## REPUBLIC OF IRAQ

## MINISTRY OF PLANNING

Iraq Social Fund for Development SFD (P163108)

# ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

### FOR THE

CONSTRUCTION WATER NETWORK IN VILLAGE (HUMAYUN, ALSORA) AND CONSTRUCTION WATER COMPACT UNIT IN THE VILLAGE (AL-TAMIM) AND REHABILITATING WATER COMPACT UNIT IN THE VILLAGE (AL-BU BASIRI, AL-BU SHAWI).

IN BASRA GOVERNORATE

27 TH AUGUST 2023

## Contents

PART A: GENERAL PROJECT AND SITE INFORMATION	3
Country	3
Project Title	3
Introduction	3
Project Location	4
Project Duration	5
Proposed Project Activities	6
Land Use and Acquisition	9
Contractor's Camp	10
Geographic Conditions	10
Climate, Air Quality and noise	10
Hydrogeology Conditions	11
Ecology Conditions	11
Heritage Environment	11
Socio-economic Aspects	11
National & Local Legislation and World Bank Policies that Apply to the Project	12
Public Consultation Process	15
Consultation Results:	15
GRM Process	16
PART B: SAFEGUARDS SCREENING AND TRIGGERS	19
PART C:	21
PART D: MONITORING PLAN/ CONSTRUCTION PHASE	45
ANNEXES	53
Annex 1: Consultations Photos	53
Annex (2): Sample individual interviews for both men and women in the village	55
ANNEX (3): IRAQI STANDARDS FOR AIR, NOISE, and Water	60
Annex (4): Contractor's Responsibilities (Arabic) مسئوليات المقاول	63
Annex (5): Cultural Heritage Chance Find Procedure	69

# IRAQ: Social Fund for Development Project PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAL &	ADMINISTRATIVE
Country	IRAQ
Project Title	CONSTRUCTION WATER NETWORK IN VILLAGE (HUMAYUN, AL-SORA) AND CONSTRUCTING WATER COMPACT UNIT IN THE VILLAGE (AL-TAMIM) AND REHABILITATING WATER COMPACT UNIT IN THE VILLAGE (AL-Bu Basiri, Al-bu Shawi) \ Basra Governorate.
Introduction	Iraq faces a historic opportunity for national reconciliation through the effective delivery of critical social services, economic growth and recovery programs. The reinstatement of trust between the State and its citizens is highly dependent on the Government of Iraq (GOI) demonstrating its capacity to deliver security, jobs and economic growth to all Iraqis, with a focus on the poor, the vulnerable and the millions of Internally Displaced People (IDP).  The GOI, represented by the Ministry of Planning (MOP), requested the World Bank's support in the design and financing of a Social Fund for Development (SFD) project to support locally driven initiatives to improve the living conditions and opportunities of the poor and most vulnerable People in Iraq. The GOI has demonstrated its commitment and support to the design of this operation and established a high-level national team to guide and coordinate the development and institutionalization of the SFD, as well as five technical teams to work on the different aspects of the fund.  The Project Development Objectives (PDOs) are to: (1) Improve access to basic services and (2) Increase short-term employment opportunities, in targeted communities. This environmental and social management checklist reflects the main issues (project description and activities, baseline conditions, impact analyses, mitigation measures and monitoring arrangements). The main objective of this document is to examine the environmental and socio-economic impacts of the project (both construction and operation phases), and to propose mitigation measures. The project is expected to result in significant socio-economic benefits for the local communities and surrounding areas in addition to developing social awareness and group responsibility.

#### PROJECT LOCATION & SITE DESCRIPTION

According to the Environmental and Social Management Framework (ESMF) which was prepared for the Iraq Social Fund for Development Project disclosed locally in Iraq and on the World Bank's website<sup>1</sup>. Environmental and Social Management plan (ESMP)/ Environmental and Social Management Checklist Will be prepared, cleared, publicly consulted and disclosed prior to the commencement of any rehabilitation activity. The World Bank Operational Policy 4.01 on Environmental Assessment was triggered as the proposed Subprojects has some potential negative environmental and social impacts. Accordingly, this Environmental and Social Management Checklist is required to implement the Sub-project in accordance with the requirements of the World Bank's Operational Procedures and applicable Iraqi national legislation.

## Project Location

.The subprojects are located in the governorate of **Basra** that is situated in South part of Iraq; Basra has internal borders with Muthanna, Thi-Qar and Missan governorates. (As shown in figure below).

The length of each network, coordinates, and the population in each village are shown in the table below:

Table 1: Information about the villages

	Tuble II IIII III ubout the III uges							
N o.	Village	Length (Km)	Population	Coordinates				
1	Humayun	1.5	1006	31.11007,47.44616				
2	AL-SORA	2	2479	30.969170, 47.228626				
3	AL-TAMIM		3359	30.10120,47.73504				
4	AL-BU BASIRI		1133	30.88000,47.52937				
5	AL-BU SHAWI		2871	30.95439,47.24985				
	Total	3.5KM	10848					
	Note	_		were inferred through on procedures in Basra				

<sup>&</sup>lt;sup>1</sup>https://documents1.worldbank.org/curated/en/221731554372651925/pdf/Environmental-and-Social-Management-Framework.pdf





**Figure 1: Project Location** 

The area adjacent to the subproject's sites are characterized as rural residential and semi desertic in some areas. The subprojects are located within the residential part of the area. There are no protected areas or endangered species (there are no critical or high biodiversity values that might be affected) in the vicinity of the site. There are no close sensitive receptors located near the subprojects site. The subproject aims to:

- To provide a good sanitary environmental condition of village and subsequently protecting public health.
- Ensure the produced water quality is within the quality standards.

## Project Duration

The anticipated project duration is Sixth months (180 days) for the water network.

The proposed activities for these Five villages in the Basra Governorate are presented in the table below:

No ·	Village	Type of implantation
1	Humayun	construction of water network with a length of 1.5 km and a diameter (110 mm to 350 mm) and burial with sand and burial with soft drilling earth free of stones and the work also includes checking the pipes inspection + hydrostatic pressure of one and a half times as much as the operational pressure.
2	AL-SORA	construction of water network with a length of 2 km And a diameter of (110 mm) and burial with sand and burial with fine drilling earth free of stones and the work also includes the inspection of pipes hydrostatic inspection at a pressure of once and a half as much as the operating pressure.
3	AL- TAMIM	Construction of a water unit with a capacity of 10 m3/h It consists of building a room dedicated to the station, a room for operation and a warehouse room with all its own electrical and mechanical works with the assembly, installation and operation of a reverse osmosis desalination plant (Reverse osmosis plant) with the processing and installation of a water tank with a capacity of 10 m 3 number 4 and drilling an artesian well pipe diameter of 12 inches with lining Processing, erecting and operating a diver (5.5 hp 2 ang)
4	AL-BU BASIRI	Rehabilitation of the water unit of 200m3/h and Includes the installation of pumps number (4) with maintenance and cleaning of sedimentation basins dimensions (8 * 2.5 * 2.5) m with the maintenance of filters with the maintenance of the control room and maintenance of the alum room.
5	AL-BU SHAWI	Rehabilitation of a water unit with a capacity of 400 m3/h Includes maintenance of sedimentation basin dimensions (12×2.3×2.3) m number 2 with maintenance of filters and maintenance of collection basins number 1 and processing and installation of chlorine device energy 4 kg / hour and maintenance and operation of a generator capacity KVA250 number 1

Proposed Project Activities

The main steps that happened to the water to be compatible with the legislations and water quality standards are:

1. Providing the necessary materials and equipment for excavating trenches at a depth of 120 cm and a width of 90 cm including cracking the sidewalks and streets.

- 2. Laying down and connecting plastic pipes and then wrapping the pipe with clean soil followed by connecting households by 0.5-inch diameter.
- 3. Backfilling of the trenches by used excavated soil at a height of (0.55 m), rehabilitation and restoration of sidewalks and streets (if any) that were demolished and returned as it was with the removal of excess construction wastes. The excavated soil resulting from the digging will be used for backfilling and refilling. However, if any surplus materials (excavated soil) remained, there will be coordination with the municipal local authority to properly dispose of the remaining material in the designated landfill.

As per design of the water distribution network, these pipes will be installed within the right of way and side walk of streets inside residential area of the village. It is not expected that these pipes will pass through agricultural/private lands and/or cause any restriction of access and livelihood impacts. Below is the network layout.



Humayun Village



## AL-SORA Village



AL-TAMIM Village



AL-BU BASIRI Village



AL-BU SHAWI Village

The anticipated duration of construction works in the villages is about 180 days for water networks with about 10-15 workers per day per site and most of them are local workers and the rest are engineers and technicians. Workers from other villages will need to have their accommodation facilities in the camp, during the construction phase. The setup of a camp will be on vacant state-owned lands. Also, storage of equipment and construction materials will be on vacant state-owned lands.

## Land Use and Acquisition

The area adjacent to the project's sites are characterized as rural residential and semi desertic to agricultural area. However, the

construction activities will not cause an impact on agricultural areas or cause any crop damage.

The water network will be constructed on state land and hence there are no issues related to land acquisition and free of encroachers or squatters. The implementation activities will not cause relocation of people, vendors, and any individuals. No sensitive receptors or critical habitats in the footprint or close to sub-project activities.

The construction of water network will need about 10-15 workers per day

For each individual Project. Workers are expected to be hired locally, however if a construction camp is deemed necessary, it will be installed on vacant state-owned land. Portable holding tanks will be installed in the subproject, waste will be collected and disposed in an authorized waste treatment plant/authorized disposing site to be determined later by the local municipality.

## Contractor's Camp

The contractor will establish his storage on vacant state-owned land for equipment and material within the area close to the construction area.

The construction camp should have independent sources of water and electricity, and an adequate Holding tank for sanitary effluent disposal. Due to its geographical location, an influx of workers to the subproject area is not expected. Most of the workers will be locals from the surrounding areas and will return to their homes / that's mean they don't need to accommodation. And there skills (According to the nature of the work and will be guided by craftsmen).

#### PROJECT BASELIN CONDITIONS

## Geographic Conditions

The terrain is characterized as flat. In the project area, the elevation is about 13m asl. No natural land obstacles are presented in the subprojects area. The subprojects areas are free of mountains, cliffs, and valleys.

## Climate, Air Quality and noise

Basra governorate is located in the South part of Iraq. The city of Basra and about 530 km south of Baghdad. It is located on the west bank of the Shatt al-Arab River, which consists of the confluence of the Tigris and Euphrates rivers, and flows into the Arabian Gulf, and Basra is 110 km from this estuary, and is located at a latitude of 30 degrees and 30 minutes north, and a longitude of 47 degrees and 50 minutes east. The city is located in the center of Basra Governorate, and is bordered by several cities and districts, including the districts of Medina, Qurna and Shatt al-Arab to the north and south, and to the southwest the city of Zubair, Abu al-Khasib and al-Faw.

	It has a hot desert climate like the rest of the surrounding region, though it receives slightly more precipitation than inland locations due to its location near the coast. During the summer months, from June to August, Basra is consistently one of the hottest cities on the planet, with temperatures regularly exceeding 50 °C (122 °F) in July and August. In winter Basra experiences mild weather with average high temperatures around 20 °C (68 °F). On some winter nights, minimum temperatures are below 0 °C (32 °F). High humidity – sometimes exceeding 90% – is common due to the proximity to the marshy Arabian Gulf. (حالة على العراق), indd (cosit.gov.iq)), (Climate & Weather Averages in Basra, Iraq (timeanddate.com).
	concentration of air pollutants is low. Air pollutants in the villages are caused mainly from movement of vehicles and trucks. Therefore, the ambient air quality is expected to be within the WHO ambient air quality standards (Annex3).
	Currently, there is no traffic congestion and consequently the existed noise level is within the normal levels.
Hydrogeolog y Conditions	Flooding of the area near the project has not been reported in the past years. The depth of ground water in the area ranges of about 15 meters.
Ecology Conditions	The project areas do not contain any globally important habitats or ecosystems. There are no Nature Reserves or other legally protected areas in the vicinity of the project or in a close proximity.
Heritage Environment	There are no sites of historical or cultural importance in the area. There are no cemeteries, historical-cultural monuments, churches, mosques near the project that need to be removed or will be impacted due to the construction activities.
Socio- economic Aspects	The population of these projects area is approximately 10848. The suggested areas of the roads will be on state land, where no land or property expropriation will be necessary and is free from encroachers or squatters. All the areas around the sites remain clear of any settlement or economic use and are ready for construction works, no interference is registered from the local community which is eager for the works to be completed. It is important to mention that during the construction of the road, it is not expected to cause restriction of access or livelihood impacts. Some of the population have a degree or equivalent to Bachelor level, and some have equivalent to middle school., some of them operating small businesses and they have only a few years of basic education.

