps away from environmentally sensitive areas
- Build additional/separate roads to project and workers' camp sites

[52] The overall process of stakeholder engagement is described in the Project Stakeholder Engagement Plan (SEP)

- Organize the commute from camp to project to reduce traffic
- Ensure workers' camp and associated facilities are connected to a septic tank or other wastewater systems that are appropriate and of sufficient capacity for the number of workers and local conditions
- Avoid contamination of fresh water sources
- Provide opportunities for workers to regularly return to their families
- Provide opportunities for workers to take advantage of entertainment opportunities away from rural host communities
- Ensure that children and minors are not employed directly or indirectly on the project, and keep registration and proof of age for all employees on-site.
- Pay adequate salaries for workers to reduce incentive for theft
- Pay salaries into workers' bank accounts rather than in cash
- Get an appropriate mix of locally and non- locally procured goods to allow local project benefits while reducing risk of crowding out of and price hikes for local consumers
- Create supervised leisure areas in workers' camp;
- Establish substance abuse prevention and management programs
- Hire workers through recruitment offices, and avoid hiring "at the gate" to discourage spontaneous influx of job seekers
- Identify authorized water supply source and prohibiting use from other community sources;
- Separate service providers for community and workers' camp/construction site;
- Put in place measures to reduce water and electricity consumption;
- Employ locals to the extent possible;
- Develop and adopt a Gender Action Plan to promote the transfer of construction skills to local women, to facilitate their employment at the Project site, including training and recruitment targets.

Labor Conditions

The Contractor shall:

- Implement the measures and commitments defined in the Project Labor Management Procedures.
- Provide all workers with terms and conditions that comply with Yemeni Labor Legislation, most particularly Decree 5/1995) and applicable International Labour Organization conventions on workplace conditions.
- Put in place workplace processes for project workers to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health. Project workers who remove themselves from such situations will not be required to return to work until necessary remedial action to correct the situation has been taken. Project workers will not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal.
- Avoid all forms of forced or compulsory labor, i.e., all work or service which is exacted from any person under the threat of a penalty and for which the person has not offered himself or herself voluntarily.

Insurance

The Contractor shall:

- Protect the health of workers involved in onsite activities, as indicated in Chapter X of Yemen's Labor Code
- Compensate any employee for death or injury

Grievance Mechanism for Workers

The Contractor shall put in place a Grievance Mechanism for its workers and the workers of its subcontractors that is proportionate to its workforce. The GM for workers shall be distinct from the Project level Grievance Mechanism described in the Project Stakeholder Engagement Plan (SEP) for affected individuals and communities, and shall adhere to the following principles:

- *Provision of information.* All workers should be informed about the grievance mechanism at the time they are hired, and details about how it operates should be easily available, for example, included in worker documentation or on notice boards.
- *Transparency of the process.* Workers must know to whom they can turn in the event of a grievance and the support and sources of advice that are available to them. All line and senior managers must be familiar with their organization's grievance procedure.
- *Keeping it up to date.* The process should be regularly reviewed and kept up to date, for example, by referencing any new statutory guidelines, changes in contracts or representation.
- *Confidentiality.* The process should ensure that a complaint is dealt with confidentially. While procedures may specify that complaints should first be made to the workers' line manager, there should also be the option of raising a grievance first with an alternative manager, for example, a human resource (personnel) manager.
- *Non-retribution.* Procedures should guarantee that any worker raising a complaint will not be subject to any reprisal.
- *Reasonable timescales.* Procedures should allow for time to investigate grievances fully, but should aim for swift resolutions. The longer a grievance is allowed to continue, the harder it can be for both sides to get back to normal afterwards. Time limits should be set for each stage of the process, for example, a maximum time between a grievance being raised and the setting up of a meeting to investigate it.
- *Right of appeal.* A worker should have the right to appeal to the World Bank or national courts if he or she is not happy with the initial finding.
- *Right to be accompanied.* In any meetings or hearings, the worker should have the right to be accompanied by a colleague, friend or union representative.
- *Keeping records.* Written records should be kept at all stages. The initial complaint should be in writing if possible, along with the response, notes of any meetings and the findings and the reasons for the findings. Any records on SEA shall be registered separately and under the strictest confidentiality.
- *Relationship with collective agreements.* Grievance procedures should be consistent with any collective agreements.
- *Relationship with regulation.* Grievance processes should be compliant with the national employment code.