#### **LEGISLATION & POLICIES**

The applicable national legislation is as follows:

- ➤ The Law for the Protection and Improvement of Environment No. 27, 2009;
- ➤ Public Health Law No. 89 of 1981, amended by Resolution No.54 of 2001:
- ➤ Law No.3,1997 regarding to Environment protection
- ➤ Instructions No. 2 of 2014 on Environmental Protection from Municipal Waste;
- ➤ Law No. 2 of 2001 on Conservation of Water Resources.
- > Instructions no. 3 of 2015 on Hazardous Waste Management;
- Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety;
- ➤ Instructions No. 12 of the year 2016: Occupational Health and Safety;
- ➤ Labor Law No. 37 of 2015;
- Law no. 89 of the year 1981, amended by Decree No.54 of 2001: Public Health;
- ➤ Law No. 41 for the year of 2015: Noise Protection and Control:
- ➤ Public Roads Law No. 35 of 2002;
- ➤ Instructions No.3 of 2012: National Emissions' Determinants for Activities and Businesses by the Ministry of Health and Environment;
- ➤ Regulation No. 4 for the year of 2012: Ambient Air Quality;
- ➤ World Health Organization (WHO) Guidelines for Drinking Water Quality<sup>2</sup>

The main WB safeguard policies applicable for SFD are:

- > OP 4.01 Environmental Assessment
- ➤ OP 4.12 Involuntary Resettlement (There might be a probability of storage of construction materials within the project area. Until the date of report development, no land acquisition is anticipated.).
- ➤ OP 4.11 Physical and Cultural Resources (The proposed construction activities are not expected to pose risks of damaging cultural property).
- labor influx guidance note (2016).
- ➤ WB General Environmental, Health, and Safety guideline<sup>3</sup>

The EHS guidelines entail effective methods for managing environmental, health and safety issues in accordance with WBG requirements. This includes understanding the likelihood, magnitude, and priority of the EHS risks. The EHS guidelines include 4 primary sections and respective subsections (applicable segments from the EHS guidelines for the sub-project are highlighted in **Red**):

#### 1. Environmental Guidelines

National &

Legislation

and World

Policies that

Apply to the

Local

Bank

**Project** 

<sup>&</sup>lt;sup>2</sup> https://www.who.int/publications/i/item/9789241549950

<sup>&</sup>lt;sup>3</sup> https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=nPtguVM

- 1) Ambient Air Quality Limits and Guidelines
- **2)** Energy Conservation Energy Conservation and Efficiency Methods
- 3) Water and Sanitation<sup>4</sup>- The EHS Guidelines for Water and Sanitation include information relevant to the operation and maintenance of (i) potable water treatment and distribution systems, and (ii) collection of sewage in centralized systems (such as piped sewer collection networks) or decentralized systems (such as septic tanks subsequently serviced by pump trucks) and treatment of collected sewage at centralized facilities.
- 4) Wastewater and Ambient Water Quality Effluent water quality and indicators for water discharge and treatment
- 5) Water Conservation Methods for ensuring reduction in water consumption
- **6)** Hazardous Material Management The appropriate Methods for managing hazardous waste and instructions on community and worker protection
- 7) Waste Management Instructions on waste management and planning, waste prevention and safe waste disposal
- 8) Noise Methods for prevention and control of Noise, and the applicable noise limits for different activities and exposure period
- 9) Contaminated Land Management approaches for contaminated land due to different hazardous substances or waste or oil. Includes Risk Reduction measures
- 2. Occupational Health and Safety Guidelines<sup>5</sup>
  - 1) General Facility Design and Operation ensuring appropriate facility integration of H&S, that integrates safety measures in design for different physical hazards
  - **2)** Communication and Training Ensuring there is an appropriate level of communication between workers and management, and that there is sufficient training for all workers prior to operations
  - **3)** Physical Hazards Methods for prevention of accidents or injuries that can occur due to exposure to mechanical or other physical works, including Noise and Vibrations
  - 4) Chemical Hazards Injuries and accidents that could occur due to usage of chemicals and methods of protection and prevention. Includes management of fires and explosions

<sup>&</sup>lt;sup>4</sup> https://www.ifc.org/wps/wcm/connect/0d8cb86a-9120-4e37-98f7-cfb1a941f235/Final%2B-%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES&CVID=nPtk0wW

https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6bcb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxyx

- 5) Biological Hazards Protection and Management of different biological agents
- **6)** Radiological Hazards Management and Limits for Radiation Exposure
- 7) PPE Guidance on usage of PPE and clearly highlighting that it should be considered the last resort
- 8) Special Hazards Environments Guidance on Managing different environments that can present a risk to workers such as confined spaces.
- 9) Monitoring Efficient monitoring of occupational health and safety programs and mitigation measures. This includes the Occupational Accident Reporting frequency
- 3. Community Health and Safety Guidelines<sup>6</sup>
  - Water Quality and Availability Ensuring the protection of nearby water resources such as groundwater and surface water sources.
  - 2) Structural Safety of the Project Potential Hazards that could occur due to poor design and methodology for dealing with those hazards. Includes the general approach that architects/structural engineers must follow to ensure community safety is considered during design
  - 3) Life and Fire Safety (L&FS) Ensuring that building design is in accordance with local regulations and requirements, and that it integrates Fire safety standards (more focused on buildings rather than infrastructure)
  - **4)** Traffic Safety Includes the potential risks and impacts on traffic and from traffic that occurs due to the project. Includes recommend measures to deal with traffic risk
  - **5)** Transport of Hazardous Material Approach and Guidelines for transporting hazardous material, including a hazard assessment and emergency response plan.
  - **6)** Disease Prevention Includes the recommended interventions and methods to protect the community from communicable diseases and vector borne diseases
  - 7) Emergency Response and Preparedness This sub section requires a plan and response system in place to respond to any potential emergency that could occur due to the works or operation

<sup>&</sup>lt;sup>6</sup> https://www.ifc.org/wps/wcm/connect/eeb82b4a-e9a8-4ad1-9472f1c766eb67c8/3%2BCommunity%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxTd

- 4. Construction and Decommissioning Guidelines<sup>7</sup>
  - 1) **Environment** covers the different environmental factors that could be affected by the construction activities including soil erosion, disturbance to water bodies, disturbance to air quality, wastewater discharges etc.
  - **2)** Occupational Health and Safety Different OHS risks due to construction or decommissioning works
  - 3) Community Health and Safety Different Hazards that can occur due to the project and affect the surrounding community.
  - 4) Grievance Redress Service

#### PUBLIC CONSULTATION & GRIEVANCE REDRESS MECHANISMS

The consultations were carried out in the village for the construction of the subproject the water treatment and the network on the 2<sup>nd</sup> January 2022. One on one interviews, and small focus group sessions were conducted. Accordingly, a questionnaire was formed to cover the key environmental and social aspects related to the subproject.

The purpose of conducting the consultation activities is to achieve the following:

- 1) Discuss project objectives and their subproject activities.
- 2) Disclose information regarding the Grievance Mechanism resources in place.
- 3) Discuss anticipated environmental and social impacts associated with the project.
- 4) Propose extensive mitigation measures to address potential environmental and social risks associated with the project activities.

### Public Consultation Process

The formatted questionnaire was then addressed to 20 women and 54 men in the surrounding community in Five Villages randomly to have their opinions and thoughts regarding the construction activities.

#### **Consultation Results:**

All interviewees expressed their hope that the completion of the project will improve their life quality. All those interviewed expressed their support for the project. Therefore, they link the project with improving their living conditions and the development of the area economically. They also stressed the importance of providing a timetable for the completion of the project because they heard of many planned projects in their district but have not seen them being completed. The participants emphasized that they know that the project's benefits are far greater than its negative impacts and confirmed their

https://www.ifc.org/wps/wcm/connect/7d708218-2a9e-4fcc-879d-9d5051746e7d/4%2BConstruction%2Band%2BDecommissioning.pdf?MOD=AJPERES&CVID=nPtgy6x

willingness to cooperate with the project. All participants in the village expressed that the construction of the compact water unit will have a positive impact on their social daily life. Please refer to Annex 1 and Annex 2 for sample of the consultations for both men and women in these villages. The full list of participants for public consultations and individual interviews are attached in standalone document to reduce the size of the instrument. As per the questionnaire prepared for individual interview, the below are the main findings:

- 1) No deportation or dislocation of any of the local community will be needed due to these activities.
- 2) No vegetation covers, crops, plants, trees...etc. will be removed in order to execute the construction activities.
- 3) No infrastructure will be affected negatively due to the construction activities.
- 4) The questioned local people agreed that the construction activities will have a strong positive impact from the social perspectives on the local residents.
- 5) No claims from any local population were recorded or alleged regarding the ownership of the land where the construction activities are to take place.

The Grievance Redress Mechanism is a procedure that aims to facilitate the most satisfactory solution and/or guidance to stakeholders seeking to submit their comments or complaints.

Before the start of the project, local community members will be informed about the GRM via communication channels. For example, they will be informed verbally by their community leader or through social media online. Visible sign boards, hard copies of the GRM brochures, and online platforms will also be made available posting GRM-relevant contact information and an explanation of the grievance process.

### GRM Process

The SFD established a central free hotline, and it is functioning properly in addition to the email and WhatsApp application. The digital system with multichannels for receiving complaints, inquiries, feedback or comments like WhatsApp, Facebook, email and complain boxes for each subproject. Additionally, GRM focal points will be assigned at local level and central level to be in charge of handling complaints. The focal point will maintain a log and report on grievance management, which includes minutes of meetings, resolutions and recommendations as part of an annual project progress report. The information for the central office is:

#	Name	Job Title	Phone Number	E-mail
1	Husam A. Shaael	GRM Team leader	07833344263 07733344263	Sfd.grm.iraq@gmail.com

Meanwhile, in order to comply with the WB requirements, SFD has assigned three staffs as focal points with their cell phone numbers to be disseminated at each subproject level for receiving calls and handling complaints. The contact details will be posted on subproject signboard and the complaint boxes will be installed in each location as shown in the below table.

#### **Contact Information for GRM**

#	Name	Job Title	Phone Number	E-mail
1	Ali M. Sabeeh	SFD Team leader	07801025217	basrah,plan@gmail.com
2	Zainab A. abd alqadir	Env. & Soc. officer	07712436659	aledinezainab@gmail.com
3	Ali S. Neama	GRM officer	07833030038	ali.salim1953@gmail.com

The process of managing complaints will be as follows:

The grievance note should be signed and dated by the aggrieved person. Where the affected person is unable to write, s/he should obtain assistance from the community to write the note and mark the letter with his/her thumbprint. Individuals who submit their comments or grievances have the right to request that their name be kept confidential, though this may mean that the social officer in charge of the GRM is unable to provide feedback on how the grievance is to be addressed. However, an anonymous complaint can receive a code and should be investigated appropriately and treated courteously.

After receiving the comments and complaints, they will be summarized and listed in a Complaints/Comments Logbooks, containing the name/group of commenter/complainant, date the comment was received, brief description of issue, information on proposed corrective actions to be implemented (if appropriate), and the date of response sent to the commenter/complainant. Complaints should be sorted out according to complexity; Significantly, the GRM classifies feedback in two categories, high-level and standard, each has its own procedure as explained further below.

#### **High-Level Feedback**

Feedback received to be categorized as 'high' level instances will include issues that meet the following criteria:

- Incidents that caused or may potentially cause significant or great harm to the environment, workers, communities, or natural resources, including issues of gender-based violence.
- Incidents which entail failure to implement environmental and social measures with significant impacts or repeated non-compliance with E&S policies.
- Incidents for which failure to address may potentially cause significant impacts that are complex and/or costly to reverse; and
- Incidents that may result in fatality or some level of lasting damage or injury.

This type of feedback will be acknowledged, and an investigation will be launched by the PCU/PMO and any other relevant stakeholders within 24 hours during workdays and within 48 hours if the feedback was received over the weekend. It should be noted that some types of incidents, including accidents and fatalities, need to be reported to the World Bank. This guidance is provided in the Environment & Social Incident Response Procedures.

#### Standard-Level Feedback

If the identity of the aggrieved person is known and the grievance is classified as 'standard', the acknowledgement of grievance will be within 3 working-days and the response will be within 20 working-days (depending on the type of grievance i.e. high or standard). The GRM Social Officer will keep a grievance log and report on grievance management (i.e. minutes of meeting, recommendations, and resolutions made) as part of annual project progress reports. At the 20 business-day mark, if a complaint/question is still pending, the GRM focal point will provide an update to the aggrieved person and inform them of the reason of delay in resolving their case and provide the date for which a response will be provided.

Aggrieved people who are dissatisfied with the outcome of their complaint can appeal the decision by resubmitting their complaint to the GRM Social Officer within 30 working days of receiving a response to the original submitted grievance. Subsequently, the GRM Social Officer and other relevant personnel have 30 working days to investigate and address the issue. Additionally, the GRM Social Officer has 10 working days to prepare a comprehensive response, including the findings of the investigation and the rationale of the determination. Accordingly, within a maximum of 40 working days, the appeal case should be closed.

Lastly, if the aggrieved person is still not satisfied with the solution provided, s/he has the option to go to court.

Individuals who submit their comments or grievances have the right to request that their name be kept confidential. An anonymous complaint will receive a code and should be investigated appropriately and treated courteously. Ensuring confidentiality when dealing with cases of gender-based violence GBV. In order to mitigate the GBV related issues/ complaints, there will be grievance mechanism sensitive to gender by assigning female GRM officer in case of facing any GBV incidents, in addition, all GRM officers/ focal points must be trained on how to handle SEA/SH related grievances.

In addition to PMO, the MOP, project offices in governorates, and Community Development Groups (CDGs), the World Bank's Grievance Redress System (GRS) can also be approached for reporting and resolving issues.

#### Disclosure activities

As soon as the site-specific ESMP gets clearance from the World Bank and approval from the Ministry of planning, the following disclosure procedures will be adapted. A final report, in English and Arabic, will be published on the WB, SFD and Ministry of Planning websites and also will be available locally (such as at local SFD office).

#### INSTITUTIONAL CAPACITY BUILDING

Will there be any capacity building?

[] N or [x]Y

It is recommended to provide safety training and induction sessions for the workers and engineers who will be employed throughout the construction phase. Moreover, there needs to be more training on GRM implementation in order to ensure its proper functioning in the future.

#### PART B: SAFEGUARDS SCREENING AND TRIGGERS

ENVIRONMENTAL /SOCIAL SCREENING FOR SAFEGUARDS TRIGGERS								
	Activity / Typology	Status	Triggered Actions					
Will the	1. Re/construction of compact water unit	[X] Yes [ ] No	This subproject is construction of compact water unit and water networks.					
site	2. Reconstruction of / impacts on surface drainage system	[ ] Yes [X] No	The subproject doesn't have an impact on Surface drainage system					
activity include/in volve any	3. Activities in Historic building(s) and districts	[ ] Yes [X] No	The construction activities do not take place anywhere near historic buildings or districts and					
of the following?	4. Required acquisition of land or temporary / permanent impacts on livelihoods	[ ] Yes [X] No	No land acquisition is required for this subproject as the activities will be constructed on state owned land.					
	5. Handling or presence of hazardous or toxic materials	[X] Yes [ ] No	There are toxic or hazardous materials generated by the project.					

6.	Impacts on forests and/or protected areas	 There are no forests or protected areas surrounding the subproject area.
7.	1	 An official clearance letter has been
	(UXO)	 provided by authorities (Annex 4).

## PART C: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR THE SUBPROJECT PHASES

Recept In	npact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
Constructio	n Phase					
Air Dus Quality exh		<ul> <li>Have a maintenance plan for the construction equipment to minimize exhaust emissions.</li> <li>Adopt a policy of switching off machinery and equipment when not in use (idle mode).</li> <li>Spray the soil before and during excavation activities, if necessary, to reduce dust emissions.</li> <li>Store construction materials in pre-identified storage areas. For example, any excavated material must remain in a confined area until disposal from site.</li> <li>Set an appropriate speed limit (typically 10-15 km/h) for the vehicles operating within the site boundaries.</li> <li>Demolition debris, excavated soil and aggregates shall be kept in controlled area and sprayed with water mist to reduce debris dust when necessary</li> <li>There will be no open burning of construction / waste material at the</li> </ul>	Site inspection     Revie wequipment maintenance records.     Revie wthe complaints reports	Contractor	Resident Enginee r / the assigne d E&S specialis ts from PMT	Within contract or's cost

<sup>8</sup> https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E HS Aspect			of Supervi sion	Implemen tation	Supervi sion	ed Cost
		<ul> <li>Providing some indigenous species of vegetation, which will also reduce dust level.</li> <li>Demolition debris, excavated soil and aggregates shall be kept in controlled area and sprayed with water mist to reduce debris dust when necessary</li> <li>proper stacking of material and avoiding excavation or other activities during high wind periods.</li> </ul>				
Noise <sup>9</sup>	The operation of heavy constructi on equipment will lead to an increase in ambient noise levels.	<ul> <li>Switch off any equipment if not in use.</li> <li>Ensure that machinery is in good condition by implementing a maintenance plan.</li> <li>Construction noise will be limited to restricted times agreed to in the permit</li> </ul>	Site inspectio n Review the equipme nt maintena nce records. Review complai nts/ grievanc e log.	Contractor	Resident Enginee r / the assigne d E&S specialis ts from PMT	Within contract or's cost
Waste Genera tion	Inappropri ate handling of hazardous or non- hazardous waste can lead to soil contaminati on. Also, not	Implement a waste management plan consisting of the following measures. For solid waste:  Identify waste types and quantities Allocate a skip/bin to each type of waste Create a confined area on site to store excavated	Field investiga tions. Review waste register. Review the complai nts reports.	Contractor	Resident Enginee r / the assigne d E&S specialis ts from PMT	Within contract or's cost

<sup>&</sup>lt;sup>9</sup> https://www.ifc.org/wps/wcm/connect/4a4db1c5-ee97-43ba-99dd-8b120b22ea32/1-7%2BNoise.pdf?MOD=AJPERES&CVID=nPtgwZY

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E		<b>_</b>	of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion	VIII OII	01011	
1	removing	material, if there is a				
	domestic	need to.				
	waste on a	Allocate a space on site to				
	periodic	store construction				
	basis will	debris and scrap				
	lead to its	material such as old				
	accumulati	pipes, broken doors				
	on and	and windows.				
	consequent	• Contract a licensed solid				
	ly to	waste contractor/scrap				
	significant	dealer to collect				
	bacterial	domestic waste on a				
	presence	daily basis and other				
	on site.	scrap waste also on a				
	on site.	regular basis.				
		• The waste management				
		areas must be part of the construction site				
		and should not				
		interfere with any				
		activities outside the				
		boundaries of the				
		subproject.				
		• Procedures will be put in				
		place for rapid response				
		to accidental spills of				
		fuels, lubricants and				
		other toxic or noxious				
		substances, and for				
		their recovery and				
		<ul><li>appropriate disposal.</li><li>The excavated soil</li></ul>				
		• The excavated soil resulting from the				
		digging will be used for				
		backfilling and				
		compacted very well.				
		However, if any surplus				
		materials (excavated				
		soil) will remain, there				
		is a need to coordinate				
		with the municipal local				
		authority to properly				
		dispose of the				
		remaining material.				
		For Hazardous waste				
		and substances:				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
nopect		<ul> <li>If there will be a diesel tank on site, it must be shaded and placed on an impervious surface such as concrete.</li> <li>Store used oils in barrels until final disposal and place them on a retention basin.</li> <li>Contract a hazardous waste contractor to collect the hazardous waste and transport it to an authorized facility/dumping site, which will be identified by local authorities.</li> <li>Safe handling using the proper PPEs and safety precautions.</li> <li>Make a register of the quantities that have been disposed of.</li> </ul>				
		For Liquid waste:				
		The holding tank connected to the site offices must be emptied on a frequent basis by a licensed waste company.				
Water Polluti on	Surface water may be polluted by improper waste handling, given that the Euphrates river is only 100 m away.	<ul> <li>The contractor must follow the solid and hazardous waste mitigation measures presented in this ESMP to limit the possibility of water pollution that may result from inappropriate handling of waste.</li> <li>No washing, maintenance or service of vehicles and</li> </ul>	Field investiga tion	contractor	Resident Enginee r / the assigne d E&S specialis ts from PMT	Within contract or's cost

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/Ē	•	U	of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect		machinery close to	sion			
		water bodies.				
		<ul> <li>The contractor must follow the solid and hazardous waste mitigation measures presented in this ESMP to limit the possibility of water pollution that may result from inappropriate handling of waste.</li> <li>Construction material and stockpiles should be covered to avoid</li> </ul>				
		run-off to water bodies.				
		Wastewater from the worker rest areas or construction offices should be contained in septic tank and should be removed regularly from site by the authorized wastewater trucks				
		In case of the need to change engine, oils or refuel some construction equipment, a proper maintenance workshop or shelter should be installed to ensure containment of any fuel or oil spills.				
Soil	Contaminat ion	The contractor must follow the solid and	Field investiga	Contractor	Resident Enginee	Within contract
	through leakages from equipment, holding tanks or	hazardous waste mitigation measures presented in this ESMP to minimize the possibility of leakages to the soil. Other measures to minimize	tion		the assigne d E&S specialis	or's cost

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
	chemical	soil contamination			ts from	
	containers	include:			PMT	
	improper	Adopting strict spill				
	disposal of	control procedures and developing a spill				
	solid or hazardous	response and				
	waste.	management plan.				
	waste.	• Storing oil and				
		chemical materials in				
		an appropriate location				
		that has a protective				
		base and a lip, such as a concrete slab, to				
		prevent any				
		penetration into the				
		ground.				
		• Reuse the excavated				
		soil when it deemed				
		<ul><li>technically appropriate.</li><li>Preventing loose</li></ul>				
		• Preventing loose material (soil and				
		equipment) from				
		falling or rolling into				
		the excavation by				
		removing this material				
		to a minimum of 0.5 meter from the edge of				
		the excavation				
		Marking excavation				
		with physical				
		boundaries (barriers,				
		tape or fence).				
		• Follow the solid and				
		hazardous waste mitigation measures				
		presented in this				
		ESMP to minimize the				
		possibility of leakages				
		to the soil.				
		Restoration of topsoil				
		and damaged areas				
		must take place after construction phase				
		end.				
		• Ensure appropriate				
		and safe storage of				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E	•	0	of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
		containments such as				
		fuels, construction				
		materials and wastes.				
Worker	Occupation	• The Contractor shall	• Contr	Contractor'	Resident	Within
s safety	al health	prepare an	actual	s health	Enginee	contract
	and safety	Occupational Health	clause	and safety	r/	or's cost
		and Safety Plan and job	s +	officers	the	
		hazard instructions	Field		assigne	
		during the construction phase.	super vision		d E&S	
		The contractor will also	V181011		specialis	
		assign a competent			ts from	
		person to supervise the			PMT	
		plan. Some of the main				
		mitigations measures				
		that must be included in				
		the plan are as follows:				
		Workers should be				
		trained to identify and				
		evaluate fall hazards				
		and be fully aware of how to control				
		exposure to such risks.				
		Workers and site				
		personnel must always				
		use personal protective				
		equipment when				
		dealing with toxic				
		material.				
		Workers must comply				
		with OSHA's general				
		rule for the safe use of				
		ladders.				
		• To prevent heavy				
		construction				
		equipment risk, workers should follow				
		construction safety				
		guidelines designed to				
		eliminate the exposure				
		to such injuries and				
		accidents				
		Emergency equipment				
		(spill-kit, fire				
		extinguishers, etc)				
		must always be				

Recent	Impact	Mitigation Measures	Means	Respons	eibility	Estimat
Recept or/E	Impact	Willigation Measures	of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	cu Cost
Aspect			sion	tation	Sion	
Aspect		available on-site and	81011			
		functional.				
		Initial and periodic     health checks must be				
		provided to the				
		workers.				
		The plan must include				
		Covid-19 response				
		measures.				
		Workers must be				
		provided with health				
		care insurance (that				
		covers provision of				
		medical support in case				
		of being infected by				
		diseases) and safety				
		insurance (that covers				
		workers in case of				
		incidents and				
		accidents)				
		Suitable working  Platforms with suitable				
		platforms, with suitable guard rails and toe				
		boards, should be				
		provided for work at				
		height. Safe means of				
		access and egress				
		should be provided for				
		the working platform.				
		Suitable guard-rails and				
		toe-boards should be				
		installed at edges.				
		Openings should be				
		properly covered where				
		persons are liable to fall				
		from height, to land				
		surfaces or into water.				
		Install railing around all				
		process tanks and pits.				
		Require use of a life line and personal flotation				
		device (PFD) when				
		workers are inside the				
		railing, and ensure				
		rescue buoys and throw				
		bags are readily				
		available; ·				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E	Impact	Wingation Weasures	of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	Cu Cost
Aspect			sion	tation	51011	
Hopeet		Implement a confined	01011			
		spaces entry program				
		that is consistent with				
		applicable national				
		requirements and				
		internationally accepted				
		standards. 21 Valves to				
		process tanks should be				
		locked to prevent				
		accidental flooding				
		during maintenance;				
		• Use fall protection				
		equipment when				
		working at heights;				
		Maintain work areas to				
		minimize slipping and				
		tripping hazards;				
		• Use proper techniques				
		for trenching and				
		shoring;				
		• Implement fire and				
		explosion prevention measures in accordance				
		with internationally				
		accepted standards;				
		When installing or				
		repairing mains				
		adjacent to roadways,				
		implement procedures				
		and traffic controls,				
		such as: o				
		Establishment of work				
		zones so as to separate				
		workers from traffic				
		and from equipment as				
		much as possible o				
		Reduction of allowed				
		vehicle speeds in work zones; o Use of high-				
		visibility safety apparel				
		for workers in the				
		vicinity of traffic o For				
		night work, provision				
		of proper illumination				
		for the work space,				
		while controlling glare				
		so as not to blind				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E	1		of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
•		workers and passing				
		motorists				
		Locate all underground				
		utilities before digging.				
		• Installation of				
		guardrails with mid-				
		rails and toe boards at				
		the edge of any fall				
		hazard area				
		Proper use of ladders				
		and scaffolds by trained				
		employees.				
		Use of fall prevention  devices including				
		devices, including safety belt and lanyard				
		travel limiting devices				
		to prevent access to fall				
		hazard area, or fall				
		protection devices such				
		as full body harnesses				
		used in conjunction				
		with shock absorbing				
		lanyards or self				
		retracting inertial fall				
		arrest devices attached to fixed anchor point or				
		horizontal life-lines				
		Appropriate training in				
		use, serviceability, and				
		integrity of the				
		necessary PPE ·				
		• Inclusion of rescue				
		and/or recovery plans,				
		and equipment to				
		respond to workers				
		after an arrested fall.				
		Make sure all walking				
		areas and work surfaces				
		are clean, dry, clear of				
		debris, etc.				
		• Keep all gear secure when not in use.				
		• Keep stairs, ladders, doorways, ramps,				
		walkways, and				
		gangways clear.				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/Ē	•		of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
Local Comm unity <sup>10</sup>	Communit y health and safety	<ul> <li>Safely secure ramps or gangways when loading and offloading.</li> <li>Wear footwear with slip-resistant soles.</li> <li>Eliminate unusable impounded water, and apply vector control programs</li> <li>Erect suitable and adequate warning signage along culvert cleaning and excavation sites</li> <li>Signs and awareness should be installed close to the excavation area to protect road users and community.</li> <li>Prepare and implement a security plan to prevent public access to the work site, hazardous materials, and waste</li> <li>The contractor must abide by the waste management plan in order not to negatively affect the safety of the surrounding communities.</li> <li>A grievances mechanism should be provided to ensure effective communication regarding community concerns</li> <li>People with disability and school children should be provided with safe access roads to their schools and commercial areas,</li> </ul>	• - Griev ances log • - Accid ents log	Contractor	Resident Enginee r / the assigne d E&S specialis ts from PMT	Within contract or's cost