Protection from Sexual Exploitation and Abuse[53]

The Contractor shall:

- Provide repeated training and awareness raising to the workforce about refraining from unacceptable conduct toward local community members, specifically women
- Inform workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted
- Prohibit its employees from exchanging any money, goods, services, or other things of value, for sexual favors or activities, or from engaging any sexual activities that are exploitive or degrading to any person.
- Develop a system to capture gender-based violence, sexual exploitation and workplace sexual harassment related complaints/issues.

[53] UNOPS has prepared a Sexual Abuse and Exploitation (SEA) and Sexual Harassment (SH) Prevention and Response Plan for the Project

- Adopt a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.

Protection from Child Labor

The Contractor shall:

- Verify that workers are older than 18 when hiring
- Exclude all persons under the age of 18.
- Review and retain copies of verifiable documentation concerning the age of workers

Code of Conduct

The Contractor shall ensure that all employees, including those of subcontractors, are informed about and sign the following Code of Conduct:

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

We the Contractor [enter name of Contractor] have signed a contract with UNOPS for [enter description of the activities]. These activities will be carried out at [enter the Site and other locations where the activities will be carried out]. Our contract requires us to implement measures to address environmental and social risks related to the activities, including the risks of sexual exploitation and assault and gender-based violence.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the activities. It applies to all our staff, including laborers and other employees at the at all the places where the activities are being carried out. It also applies to the personnel of every subcontractor and any other personnel assisting us in the execution of the activities. All such persons are referred to as "Contractor's Personnel" and are subject to this Code of Conduct.

This Code of Conduct identifies the behavior that we require from all Contractor's Personnel.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

Required Conduct

Contractor's Personnel shall:

1. carry out his/her duties competently and diligently;
2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
3. maintain a safe working environment including by:
4. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
5. wearing required personal protective equipment;
6. using appropriate measures relating to chemical, physical and biological substances and agents; and
7. following applicable emergency operating procedures.
8. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
9. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
10. not engage in any form of sexual harassment including unwelcome sexual advances, requests for sexual favors, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
11. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to,

profiting monetarily, socially or politically from the sexual exploitation of another. In Bank financed projects, sexual exploitation occurs when access to or benefit from Bank financed Goods, Works, Consulting or Non-consulting services is used to extract sexual gain;

12. not engage in Sexual Assault, which means sexual activity with another person who does not consent. It is a violation of bodily integrity and sexual autonomy and is broader than narrower conceptions of "rape", especially because (a) it may be committed by other means than force or violence, and (b) it does not necessarily entail penetration.
13. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
14. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation and Assault (SEA);
15. report violations of this Code of Conduct; and
16. Not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the Grievance mechanism for Contractor's Personnel or the project's Grievance Mechanism.

Raising Concerns

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

1. Contacting the Individual designated by the Contractor [enter name of Contact)
2. In writing at this address [ ]
3. By telephone at [ ]
4. In person at [ ]
5. Calling [ ] to reach the Contractor's hotline and leave a message (if available)

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

Consequences of Violating the Code of Conduct

Any violation of this Code of Conduct by Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

For Contractor's Personnel

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [enter name of Contractor's contact person with relevant experience in handling gender-based violence] requesting an explanation.

Name of Contractor's Personnel: [insert name]
Signature: _____
Date: (day month year): _____
Countersignature of authorized representative of the Contractor:
Signature: _____
Date: (day month year): _____

A copy of the code shall be displayed in a location easily accessible to the community and project affected people. It shall be provided in languages comprehensible to the local community, Contractor's personnel (including sub-contractors and day workers), and affected persons.]