<sup>&</sup>lt;sup>10</sup> https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxyx

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat	
or/E HS Aspect	•		of Supervi sion	Implemen tation	Supervi sion	ed Cost	
		particularly, as the project will dig streets. Safe access roads can be provided with lights in order to avoid falls of pedestrians during night.					
Local Comm unity	Traffic safety	<ul> <li>Safety signs must be installed to notify the community that construction vehicles will be using the roads leading to the water units</li> <li>The contractor must set a speed limit for construction vehicles while they operate outside the site boundaries.</li> </ul>	<ul> <li>Accid ents log</li> <li>Communit y grievance mech anism</li> </ul>	Contractor in coordinatio n with the traffic department	Resident Enginee r / the assigne d E&S specialis ts from PMT	Within contract or's cost	
Local Comm unity	Child Labour	<ul> <li>The ToR of the contractor must prohibit all forms of child labor in the subproject (below 18 years old) and specify the appropriate penalties.</li> <li>The ToR shall also oblige the contractor/subcontractor to keep a copy of IDs of workers in order to monitor their age.</li> </ul>	• Work ers atten dance sheets	Contractor	Resident Enginee r/ the assigne d E&S specialis ts from PMT	Within contract or's cost	
Local Comm unity	Cultural heritage	Chance find procedures are included in Annex 5 in order to provide guidance in case of finding any cultural heritage objects	• The chanc e find proce dures are availa ble	Contractor	Resident Enginee r/ the assigne d E&S specialis ts from PMT	Within contract or's cost	
Local Comm unity	Temporary labour influx	Prepare a code of conduct that stipulates the different commitments of labour	<ul><li>Site visit</li><li>Mont hly</li></ul>	Contractor	Resident Enginee r/	Within contract or's cost	

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/Ē			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
Local Comm unity	GBV	towards community groups. The CoC must be signed by the contractor.  • All workers should be trained on the Code of Conduct.  • Apply Penalties to workers who violate the code of conduct  • Ensure smooth operation of the grievance mechanism and the anonymous channels  • Raise the local population's awareness about the subproject's commitment towards communities, and the measures taken through public consultation and focus group discussions  • Conduct initial and periodic health checkups on workers and provide the necessary care accordingly  • The code of conduct (CoC) must include the prevention of sexual exploitation and sexual harassment at the workplace  • CoC needs to consider privacy in setting up the household connections.  • Maintain an efficient gender sensitive grievance mechanism for both local community and workers.	report ing GRM Meetings with surro undin g communit ies  • Mont hly report ing GRM	Contractor	Resident Enginee r/ the assigne d E&S specialis ts from PMT	Within contract or's cost

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/Ē	_		of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
Local	Infrastruct	• Coordinate with the	•	Contractor	Resident	Within
Comm	ure and	departments of potable	Revie		Enginee	contract
unity	undergroun d utilities	water, wastewater,	W		r / PMT	or's cost
	d utilities	electricity, and telecom	infras			
		authorities to obtain maps/ data on	tructu re			
		underground utilities,	accide			
		whenever available	nts			
		In case an underground	report			
		utility and	s.			
		infrastructure pipe is				
		subjected to damage by				
		the subproject				
		activities, standard				
		procedures should be				
		followed, in addition to preparing a				
		documentation report				
		for the accident.				
		• In case of water outage,				
		the community people				
		should be informed				
		prior to any cut to store				
		water.				
		Maintain an efficient				
		grievance mechanism.				
		In case an underground				
		utility and infrastructure pipe has				
		been damaged,				
		standard procedures				
		should be followed, as				
		described before, in				
		addition to preparing a				
		documentation report				
		for the accident. The				
		documentation report should include:				
		- Time and place of				
		accident;				
		- Name of contractor;				
		- Type of underground				
		utilities and infrastructure				
		line;				
		- Description of accident				
		circumstances and causes;				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E	1		of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
		- Actions taken and responses of different parties, such as infrastructure company; - Duration of fixing the damage; and - Damage caused (description shall be according to observation, expertise judgment, reports of infrastructure company)  Quick restoration and effective communication with regarding work and restoration schedule				
Workers	Manageme nt of onsite facilities	<ul> <li>Establish the caravans inside water unit site.</li> <li>Ensure installation of adequate workers facilities for the construction phase; i.e. construct a holding tank to be used to collect domestic wastewater generated by the workers.</li> <li>Follow the waste management best practices and mitigation measures outlines in this ESMP.</li> <li>Monitor closely the working conditions, and impose measures that control transmission of infectious diseases.</li> <li>Maintain an efficient grievance mechanism (discussed in the stakeholder engagement chapter). This GRM should be sensitive to gender and assure confidentiality</li> </ul>	• Site inspections	Contractor	Resident Enginee r/ the assigne d E&S specialis ts from PMT	Within contract or's cost

Recept	Impact	Mitigation Measures	Means	Responsibility		Estimat
or/E			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
		<ul> <li>Specific engagement with women and girls that includes awareness on GBV and access to anonymous channels to report cases.</li> <li>Train workers on the Code of Conduct and keep close eye on any violation of the COC</li> <li>A list of recommendations, instructions, and restrictions will have to be prepared to minimize the negative ecological and social impact of the workers facilities and the restoration of the site after the construction phase.</li> <li>Provide for appropriate amenities (eating, provision of drinking</li> </ul>				
0 1:	D1	water, prayer etc).				
_	on Phase		Lat	7.11	1 3.6	
Air Quality	Exhaust and Particulate matter emissions from generator(s) Chlorine gas has a temporary negative impact on air quality	<ul> <li>Maintain generators         regularly</li> <li>Using generators in case         of emergency only</li> <li>Ensure appropriate         ventilation at chlorine         storage area</li> <li>Ensure chlorine         container are sealed         properly during storage         time</li> </ul>	Site inspectio n	The manager of the water unit	Maysan Water Director ate	Operatio n cost
Noise	Pumps and	Using rubber padding	Site visit	The	Maysan	Operatio
11	generators	when applicable to	reports	manager of	Water	n cost

<sup>&</sup>lt;sup>11</sup> https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS

Recept Impact	Mitigation Measures	Means	Respons	Estimat	
or/E	<b>g</b>	of	Implemen	Supervi	ed Cost
HS		Supervi	tation	sion	
Aspect		sion			
(used temporary) generate noise levels felt by workers and nearest neighbors	maintenance and monitor lubrication	Incident s and accident s reports	the water unit	Director ate	
Waste Genera tion handling of solid and liquid waste	municipality.	Field investiga tions. Review waste register. Review the complaints reports.	The manager of the water unit	Maysan Water Director ate	Operatio n cost

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/Ē			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect		in coordination with the local authority;  • Potential impact on soil, groundwater, and surface water, in the context of protection, conservation and long term sustainability of water and land resources, should be assessed when land is used as part of any waste or wastewater treatment system;	sion			
Water Polluti on	Chlorine spills or inappropria te handling of solid and liquid waste	Chlorine Gas Safety Measures  Chlorine drums must have adequate shelving in a well-ventilated area that is protected from the weather and sun exposure and ideally located downwind of commonly used structures and areas.  Provision of a proper secondary containment area or as a spill control measures.  The drums must be properly sealed and kept away from incompatible and flammable materials. Drums should be inspected upon receipt for structural integrity.  Chlorine detection devices should be installed inside the storage room and	Field investiga tions. Review waste register. Review the complai nts reports.	The manager of the water unit	Maysan Water Director ate	Operatio n cost

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
		chlorine injection				
		room.				
		• The chlorine injection area and storage room must be equipped with a ventilator to prevent high chlorine gas concentrations inside the room.				
		Workers who operate the chlorine facility must always wear a chemical protective mask when handling chlorine to minimize exposure.				
		• Installation of chlorine showers and maintained to be fully functional in case of spill.				
		Employees should be adequately trained in hazard awareness, detection and safe handling procedures to minimize potential spills.				
		Ensure chlorine containers are always sealed properly and secured from tipping/falling/damage /direct sunlight during transportation and storage				
		No washing, maintenance or service of vehicles and machinery close to water bodies.				
		• Store hazardous waste, such as paint cans and empty chlorine containers in separate skips/waste containers.				

Recept	Impact	mpact Mitigation Measures		Respons	Estimat	
or/E HS Aspect	-		of Supervi sion	Implemen tation	Supervi sion	ed Cost
Impact s on soil	Contaminat ion caused by possible leakages or spills	<ul> <li>Store used oils in barrels until final disposal and place them on a retention basin.</li> <li>Contract a hazardous waste contractor to collect the hazardous waste and transport it to an authorized facility/dumping site, which will be identified by local authorities.</li> <li>Maintain a waste register</li> <li>In case of the need to change engine, oils or refuel some construction equipment, a proper maintenance workshop or shelter should be installed to ensure containment of any fuel or oil spills.</li> <li>Chemicals storage in areas with impervious floor</li> <li>Ensure liquid material/waste containers are always sealed properly and secured from tipping/falling/damage /direct sunlight during transportation and storage</li> <li>In case of spillage: avoid inhalation and sources of ignition, cover and mix with sufficient amounts of sand using PPE, collect contaminated sand in clearly marked secure containers/bags</li> </ul>	Site visit reports Incident s and accident s reports	The manager of the water unit	Maysan Water Director ate	Operatio n cost

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E	•		of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect	OHS	The Component average: 11	sion	The	Mayraan	Operation
Workf orce	OHS	The Component owner will adhere to the following OHS procedures:  • The use of PPE during operating the treatment unit  • Maintain good housekeeping standard  • Maintain site security and safety.  • Provision of adequate firefighting equipment	Site visit reports Incident s and accident s reports	The manager of the water unit	Maysan Water Director ate	Operatio n cost
		<ul> <li>Inform all who may be affected by the application of water cleaning of the work arrangements and the safety measures to be taken.</li> <li>Limit the workers exposure to particle matter and dust emissions for extended periods by using</li> </ul>				
		respirators and shift rotations.  • Strictly adhere to the operational safety guidelines and the				
		instructions on chlorine packages.				
		Wash hands, face and skin that may be contaminated chemicals with water and soap.				
		Develop occupational health and safety plan.				
		Develop emergency plans				
		Develop COVID-19 risk- based procedures tailored to site conditions and workers				

Recept	Impact	Mitigation Measures	Means	Respons	sibility	Estimat
or/E HS			of Supervi	Implemen tation	Supervi sion	ed Cost
Aspect			Supervi sion	tation	sion	
		characteristics, and based on guidance issued by relevant authorities, both national and international (e.g. WHO).				
		• Training of workers for the management of the system, safety management, and actions in case of an accident should be implemented.				
Local Comm unity	Communit y Health and Safety	<ul> <li>Emergency response plan should be prepared in case of any water contamination.</li> <li>Maintain an efficient grievance mechanism.</li> <li>Conduct quarterly community meetings to observe any concerns they may have.</li> <li>Conduct quarterly meetings with the concerned authorities to monitor the quality of reducing the impacts of dust.</li> <li>That treated water quality must meet the WHO Guidelines (as indicated in the EHS Guidelines)</li> <li>The treatment plant will be designed to meet the standards of EHS.</li> <li>Quality control and quality assurance system will be in place, the transmission and distribution network</li> </ul>	Site visit reports Incident s and accident s reports	The manager of the water unit	Maysan Water Director ate	Operatio n cost

Recept	Recept Impact Mitigation Measures			Respons	Estimat	
or/E HS Aspect	Î		of Supervi sion	Implemen tation	Supervi sion	ed Cost
		will be properly protected from contamination through maintaining adequate pressures and monitoring system etc.  • Ensure quarterly community meetings will include beneficiary households of new water network.				
storage and handlin g of chemic als and other materia ls	OHS	Install alarm and safety systems, including automatic shutoff valves, that are automatically activated when a chlorine release is detected  Install containment and scrubber systems to capture and neutralize chlorine should a leak occur o  Use corrosion-resistant piping, valves, metering equipment, and any other equipment coming in contact with gaseous or liquid chlorine, and keep this equipment free from contaminants, including oil and grease	Site visit reports Incident s and accident s reports	The manager of the water unit	Maysan Water Director ate	Operatio n cost
		<ul> <li>Store chlorine away from all sources of organic chemicals, and protect from</li> </ul>				

Recept Impact		Mitigation Measures	Means	Respons	Estimat	
or/E	- In parce	<b>g</b>	of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion		5.5.	
		sunlight, moisture,				
		and high				
		temperatures				
		• Minimize the				
		amount of				
		chlorination				
		chemicals stored				
		on site while				
		maintaining a				
		sufficient inventory				
		to cover				
		intermittent				
		disruptions in				
		supply;				
		• For systems that				
		use gas				
		chlorination: o				
		Install alarm and				
		safety systems,				
		including				
		automatic shutoff				
		valves, that are automatically				
		activated when a				
		chlorine release is				
		detected o Install				
		containment and				
		scrubber systems				
		to capture and				
		neutralize chlorine				
		should a leak occur				
		o Use corrosion-				
		resistant piping,				
		valves, metering				
		equipment, and any				
		other equipment coming in contact				
		with gaseous or				
		liquid chlorine, and				
		keep this				
		equipment free				
		from				
		contaminants,				
		including oil and				
		grease o Store				
		chlorine away from				
		all sources of				

Recept	Impact	Mitigation Measures	Means	Responsibility		Estimat
or/E			of	Implemen	Supervi	ed Cost
HS			Supervi	tation	sion	
Aspect			sion			
		organic chemicals,				
		and protect from				
		sunlight, moisture,				
		and high				
		temperatures				

## PART D: MONITORING PLAN/ CONSTRUCTION PHASE

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
Air Quality <sup>12</sup>	- Number of complaints related to air quality Compliance with dust abatement measures	Residen t Enginee r & PMT, contract	Bi- weekly, or as soon as complain ts are received	- Near excavat ion and backfill ing activiti es.	- Site inspection - Following up with complaint s	No addition al cost
Noise & Vibration	<ul> <li>Noise level</li> <li>Number of complaints related to high noise levels.</li> </ul>	Residen t Enginee r & PMT, contract or	Bi- weekly, or as soon as complain ts are received	On site	- Site inspection - Complaint s log	No addition al cost

<sup>&</sup>lt;sup>12</sup> https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-

<sup>1%2</sup>BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS

<sup>&</sup>lt;sup>13</sup> https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-

 $<sup>\</sup>underline{1\%2BAir\%2BEmissions\%2Band\%2BAmbient\%2BAir\%2BQuality.pdf?MOD=AJPERES\&CVID=nPtgvbS$ 

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
Solid and Liquid waste	<ul> <li>Waste segregation</li> <li>Storage conditions of hazardous waste and materials;</li> <li>Disposal receipts</li> <li>Condition of the holding tank</li> </ul>	Residen t Enginee r & PMT, contract or	Bi-weekly	- Waste areas on site - Holdin g tank	- Site inspection - Checking waste register	No addition al cost
Water Pollution	- Signs of inappropriate waste disposal (including hazardous waste and materials).	Residen t Enginee r & PMT', contract or	Monthly	Euphrate s	- Visual inspection - Document ation in H&S monthly reports	No addition al cost
Soil	- Signs of spillage of hazardous materials	Residen t Enginee r & PMT, contract or	Bi-weekly	Within site boundari es	- Site inspection - Document ation in H&S monthly reports	No addition al cost
Occupati onal Health and safety <sup>14</sup>	<ul> <li>An Occupational Health and Safety Plan is in place</li> <li>Availability of a competent supervisor</li> <li>Availability of an accident log</li> </ul>	Residen t Enginee r & PMT, contract or	Monthly inspectio ns	Subproje ct site in general	Maintaining records of injuries and accidents with cause and location  - Maintainin g record recurring health	No addition al cost

<sup>&</sup>lt;sup>14</sup> https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxyx

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
	<ul> <li>Number of accidents and injuries on site.</li> <li>Worker's health checkups</li> <li>Total number of trained workers</li> <li>Complaints raised by workers</li> </ul>				conditions if any	
Communi ty health and safety	<ul> <li>Number of accidents and injuries involving local community.</li> <li>Presence of warning signs in and around the site.</li> <li>Complaints raised by locals with regards to community health and safety.</li> </ul>	Residen t Enginee r & PMT, contract or	Monthly inspections	Site boundari es	- Site inspection with photo document ation - Grievance s log	No addition al cost
Traffic Safety	- Presence of warning signs and speed limits for construction vehicles.	Residen t Enginee r & PMT, contract or	Daily	The access road leading to the water units	Site inspection with photo documentati on	No addition al cost
Child labour	- The ToR of contractor includes a contractual term related	Residen t Enginee r & PMT,	Daily	Construc tion site	Site inspection and desk work	No addition al cost

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
	to prohibiting child labour.  - Presence of IDs of workers at the site	or or				
Cultural heritage	- The chance find procedures are available	Residen t Enginee r & PMT, contract or	Once	Construction site	Desk work	No addition al cost
Temporar y labor influx	<ul> <li>Appropriate code of conduct is in place (at the site)</li> <li>Number of workers trained on the code of conduct</li> <li>Breaches to the code of conduct and how they are managed</li> <li>Complaints raised by the local community due to labor influx</li> <li>Engagement activities related to code of conduct</li> </ul>	Residen t Enginee r & PMT, contract or	On Monthly basis	Subproje ct area	- Grievances log - Site inspection	No addition al cost

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
GBV	- Availability of health checkup	Residen	Monthly	Subarcio	- The code	No
GDV	- The code of conduct includes preventive sexual exploitation and prohibition of harassment - Complaints raised by the local community	t Enginee r & PMT, contract or	Monuny	Subproje ct site	of conduct - Grievances log	addition al cost
Infrastruc ture and undergro und utilities	- Minutes of coordination meeting - Availability of underground utility maps - Incidents of damaging infrastructure - GRM is available at the site - Complaints raised due to infrastructure and water service damages	Residen t Enginee r & PMT, contract or	As soon as complain ts are received	Subproje ct site	- The code of conduct - Grievance s log	No addition al cost
Resident Engineer & PMT, contracto r	- Caravan location inside the water unit site - Availability of adequate waste	Residen t Enginee r & PMT, contract or	As soon as complain ts are received	Subproje ct site	- The code of conduct - Grievance s log	No addition al cost

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
	management system - Monitoring reports of working conditions - Engagement activities with women minutes of meetings - Training reports, including list of participants of workers received training on the code of conduct - Recommendat ion and instructions related to the facilities is available at the site					
Operation I						
Air quality <sup>15</sup>	<ul><li>Generated         <ul><li>Emissions</li><li>Complaints         <ul><li>from residents</li></ul></li></ul></li></ul>	Maysan Water Directo rate	Twice a year	- Near the emissio ns sources - Site bounda ries	- Measurem ents and reporting of exhaust emissions - Complaint s log	No addition al cost
Noise and	- Noise and vibration	Maysan Water	Twice a year	- Near the	- Measurem ents and	No addition al cost

<sup>&</sup>lt;sup>15</sup> https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
Vibration 16	intensity, exposure durations - Complaints from residents and workers	Directo rate		source of vibratio n and noise - Site bounda ries	reporting of exhaust emissions - Complaint s log	
Waste generation	<ul> <li>Status of waste management areas on site.</li> <li>Disposal receipts</li> <li>Cleanliness of the farm.</li> <li>Condition of the holding tank</li> <li>Status of waste resulting from the removal of suspended solids and dissolved contaminants</li> </ul>	Maysan Water Directo rate	Twice a year	- Waste areas - Holdin g tank (s)	- Site inspection - Review waste register	No addition al cost
Water Pollution	<ul> <li>Signs of inappropriate waste disposal (including hazardous waste and materials).</li> <li>Drinking Water quality indicators</li> <li>Observation of</li> </ul>	Residen t Enginee r & PMT, contract or	Monthly	- Euphrate s water intake - Chlorine storage area	- Visual inspection - Document ation in H&S monthly reports	No addition al cost

https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS

Receptor /EHS aspect	Monitoring indicators	Respon sibility of monito ring	Frequen cy of monitori ng	Location of monitori ng	Methods of monitoring	Estimat ed Cost of monitor ing
	spillage/leakag es of Chlorine					
Impacts on soil	Observation of: - spillage/leaka ges from hazardous material and wastewater - accumulated wastes - piling of hazardous materials	Maysan Water Directo rate	Twice a year	Subproje ct site	- Site inspection - H&S reports	No additiona l cost
Occupati onal Health and Safety <sup>17</sup>	- Adherence to PPE, especially by workers who clean the water Site safety - Storage of materials	Maysan Water Directo rate	Twice a year	Water units site	- Maintainin g a record of toxic exposure/ contact - Checking workers' complaint s	No additiona l cost
Communi ty health and safety	<ul> <li>Emergency response plan is in place</li> <li>Complaints raised due to community health aspects</li> <li>Applying monitoring indicators required by WHO</li> </ul>	Maysan Water Directo rate	Twice a year	Water units site	- Site inspection - Maintainin g a record of toxic exposure/ contact - Checking residents' complaint s	No additiona l cost

\_

<sup>&</sup>lt;sup>17</sup> https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxyx

ANNEXES

**Annex 1: Consultations Photos** 





Public Consultations Humayun Village

Public Consultations at AL-SORA Village



Public Consultations at AL-TAMIM Village



Public Consultations at AL-BU BASIRI Village



Public Consultations at AL-BU SHAWI Village

# Annex (2): Sample individual interviews for both men and women in the village

استبيان الصندوق الاجتماعي لتنتمية المحافظة المهامي	استبيان الصندوق الاجتماعي تلتنمية المدافقة المنار و المنار و عزيزي الموافقية المنار و عزيزي الموافقية عزيزي الموافقية المناوق الاجتماعي اللتنمية ) مسح مينقي تغرين التشاور المجتمعي مع ابناء الغرية حرن الإجراءات الهبلية والاجتماعية التي سبتم التداها بخصوص تقلية الشارو في الغرية ومدن التراجا على المجتمع المعطي و الهيئية المعطية، راجين الإجابة بمعلق وحيادية عن الامتيان النائي دون الحلجة تفكر الامم أو وسيلة الانصال.
لسم المشروع: المشار كله ما ر محي لغريد فلفناه المغرف فلفن فلفناه المغرف فلفن المالهان المؤمن المعالمان ال	الم العشروع: المشار على ماء القية المائين القية المائين الفراء ا
قل هذك ادعادت او مطالبات من قبل السكان المحليين يعادية الارض المقام عليها المشروع؟.     قل ميكون هناك ضرر على التشاطات و المصالح اليومية الأهلي يسبب الاصال الاشائية المشروع؟.     قل ميكون المائة المينية منتائز يسبب الاعمال الاشائية المشروع ؟.     من هناك اي بني تحيّة منتائز يسبب الاعمال الاشائية المشروع ؟.     ينم	<ol> <li>مل هذك ادعادات أو مطالبات من قبل المدكان المطبين يطاعية الارض المقام عليها المطروح!.</li> <li>ما مع كان مثال أمر على الشلطات و المصالح اليومية الأطلق بسبب الاصال الاشلقية المشروع!.</li> <li>ما مع كان معالم مشائل بسبب الاصال الاشاعية المطروع!.</li> <li>من طالب ابها بني نحية مشائل بسبب الاصال الاشاعية المطروع!.</li> <li>و نم حو كان و ملاحظات و نم حو كان و ملاحظات.</li> <li>ما مقال العامة الوطن الشخص أو تعدة المذكان بسبب اللمة المشروع في الارباد.</li> <li>ما ملاحظات و ملاحظات.</li> </ol>
<ul> <li>هل سوف بتأثر المجتمع العطي بصورة سليبة نتيجة المشاريع المقادة؟.</li> <li>نام كا كل ملاحظات</li> <li>با اعدال الشاء او اعادة تنهل المشروع ستؤثر بشكل سلي على المجتمع الإكثر ضطا والإكثر هشاشة (النساء والمعاقين) ؟.</li> <li>و نام كا كل ملائلات</li> </ul>	<ul> <li>د. ها سوق ینگر المجتمع المحلی بصورة سفیهٔ نتیجة المشاری المقامة؟.</li> <li>ن لم</li></ul>
<ul> <li>لا تتوقع ازالة معاصيل زراعية أو الشجار أو اية غطاه نباتي تعود علتيته لموافقين أو سكان مطبين بسبب الاعدال الاشائية المشروع؟.</li> <li>ما مجواد المشروع في الكتافة السكانية (سكانية قدوم موافقين من مناطق لغرى الى القرية بسبب المشاريع التي ستنفأ)؟</li> <li>ما مجواد المشارع على الكتافة السكانية (سكانية قدوم موافقين من مناطق لغرى الى القرية بسبب المشاريع التي ستنفأ)؟</li> <li>ما تعلق الن علية تشاه أو اعادة تاهل المشروع لها التر ايجنية من الناهية الاجتماعية بالنسبة السكان القلطنين في المشاطق القريبة من المشروع؟.</li> </ul>	المشروع).  الم حولات المشروع المستقلة
ونم وكلا وملاحظات شكراً على وقتكم	شكراً على والككم

العرد	l Miles	120	الاماماء	inite!	استسار
3/0	-0074	-	Carried 21	Character	WITT-

عَزِيزَ فِي المواطِّقُ .. عَزِيزَ يَ المواطنَ ..

تُهِرِيْ إِزَارَةَ النَّعَلِيدُ } المشرق الإيشاعي لتنبية } سج ميدني تغرض التشاور المجتمعي مع أيناه تقريبة هول الإجراءات المينية والاجتماعية الني سيتم انتفاها يطمعوص تنفيذ المشاريع في الغربة وسدى الرها على المجتمع المعلي والبيد السعيطة راجين الإجابة بصدق وحيادية عن الاستبيان النائي دون المدينة للكر الاسم أو وسينة الانصال.

		باد	de 11	٤: _ الم	أسم العشر و
			8		
الورث	الثرية		التنبة	المنح	الفناء
4/5			al o	SE	لبنس
				in al	لسر:
	4400	وطاف	<b>415</b> ty	ومرقف والقالد	الهلة

- ١. على هذك التعاول أو مطاقيات من فين السقان المحليين بعادية الأرض المقام عليها المشروع ال
  - وعلامتك
- ". هل ميكون هذك طرر على الشافلت و المصلح فيومية للأهلي يسب الاعمل الانشقية للمتروع!
  - distant May pil
  - عن هناك اي بني تحقية منتائر بسبب الاعمال الاشائية المشروع ال.
    - ونم توکلا وملاطلت
  - ار. هَلَ هَكَ اعْدُمُ تُوطِّنَ تُشْفُصَ أَوْ تُعَمُّ الشَّمَاصِ بِسِبِ الْأَسَةُ الْمَثْرُوحِ فِي القَوْيَةُ ﴿
    - وملطك
    - ه. هَا سَوْفَ يَكُلُّرُ الْمُصْحِ الْمَطْيِ يَسُورَةَ مَقْيَةً كَيْجِةً فَتَشَارِيعِ الْمَقْمَارُ
      - ولم ١٥٥
- ". هل اعمل فقداء أو اعادة تاهل المشروع متؤثر بشئل سلين على المجامع الاعثر ضعفا والاعثر هشاشة والسداء والمعطين) ".
  - 75 p p 10 ن ملاحقات
- ٧. ﴿ لَمْ تَوْلِعُ إِزَانًا مَعَلَمِينَ بِسِيمِ الأَعْلَى أَوَ فِيهُ خَطَّاهُ نَبِشَي تُودِ عَلَيْتِه فوظين أو مثان مخلين بسبب الأعمال الانشائية
  - Clade I
  - ٨. ﴿ هَا سَوْتُرُ الشَّرُوعَ فَي الثَّلْقَةُ السَّكَانِيَّ (الكَنْيَةُ قَدْمِ مِوَاعْتَيْنَ مَنْ مَلْقِلُ لفري أَنِي الدَّرِيةُ بسبب المشاويع التي ستقالُ؟"
- إلى الحكة إن عداية أنشاء أو اعدة تأجل المشروع لها الرا إيجابية من النحية الاجتماعية بالسبة السنان التلطين في السلمان الربية من المشروع).
  - ال مالحظات

شتراً على وفتتم ....