Contractor Environmental and Social Reporting

The Contractor shall report major work-related incidents, accidents or loss of life to UNOPS or the relevant Implementing Partner **within 24 hours** of their occurrence.

The Contractor shall monitor, keep records and report on the following environmental and social issues:

- *Safety:* hours worked, lost time injury (LTI), lost workdays, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).
- *Environmental incidents and near misses:* environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.
- *Major works:* those undertaken and completed, progress against project schedule, and key work fronts (work areas).
- *ESHS requirements:* noncompliance incidents with permits and national law (legal noncompliance), project commitments, or other ESHS requirements.
- *ESHS inspections and audits:* by the Contractor, UNOPS and its Implementing Partners, or others—to include date, inspector or auditor name, sites visited and records reviewed, major findings, and actions taken.
- *Workers:* list of workers at each site, confirmation of ESHS training, indication of origin (expatriate, local, nonlocal nationals), gender, age with evidence that no child labor is involved, and skill level (unskilled, skilled, supervisory, professional, management).
- *Training on ESHS issues:* including dates, number of trainees, and topics.
- *Footprint management:* details of any work outside boundaries or major off-site impacts caused by ongoing construction—to include date, location, impacts, and actions taken.
- *External stakeholder engagement:* highlights, including formal and informal meetings, and information disclosure and dissemination—to include a breakdown of women and men consulted and themes coming from various stakeholder groups, including vulnerable groups (e.g., disabled, elderly, children, etc.).
- *Details of any security risks:* details of risks the Contractor may be exposed to while performing its work—the threats may come from third parties external to the project.
- *Worker grievances:* details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.
- *External stakeholder grievances:* grievance and date submitted, action(s) taken and date(s), resolution (if any) and date, and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report. Grievance data should be gender-disaggregated.
- *Major changes to Contractors environmental and social practices*.
- *Deficiency and performance management:* actions taken in response to previous notices of deficiency or observations regarding ESHS performance and/or plans for actions to be taken should continue to be reported to UNOPS until it determines the issue is resolved satisfactorily.

Annex 6.

Grievance Complaint, and Suggestion Form

نموذج لألية التظلمات والشكاوى

استمارة توثيق ومتابعة شكاوى المستفيدين من المشروع الطارئ للخدمات الحضرية المتكاملة

"Documenting and Monitoring Complaints Form of Beneficiaries of Yemen Integrated Urban Services Emergency Project"

الاسم الثلاثي للمستفيد: Beneficiary Name				
رقم البطاقة الشخصية: ID No.		Tel No. for **رقم الهاتف للمتابعة** follow up		
العنوان الدائم: Permanent Address				
اسم النشاط المنفذ (مركز/وحدة) Name of activity under implementation				
مكان تنفيذ النشاط: Place of activity under implementation	**القرية:** Village	**المديرية:** District	**المحافظة:** Governorate	

نوع الشكوى Complaint Type	إدارية Administrative	فنية Technical	مالية Financial	أخرى Other

موضوع الشكوى:
Complaint Subject

الوضع الحالي: Current Situation			
أسباب المشكلة: Reason of the problem			
التاريخ: Date		**توقيع صاحب الشكوى:** Complainant Signature	

- الجهة التي يجب أن يقدم لها الشكوى:.. UNOPS/Sana'a – Tel: 01 504914/915 - SMS:739888388 Email: GRM.yemen@unops.org
.....
The entity which the complaint should be forwarded to:
-الرأي في جدية الشكوى:.....
Opinion on the seriousness of the complaint
-الجهة المحول لها الشكوى :.....
The complaint transferred to
- المدة الزمنية اللازمة للبت في الشكوى:.....
Time required for response
-مدى رضى المستفيد عن الاستجابة لحل شكواه:.....
Satisfaction of beneficiary in responding to his/her complaint

الإجراءات المتخذة : Action taken			
ما ترتب عليها من نتائج: The results of the action taken		**التاريخ:** Date	

اسم مستلم الشكوى ووظيفته: .....
Name of person received the complaint and his/her position

التاريخ Date : **.....**

توقيع الموظف المختص/ Signature