#### استبيان الصندرق الاجتماعي للتنمية لمحافظة أأساكم

عزيزتي المواطنة ... عزيزي المواطن ... تُعِرِي ﴿ وَزَارَةَ النَّفَطِيدُ ﴾ الصنوق الإجتماعي لتشيةً ﴾ مسح ميناني لغرض التشاور المجتمعي مع أبناء القرية حول الإجرادات البهابة والاجتماعية الني سيتم الخافها بخصوص تنفيذ المشاري في القرية ومدر الفرها على المجتمع المطمي والهيا المحيطة، راجين الإجابة بمنق وحيادية عن الاستبيان التالي دون العاجة لذكر الاسم أو وسيلة الاتصال .

		را ر	رمنه	انشا	: 8.3.	أسم المش
البوره	الثرية	أتنى	الثنوية	-	المل	القشاء الجنس:
	اله رية بيت	و طائب	ن کانپ		ر کر او مرطف	لسر: البينة:

- فل فقك ادعاءات أو مطالبات من قبل السكان المحابين بعادية الأرض الطام عليها المشروع؟.
  - ونم وكلا و ملاحظت.
- ٧. عل سيتون هلك ضرر على الشاطات و المصلح اليومية للأهلي بسبب الاعدال الانشائية المشروع؟.
  - סיים או وملطك
  - هل هذاك ان بني تحية ستثقر يسبب الاصال الاشائية للشروع ".
    - XSG ن مالحظات Mil
  - إلى هذاك اعادة توطين لشخص أو تحة اشخاص بسبب اللهة المشروع في القرية؟.
    - وملطات YSE 10 لم
    - هل موف بدأتر المجتمع المحلي بصورة سليبة نتيجة المشاريع الطابة؟.
      - 350 dilahan n
- ق. هل اعدال قشاء او اعادة تاهل المشروع ستوار بشكل سلمي على المجامع الانثر ضعفا والانتر هشلشة (فنساء والمعظين) ?.
- ٧. هل تكوفع ازقة محاصيل زراعية أو الشجار أو لية غطاء لبائي تعوه عائليته لمواطنين أو سكن محليين بسبب الاعمال الانشائية المشروعات
  - 75 g ونم distant
  - ٨. هل سيزائر المشروع في الكافة السكافية السكافية فتوج مواطنين من مناطق لخرى الى القوية بسبب المشاريع التي ستلف)؟
    - ومالطف
- هل تعتف إن عدثية أنشاء أو اعادة تأهيل المشروع لها النار إيجابية من الناهية الاجتماعية بالنمية الممكان القاطنين في المشاطق القريبة من المشروع".

ونع ٥٥٥ ومالطف

شكراً على وفتكم ....

## استبيان الصندوق الاجتماعي للتنمية تمحافظة المغره

عزيزش المواطئة .. عزيزي المواطن...

تُجري ( وزارة النطية ) المنطوق الإبتداعي لتنبية ) سمع ميدني لفرض التشاور المجتمعي مع أيناه القرية حول الإجرادات النيفية والإنتداعية التي سيتم التفاها بالصوص تفية المستريع في الاربة ومدن التربة على المجتمع المعلي والبينة المحيفة راجين الإبلة بعدق وحدادة عن الامتيان التني مون الحديثة لكر الامم أو وميلة الإصال

		16	كاريك	الما	:83:	أسم المش
التأمير	الأربة		النبة	1	<u>اک</u> ری ونو	الفضاء الوضن:
	وربايد	وطاف ا	وكلب	۱۵.		الصر: المهلة:
	0					

- ١. ﴿ فَلَ هَلَكَ ادْعَادِكَ أَوْ مَطَالِبَكَ مِنْ قَبْلِ السَمَانِ الْمَطْيِينَ بِعَالِمِيةٌ الأرض الملكم عليها المشروع؟.
  - ونم علا وملطك
- قل سيتون هذا ضرر على النشاطات و المصالح اليوسية الأهلي بسبب الاعمال الانشقية المشروع؟.
  - ونم ٥٧٠ وملامظات
  - ٣. عل هناك أي بفي تحقية منتقار بسب الاعمال الانشقية المشروع ال
    - סיא פאל ביאוני
  - قل هناك اعادة توطين للنفس او تحة الشخاص بسبب اللمة المشروع في القرية?.
    - ونم وكلا وملاطك
    - الله موف يتأثر المجتمع المحلي بصورة سلية فتيجة المشاريع المطامة؟
      - ونع وكلا وملاملة
- إ. إلى إصال الشاء أو أعلمة تلفيل المشروع سنؤل بلطل سني على المجامع الأهل ضعا والأهل عشاشة إنشساء والمعطون إن المراحد والمحاود إلى المراحد والمحاود المحاود المحا
- ". ها تقوق ازقة محاصل إراعية أو الشجار أو أية نظاء ثباني تعود عائديته لمواطنين أو سئان محلين بسبب الاعمال الانسانية المشروع.
  - ولم وكلا وملطك
- ﴿ ﴿ وَاللَّهُ السَّامِ السَّامَةِ (اسْتَقَيَّةُ وَاسْتَقَيَّةً وَالسَّمَانِ مِن السَّقالِ الذرق التي القرارة في استَقارًا الشَّارِيعِ في استَقارًا اللَّهِ اللَّهِ اللَّهُ اللَّهُ اللَّهِ اللَّهُ اللَّهِ اللَّهُ اللّلَهُ اللَّهُ الللَّا اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّا اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللّلْمُلْلِي اللَّهُ اللَّهُ اللَّهُ اللَّالَالَالَالْمُلْمُ اللَّهُ اللَّهُ اللَّالَةُ اللَّهُ اللَّلْمُ اللَّا اللَّالَةُ الللَّال
  - ے اس و کلا و ملطات
- بل تعلق أن علية قشاء أو أعادة تأميل المطروع لها قار أيجلية من الناحية الاجتماعية بالنسية السكان الفاعلين في المناطق القويبة من المشروع).
  - كالم وكلا وعلامظات
  - شكراً على وقكم ....

## استبهان الصندوق الاجتماعي لتشعية لمحافظة المعم

غزيزي المواشقة.. غزيزي المواطن... ثهر يوا وزارة التطبط المستوى الاجتماعي للثنية إسح مينتي تغرض الشئور المجتمعي مع أيناه القرية مون الإجراءات الجنية والاجتماعية التي سيتم القلاما بخصوص الفيذ المشاريع في القرية ومدي الترها على المجتمع المطبي والهيئة المجهلة راجبة الاجلة بعدق وجانية عن الاستيان الثاني نون العابة تكر الابعر أو وسيئة الانسال.

		stales	الم الشروع: اليَّمَا را
reful	هربة	النمية	عده الغربير النس المتعرب
		ه لان	العسر: ٢٥٠ ينة
	وريابها	وكانب وطائب	فها كورث وكالد

- فل فلك ادعاوات أو مطالبات من قبل السكان المطبين بعلتية الارض الطام عليها المشروع!
  - ونم كلا وملطك
- ٢. هل سيلون هنك ضرر على الشاطات و المصلح اليومية للأهالي يميي الاعمال الاشائية المشروع إ
  - ونم وكل وملطان
  - ٢. ﴿ فَيَ هَنْكُ أَنِ بِنِّي نَحْتُهُ مَنْتُكُّر بِسِيهِ الإصال الإنشائيةُ للشروع ال
    - ونم کلا وملامقات
  - فل هنك اعادة توطيق لشخص أو لحة اشخاص بسبب الأمة المشروع في القرية؟.
    - ونم وكلا وملطك
    - ه. على سوف يتأثر المجتمع المطي يصورة سليبة نتيجة المشاريع المقامة؟.
      - نم کرکل و ملاحظات
- هن اعدل الشاء او اعتدة تناهل المشروع ستؤثر بشمل سلين على المهدم الانظر ضطا والانظر هشاشة والنساء والمعطين) از.
  - ولم وكلا وملاحظات
- بن تاوقع ازالة محاصل زراعية أو شجار أو أية لحظاء ليش تعود علتينه لمواطنين أو سكان محليين بسبب الاعمال الانسائية المشروع.
  - الم 5 كلا ومالحقات
  - ٨. هل سيؤثر المشروع في الثاقة المشادية إمانانية قدره مواطنين من مناطق نفرى الوراقة بسبب المشاريع التي مشافح إ
    - ونم وكلا وملامظك
- في تعلق أن عشية أنشاء أو اعدة ناهن المشروع تها التر ايجابية من النامية الاجتماعية بالنسبة السندن القاطبين في المنطق القربية من المشروع!.

ونم وكل والأطان

شكراً على وقتكم \_\_\_

1641	سبة لمحافظة	الاجتماعي للت	الصندق	استبيان

عزيزتي المواطئة... عزيزي المواطن...

تُجري (وزارة النظيف الصلوق الاجتماعي تقتيم } مسح مدتي نفوض التنفيق المجتمع مع أبناء الذية حول المستود المستود ا الإجراءات البيئية والاجتماعية للس سيتم الفاقعا بتصويص تلفية المشاري في الآرية ومدن الأرها على المجتمع المطبي واتبياء المعملة، راجبة إجابة بعدق وحيثية عن الاستيان النفي نون العلهة لكر الاسم في وسيلة الإسمال.

80 <u>-200</u>	11	کطم (	تأهير	:	اسم الما
العلقول المعلقول	ش	الانمية الان	اس	J'A	
ەرىقىت	وخائب	ن كانب	رىنة وىتقام		العسر: النهلة

١. هل هذك ادعامات أو مطالبات من قبل المخلق المحليق بطنية الأرض المقلم عليها المشروع؟.

ونم وركلا وملاطات

- بن ميكون هذا ضرر على الشاطات و المسلح اليومية الأهلى يسب الاعدال الانشقية للمشروع?.
   ع لمر حر كلا عملات ملاحظات
  - ٢. هن هناك ان بني تحلية ستثلثر يسبب الاعدل الاشتابة للمشروع ال

ولعم ١١٥٥ وملاحظات

في هنك اعادة توطين تشخص أو لحدة الشخاص بسبب اللهة المشروع في القرية?.

ولم وكلا وملامظات

ق سوف بثائر المجتمع المحلي يصورة سلية نتيجة المشاريع المقامة؟.

ولم وكلا وملامظات

- قل اعمال النباء أو اعدّة تلفيل المشروع ستوثر بشكل ستين على المجامع الانفر ضعفا والانفر علمائية (النساء والمعطين) ؟.
   نام 26% عن ما كلمائية
- ب. فل تتوقع ازاناً محاصيل إراعية أو الشجار أو ابة علماه تبائي تعود عقديلته المواطنين أو مكان مطبين بسبب الاعمال الانشائية المشروع.
  - ونم كاكلا والألطال
  - ا. على سيؤقر الشاروع في فتائفة السكالية المنتقبة أهوم مواطنين من مناطق لخرق الى الغرية بسبب المشاريع التي سكافإ ا مناسب مناسب منافقات مناسبة المناسبة ا
- على تعلق أن عملية أشداء أو اعدة تابين استروع لها الله فيجابية من الفاعية الاجتماعية بالنسبة السنان الفاعلين في المشاطئ القربية من المشروع).

إنم وكلا ومالطات

شكراً على والتكم ....

استيبان الصندوق الاجتماعي للتنعية لمحاطلة إلى

عزيزتي المواطنة... عزيزي المواطن... ثيري( وزارة التخطيط/ الصندق الإيشاعي للقانية ) سبع ميداني لغرض التشاور المجتمعي مع لبناه القرية حول الإجراءات البيابة والاجتماعية التي سيتم الفقالها بخصوص تلفيذ المشاريع لمي القرية ومدن الترجما على المجتمع المطبي والبيلية المحيطة راجعن الاجتمة بمحق وحيادية عن الاستبيال التقي دون الحاجة للكر الاسم أو وسيئة الاكسال .

اسم المشروع: \_\_\_\_\_\_\_\_ الأصل كعان أبي ير القناء \_\_\_\_\_\_\_ الأبيا التعين الوية المويهوي التبين: ونكر ا \_\_\_\_\_ الأس المسر: المها المساهد الأبيان المناس والمناس والمناس والمناس الالمناس المناس والمناس والمناس المناس ال

فن هذى ادعاوات أو مطالبات من قبل السكان المطبين بعلدية الأرض الطام عليها المشروع؟.

ونعم وكلا وعلامظات

قال سباون هنك شرر على الشاطات و المصالح اليومية للأهالي بسبب الاصال الانشائية المشروع!".

وتم وكلا وملامقات

٣. هل هنك اي بني تعنية سنتاثر بسبب الاعدل الاشائية للمشروع ٢.

نام کالا وعلامقات

على هذك اعادة توطين تشخص أو تعدة اشخاص بسبب اللهة المشروع في القرية؟.

ونم وكلا وعلامقات

ه. هل سوف بتأثر المجتمع المطي بصورة مثية تتيجة المشاريع الطامة!.

ونم وكلا وملاحقة

- ٢. ها اعمال الشاء أو اعتدة تناهل المشروع سنوائر بشكل سنيي على المجامع الانظر ضطا والانظر هشاشة والتساء والمعطف) ٢.
   ٢. منام
   ٢. منام
- لا من تتوقع از الله معاصيل زواعية أو الشجر أو اية غطاء نيش تعود عنديته لمواطنين أو سكان معليين بسبب الاعمال الانشائية المشروع؟.

סוא אל מאמני

- قل سوزار المشروع في الكافة السكانية (المكانية قدوم مواطنين من مناطق لغرن الى الغرية يسبب المشاريع التي ستلقارا؟
  - نم ۵۵٪ وملاطات
- إ. هل تعقد أن عملية أنشاء أو اعادة ناهل المشروع لها الله إيجليية من النامية الاجتماعية بالنسبية السكان التلطين في المشابق القربية من المشروع.

ونم وكلا وملامثات

شكراً على وفتكم ....

#### استبيان الصنتوق الاجتماعي للتنمية لمحافظة المطر

عزيزتي المواطئة... عزيزي المواطن...

لَجِرِي ﴿ وَزَارَةَ النَّفَطِطُ } الْمُعْدُوقَ الْجَنَّمَاعِي لَكُتُبِةً ﴾ سبح سيدلي تغرض النشاور المجتمعي مع أيناه القرية حول الإجراءات البيانية والاجتداعية التي سيتم الفائما بخصوص تنفيذ المشاريع في القربية ومدن الأرها على المجتمع المطبي والبيلة المحيطة، راجين الإهابة بعدل وحياتية عن الاستبيان الذالي دون الحلجة لذكر الاسم أو وسيلة الاتصال.

من منتق والله من المساعد الله الله الله الله الله الله الله الل			30	ale?	تأهر	سم المشروع :
الله الله الله الله الله الله الله الله			- 10	V		
من مودع والله مرة المراكب منه	الوشاري	الثرية		التامية	à	لنباء المبر
سردم.ک سنة ينة: حريف ويتاعث وكليب ويلاب ورية بيت	9/ -		لأى	0	-	مان رانکو
ينة ومرشف ومتناعد وكلب وطاف ورية بيت					٠ سنة	KA in
		۵ ربة يت	ن طالب	ن کلب	ن مثالث	لهلة كرموظف

لارض المقام عليها المشروعال	مَنْ قُبِلُ السَّكَانُ المحليينُ يعالديةً	ا. هل هناك ادعاءات أو مطالبات
I Pan Br I Br A	2 1 800 0 0 0	

رر ملاحظات

1. هل سيكون هناك ضرر على النشاطات و المصالح اليومية للأهالي بسبب الاصال الانشائية المشروع؟.

٣. هل هنك او بني تحتبة ستتأثر يسبب الاعمل الانشائية للمشروع ٢.

إلى علك اعادة توطين لشخص أو لحدة اشخاص يسبب الأمة المشروع في القرية؟.

وتم وكلا

هل سوف بكائر المجتمع المطن بصورة سليبة تتيجة المشاريع المكتمة؟.

ن ملاحظات סיא סאל

 قل اعمال الشاء أو أعادة تاهل المشروع سنؤثر بشكل منبي على المجلموع الاكثر ضعا والاكثر هشاشة والنساء والمعلين) ?. 25.0 ن ملاحظات

٧. هل تتوقع ازالة معاصول زراعية أو الشجار أو لية غطاء نبائي تعود عقديته لمواطقين أو مدّان مطيين يسبب الاعدال الإنسائية

المشروعال □ مالحظات pai ()

قل سيوائر المشروع في الكافة السكالية إسكانية فوم مواطنين من مناطق الحرى الى الغرية بسبب المشاويع التي ستقارًا؟

Xo Pin

 قل تحق أن عملية أنشاء أو اعادة تأهن المشروع لها الثر البجلية من الناحية الاجتماعية بالنسبة للمكان القاطنين في المشاطق القربية من المشروع!.

> المالحظات 35.0

#### استبيان الصندوق الاجتماعي للتنمية لمحافظة الموه

عزيزتي المواطئة... عزيزي المواطن... لجري( وزارة التفطية / الصندوق الاجتماعي للتنمية ) مسح ميداني لغرض التشاور المجتمعي مع أبناه الفرية حول الإجراءات البيانية والاجتماعية التي سيتم اتفادتها بخصوص تلقيد المشاريع في الفرية ومدن النرها على المجتمع المطني والبينا المحيطة، راجين الإجابة بصدق وحيادية عن الاستبيان التالي دون الحاجة لذكر الاسم أو وسيلة الاتصال.

		, V c	عمل الف	É	. (83	اسم المش
بديكوب	: القرية	(	الناحية	0	ا لمدر دنکو	
	مورية بيت -	5	0 كانب		<u>۵</u> مرتك	العسر: المهلة:

هل هنك ادعاوات او مطالبات من قبل السكان المحليين بعادية الارض المقام عليها المشروع؟.

ن ملحظات

٢. هل سيكون هنك خرر على التشاطات و العصائح اليومية للأهالي يسبب الاعبال الانشائية للعشروع؟.

ن ملاحظات 350

٣. هل هذاك اي بني تحتية ستتأثر بسبب الاعمال الانشائية للمشروع ؟.

ر ملاحظات

هل هناك اعادة توطين لشخص او لحدة اشخاص يسبب الناسة المشروع في القرية؟.

رر ملاحظات

هل سوف يتأثر المجتمع المحلي بصورة سلبية نتيجة المشاريع المقامة؟.

ن نم ن کلا

 هل اعدال الشاء او اعادة تاهل المشروع ستؤثر بشكل سئين على المجاميع الانثر ضعفا والانثر هشاشة (النساء والمعافن) ٢. ونم وكلا ن ملاحظات

٧. هل تتوقع ازالة محاصيل زراعية او اشجار او اية غطاء نبائي تعود عانديته لمواطنين او سكان محايين يسبب الاعمال الاشدائية للمشروع؟.

17 ملاحظات

MID ٨. هل سيؤثر المشروع في الكثافة السكانية (امكانية فنوم مواطنين من مناطق الحرق الى القرية يسبب المشاريع التي ستنظع)؟

 هل تعقد ان عملية أنشاء او اعادة تاهيل المشروع لها التر ايجابية من الناهية الاجتماعية بالنمية للسكان القاطنين في المناطق القريبة من المشروع؟.

رر ملاحظات

شكراً على وقتكم ....

# ANNEX (3): IRAQI STANDARDS FOR AIR, NOISE, and Water

### **Ambient Air Quality Guidelines**

Pollutant	Iraqi Standards		WHO Standards	
Pollutant	Concentration	Average Time	Concentration	
CO 10 ppm		8 hours	N/A	
CO	35 ppm	1 hour	N/A	
	0.1 ppm	1 hour	500 μg/m³	
SO <sub>2</sub>	0.04 ppm	24 hours	20 μg/m³	
	0.018 ppm	1 year	N/A	
NO <sub>2</sub>	0.05 ppm	24 hours	200 μg/m³	
NO <sub>2</sub>	0.04 ppm	1 year	40 μg/m³	
Ozone (O <sub>3</sub> )	0.06 ppm	1 hour	100 μg/m³	
PM <sub>10</sub>	150 μg/m³	24 hours	50 μg/m³	
DM	65 μg/m³	24 hours	50 μg/m³	
FIVI2.5	PM <sub>2.5</sub> 15 μg/m <sup>3</sup>		15 μg/m³	
Total Suspended	350 μg/m³	24 hours	N/A	
Particles	150 μg/m³	1 year	N/A	
	10 t/Km²/month (Residential Zone)	30 days	N/A	
Falling Dust	20 t/Km²/month	30 days	N/A	
	(Industrial Zone)		·	
Hydrocarbons	0.24 ppm	3 hours	N/A	
	2 μg/m³	24 hours	N/A	
Pb	1.5 μg/m <sup>3</sup>	3 months	N/A	
	1 μg/m³		N/A	
Benzene	0.003 μg/m <sup>3</sup>	1 year	N/A	
Dioxin	0.6 pico g/m <sup>3</sup>	1 year	N/A	

## Noise:

Law no. 41 of the year 2015: Noise Protection and Control / Noise Limits for Different Working Zones

Туре	Allowable (dB)
Industrial	70
Commercial	70

## Water:

The table below shows the limits defined for discharges to both natural waters (water resources) and sewers (which generally have higher permissible discharge limits).

Pollutant	Limits for discharge to water resources	Limits for discharge to public sewers
Color	-	-
Temperature	Less than 35°C	45°C
Suspended solids	60	750
рН	6 – 9.5	6 – 9.5
Dissolved Oxygen (DO)	-	-
Biochemical Oxygen Demand (BOD)	Less than 40	1,000
Chemical Oxygen Demand (COD)	Less than 100	-
Cyanide (CN <sup>-</sup> )	0.05	0.5
Fluoride (F <sup>-</sup> )	5.0	10
Free Chlorine (Cl <sub>2</sub> )	Traces	100
Chloride (Cl <sup>-</sup> )	<ul> <li>A. If the ratio of the amount of water discharged to the amount of source water is 1000:1 or less, the chloride concentration of the discharge is permitted at 1% of the concentration of the natural source before discharge.</li> <li>B. If the ratio of the amount of water discharged to the amount of source water is more than 1000:1 the wastewater discharge must not exceed a chloride concentration of greater than 600 mg/L.</li> <li>C. If the concentration of chloride in the source water is less than 200 mg/L then the permitted discharge limit must be established on a case by case basis</li> <li>0.01 – 0.05</li> </ul>	600 5 – 10
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	<ul> <li>A. If the ratio of the amount of water discharged to the amount of source water is 1000:1 or less, the sulfate concentration of the discharge is permitted at 1% of the concentration of the natural source before discharge.</li> <li>B. If the ratio of the amount of water discharged to the amount of source water is more than 1000:1 the wastewater discharge must not exceed a sulfate concentration of greater than 400 mg/L.</li> <li>C. If the concentration of sulfate in the source water is less than 200 mg/L then the permitted discharge limit must be established on a case by case basis</li> </ul>	300

Pollutant	Limits for discharge to water resources	Limits for discharge to public sewers
Nitrate (NO₃⁻)	50	-
Phosphate (PO <sub>4</sub> <sup>3-</sup> )	3	-
Ammonium (NH <sub>4</sub> +)	-	-
DDT	Nil	-
Lead (Pb)	0.1	0.1
Arsenic (As)	0.05	0.05
Cupper (Cu)	0.2	-
Nickel (Ni)	0.2	0.1
Selenium (Se)	0.05	-
Mercury (Hg)	0.005	0.001
Cadmium	0.01	0.1
Zinc (Zn)	2.0	0.1
Chromium (Cr)	0.1	0.1
Aluminum (Al)	5.0	20
Barium (Ba)	4.0	0.1
Boron (B)	1.0	1.0
Cobalt (Co)	0.5	0.5
Iron (Fe)	2.0	15
Manganese (Mn)	0.5	-
Silver (Ag)	0.05	0.1
Total Hydrocarbons & Derivatives	Allows discharge of total hydrocarbons to water sources and A1 and A2 according to the concentrations and limitations set forth in the tables below; the concentration of hydrocarbons must be measured discharging to the water source. Hydrocarbons shall not be discharged to water sources A3 and A4. For rivers in continuous flow 10 mg/l according to the ratio of the amount of wastewater discharged to the amount of the water source should not be less than 1000:1.  For a river in a continuous flow 3 mg/L and in accordance with the ratio of the amount of the wastewater discharged to the amount of water source should not be 300:1 or less.	-
Sulfide (S <sup>2-</sup> )	Nil	3.0
Ammonia (NH₃)	Nil	10
Ammonia gas (free NH₃)	Nil	6.0
Sulfur dioxide SO <sub>2</sub>	Nil	7.0
Calcium Carbide CaC	Nil	Not allowed
Organic solvents	Nil	Not allowed
Benzene	Nil	0.5
Chlorobenzene	Nil	0.1
TNT	Nil	0.5
Bromine (Br <sub>2</sub> )	Nil	1-3

## Annex (4): Contractor's Responsibilities (Arabic) مسئوليات المقاول

يجب على مقاول الإنشاء الالتزام بالإجراءات التالية:

#### جودة الهواء

-الترطيب المنتظم للطرق بالماء لمنع الغبار

-التحكم في نواتج الحفر والتسوية للحد من إنتشار الغبار.

-أي مواد بناء قابلة للتطاير (أسمنت جاف وخلافه) يتم تخزبنها في أكياس محكمة الغلق وتغطيتها لمنع تولد الغبار.

-الاحتفاظ بالمازوت والزيوت والطلاء والمواد الكيميائية الأخرى المستخدمة في الموقع بأقل كميات ممكنة وتخزينها في حاويات محكمة الغلق للحد من الأبخرة ؛

- لا يتم تشغيل محركات المركبات والآلات الأخرى إلا عند الضرورة لتجنب الانبعاثات غير الضرورية ؟

-يتم الحفاظ على جميع المعدات والآلات والمركبات المستخدمة في الموقع في حالة عمل جيدة في جميع الأوقات لضمان الحد الأدنى من استهلاك الوقود وعوادم الدخان. ينطبق هذا على الحافلات المستخدمة لنقل العمال من وإلى الموقع.

-منع الحرق المكششوف للمخلفات.

-يتم تغطية الشاحنة الناقلة لمواد/مخلفات البناء أو المواد المتربة الأخرى وذلك بعد التأكد من الاحتفاظ بمسافة ٠.٣ متر تحت الحافة العلوية لجدران الشاحنة ، بالقماش المشمع للتحكم في الغبار ؛

-تغطية درم الحفر المخزن بصفة مؤقتة في الموقع بالمواد المناسبة ، مثل البولي إيثيلين أو ألواح النسيج لتجنب تشتت التربة. -تحديد سرعة قصوى للمركبات والمعدات التابعة للمشروع بحيث ألا تتجاوز السرعة القصوى داخل حدود الموقع عن ١٠-١٠ كم/ساعة.

-توفير خط ساخن لتلقى الشكاوي ٧/٢٤

#### الضوضاء

-تطبيق جدول زمني مناسب لتجنب أي أعمال قد تسبب ضوضاء واهتزازات خلال الفترة من ١٠ مساءا إلى ٦ صباحا.

-إقتصار تشغيل المعدات المستخدمة في أعمال البناء على أوقات محدودة خلال النهار حيث أنها ليست آمنة للعمل أثناء الليل. سيؤدي ذلك إلى تقليل اضطراب الضوضاء إلى حد كبير للمجتمعات القريبة من مواقع العمل ؛

-تقييد استخدام الآلات التي تصدر ضوضاء بالقرب من المستقبلات الحساسة ، واستخدام وسائل الحد من الضوضاء لآلات البناء ، إذا لزم الأمر ؛

-استخدام المركبات والمعدات المطابقة للمعايير الوطنية للضوضاء والاهتزاز ؟

-أثناء العمل ، يجب إغلاق أغطية المحرك للمولدات وضواغط الهواء وغيرها من المعدات الميكانيكية التي تعمل بالطاقة ، ووضع المعدات بعيدًا عن المناطق السكنية قدر الإمكان ؛ -يجب توفير أغطية للأذنين / معدات حماية السمع لجميع العمال

- لا يتم تشغيل محركات المركبات والآلات الأخرى إلا عند الضرورة للتحكم في الضوضاء الناتجة ؛

-تطبيق نظام الشكاوي لتلقى الشكاوي المتعلقة بالضوضاء.

#### إدارة المخلفات الصلبة والخطرة

#### التقليل من المخلفات:

-شراء المواد بالكمية الدقيقة المطلوبة ، لتقليل الاستخدامات المتبقية غير المستخدمة.

-تقليل تولد النفايات في الموقع.

-وضع خطة إدارة بسيطة للنفايات.

-يجب جمع النفايات العامة ونقلها إلى المكان المخصص لذلك من قبل البلدية.

-يجب جمع نفايات الطعام ، حيثما أمكن ، مع مراعاة النظافة الشخصية ، للتخلص منها خارج الموقع من خلال مقاولين مرخصين.

-يجب وضع حاويات لتجميع النفايات في كل موقع عمل.

-يجب جمع النفايات الكيميائية في براميل (أو حاويات محكومة مماثلة) ، معنونة بشكل مناسب ، وم ثم يتم إرجاعها إلى المورد أو نقلها بأمان إلى المكان المخصص من قبل البلدية. يحتوي مكب النفايات هذا على مكان مخصص لاستقبال النفايات الخطرة والطبية على حد سواء ، ويجب إجراء عمليات التخزين والنقل والتعامل مع جميع المواد الكيميائية وفقًا لجميع المتطلبات التشريعية ، من خلال المقاولين المرخصين وبالتنسيق مع البلدية.

-يجب تخزين جميع النفايات الخطرة بشكل ملائم في مناطق محدودة ويجب تحديدها بوضوح على أنها "خطرة".

-يجب أن يتم نقل النفايات الخطرة والتخلص منها من خلال مقاولين مرخصين وبالتنسيق الوثيق مع البلدية ذات الصلة ووفقًا للمتطلبات والتعليمات القانونية.

-يجب إدارة السوائل الخطرة ، مثل المذيبات وعوامل مقاومة الصدأ طبقاً لمتطلبات التشريعات ذات الصلة.

-يجب إعداد جرد للمواد الخطرة لفترة البناء.

-يجب توفير أصحيفة بيانات سلامة المواد (MSDS) للمواد الخطرة في الموقع أثناء البناء وإتاحتها وشرحها للعمال.

-يجب جمع نفايات المواد الهيدروكربونية ، بما في ذلك زيوت التشحيم ، للنقل الآمن خارج الموقع لإعادة استخدامها أو إعادة تدويرها أو نقلها أو التخلص منها في مكب معين من قبل البلدية.

## إعادة استخدام النفايات وإعادة التدوير

-كلما أمكن ، سيعيد المقاول استخدام المواد القابلة للتدوير وإعادة تدويرها.

-يتم إعادة تدوير المخلفات التالية: الورق المقوى ، والمعادن ، وخردة المعادن مثل علب المشروبات الغازية ، وزيت مستهلك ، والورق ، والبلاستيك ، والخرسانة النظيفة ، وكذلك الغطاء النباتي المنزوع .

#### حفظ السجلات

-سيتم الاحتفاظ بكافة سجلات إزالة النفايات والإبلاغ عنها كما هو مطلوب في تقرير الأداء البيئي الشهري ؟

-السجلات التي سيتم الاحتفاظ بها تشمل: إيصالات وفواتير من مقاول نقل النفايات ومنشأة استلام النفايات

-يتم الاحتفاظ بالسجلات السالفة الذكر في سجل النفايات ، الذي يسجل تواريخ الجمع ونوع النفايات والكميات وشركة نقل النفايات والوجهة وتوقيع الشخص المفوض

#### تخزين النفايات ومعالجتها

-سيتم تخزين النفايات في حاويات أو صناديق. لن يتم تخزينها مباشرة على أرض غير مبطنة ؟

-سيتم تخزين نفايات إعادة التدوير في مناطق أو حاويات منفصلة ، ولن يتم خلطها مع أنواع النفايات الأخرى ؟

-يجب تخزين جميع النفايات الخطرة بشكل ملائم في المناطق المحصورة وتحديدها بوضوح على أنها "خطرة"

-معالجة النفايات وإدارتها بشكل صحيح من خلال فصل النفايات الصلبة عن النفايات الخطرة وعدم مزجها في مكب النفايات ؛ -سيتم جدولة إزالة النفايات من الموقع ، بحيث يكون لديك دائمًا سلة للنفايات متاحة للإستخدام في الموقع ، وللتأكد من عدم الملئ الكامل للنفايات/الحاويات ؛

-أي مناطق تخزين نفايات مؤقتة (غير متضمنة في صناديق أو حاويات) سيتم تغطيتها و / أو إحاطتها بسياج شبكي لمنع هبوب الرياح منها إلي الموقع ؛ و

-يتم تخزين النفايات السائلة ، بما في ذلك نفايات الزيوت والمواد الكيميائية السائلة ، في براميل / حاويات محكمة الإغلاق على سطح خرساني.

## التخلص من النفايات

- يجب أن يتم نقل النفايات الخطرة والتخلص منها من خلال المقاولين المرخص لهم وبالتنسيق الوثيق مع البلدية المختصة بذلك. -يجب جمع النفايات العامة ونقلها إلى المكب المعين من قبل البلدية.

#### <u>جودة التربة</u>

-وضع علامات لتحديد مكان الحفر عن طريق سور ولاصقات وعلامات ارشادية.

-إتباع الأساليب السليمة للحد من الانسكابات/التسربات؛

-التداول والإدارة السليمة للمخلفات ومواد البناء والمواد الخطرة.

-يتم تخزين النفايات داخل صناديق أو حاويات، وليس على الأرض مباشرة؛

-عدم دفن و / أو حرق النفايات المنزلية في موقع المشروع.

-التخزين المؤقت للنفايات الصلبة عن طريق الاحتواء المناسب لتجنب انتشار النفايات والرائحة وتجنب الغبار؛ احتواء ثانوي لمنع التسرب.

-ضمان أن تكون حاويات المواد السائلة الخطرة / حاويات النفايات محكمة الإغلاق بشكل صحيح دائمًا ومؤمنة من الانقلاب / السقوط / التلف / أشعة الشمس المباشرة أثناء النقل والتخزين؛

-تخزين المواد الكيميائية، مثل الزبوت ومضادات التآكل بكميات قليلة بالموقع.

-تحفظ جميع أنواع الوقود والمواد الكيميائية السائلة في أوعية أو براميل أو خزانات محكمة الإغلاق وفوق سطح الارض.

-يجب إجراء الصيانة والإصلاح الروتيني للمعدات / المركبات المتنقلة في ورشة عمل.

-يتم الاحتفاظ بمجموعات التنظيف الخاصة بالانسكابات بالقرب من المناطق المستخدمة لتخزين الوقود أو المواد الكيميائية السائلة وسيتلقى الموظفون تدريباً على استخدام أدوات تنظيف الانسكابات؛

-تخزين الزيت ومواد الطلاء في مكان مناسب له قاعدة واقية، مثل بلاطة خرسانية، لمنع أي تغلغل في الأرض؛

-التأكد من وجود البراميل والحاويات المستخدمة في تخزين الوقود أو المواد الكيميائية السائلة (بما في ذلك الزيوت المستعملة والدهانات) في حالة جيدة وخالية من الصدأ أو التلف؛

-تنظيف موقع البناء من المخلفات الصلبة قبل إغلاقه.

-تخصيص مناطق معينة لتخزين مخلفات التربة ومخلفات البناء.

-يجب أن يتم ترميم التربة السطحية والمناطق المتضررة بعد انتهاء مرحلة البناء.

#### جودة المياه

- يجب تنفيذ أعمال الأرض (إزالة الغطاء النباتي، والحفر، والتسوية) خلال فترات الطقس الجاف.
  - يجب أن يتم تخزبن التربة على مسافة آمنة بعيداً عن المجاري المائية.
- يتم تخزين النفايات داخل صناديق أو حاويات ، وليس على الأرض مباشرة لمنع التسرب ؟
- عدم إلقاء / التخلص من النفايات الصلبة (غير الخطرة أو الخطرة) ومياه الصرف في المسطحات المائية أو بالقرب منها.
  - التنظيف الجيد لتقليل الانسكابات / التسريبات.
- الاستجابة السريعة للانسكابات العرضية للوقود ومواد التشحيم والمواد السامة أو الضارة الأخرى ، واستعادتها والتخلص منها بشكل مناسب (يجب على المقاول إعداد خطة استجابة للطوارئ).
  - عدم غسل أو صيانة المركبات والآلات بالقرب من المسطحات المائية.

#### المياه الحوفية:

-سيتم تخزبن النفايات داخل حاوبات أو حاوبات نفايات ، وليس مباشرة على الأرض لمنع التسرب ؛

-يجب إجراء الصيانة والإصلاح الروتينية للمعدات / المركبات المتنقلة في ورشة ؛

- إجراء الصيانة والتفتيش الدوريين على خزانات الصرف الصحي والسباكة ومرافق الصرف الصحي المرتبطة بها لضمان ظروف صحية جيدة

#### السلامة وإلصحة المهنية

يجب على المقاول إعداد خطة الصحة والسلامة المهنية وتحليل مخاطر العمل خلال مرحلة البناء. سيقوم المقاول أيضًا بتعيين شخص متخصص للإشراف على الخطة. فيما يلي بعض تدابير التخفيف الرئيسية التي يجب تضمينها في الخطة:

- يجب تدريب العمال على تحديد وتقييم مخاطر السقوط وأن يكونوا على دراية كاملة بكيفية التحكم في التعرض لمثل هذه المخاطر
  - يجب على العمال وموظفي الموقع دائمًا استخدام معدات الحماية الشخصية خاصة عند التعامل مع المواد السامة.
    - يجب على العمال الامتثال لقاعدة إدارة الصحة والسلامة المهنية التي تخص الاستخدام الأمن للسلالم.

- لمنع مخاطر معدات البناء الثقيلة ، يجب على العمال اتباع إرشادات سلامة البناء المصممة للقضاء على التعرض لمثل هذه الإصابات والحوادث
  - يجب أن تكون معدات الطوارئ (مواد تنظيف الانسكاب ، طفايات الحريق ، إلخ ..) متوفرة دائمًا في الموقع.
    - يجب توفير الفحوصات الصحية الأولية والدورية للعمال.
    - يجب أن تتضمن الخطة تدابير الاستجابة لفيروس كورونا المستجد كما هو موضح في الملحق ٤.
- يجب تزويد العمال بتأمين صحي (يغطي تقديم الدعم الطبي في حالة الإصابة بالأمراض) وتأمين السلامة (الذي يغطى العمال في حالة الحوادث

#### السلامة المجتمعية

- يجب وضع خطط أمن وأمان كافية لمنع وصول الجمهور إلى مواقع العمل والمواد الخطرة والمخلفات
  - يجب على المقاول الالتزام بخطة إدارة المخلفات لتجنب أي عوائق أو مخاطر على السلامة.
    - يجب توفير آلية للتظلمات لضمان التواصل الفعال فيما يتعلق بمخاوف المجتمع.

#### السلامة المرورية

- يجب تثبيت لافتات أمان لإخطار المجتمع بأن مركبات البناء ستستخدم الطرق المؤدية إلى محطة المياه
  - يجب على المقاول التأكد من أن النقل المرتبط بالبناء يتوافق مع حدود السرعة

#### عمالة الأطفال

- يجب كتابة شروط صارمة في عقد المقاول لحظر تعبين الأطفال دون سن ١٨ عامًا
  - يجب أن يحتفظ المقاول بنسخة من هويات جميع العاملين

#### التراث الثقافي

- اتباع إجراء العثور على الأثار (مرفق رقم (٣))

## تدفق العمالة و العنف القائم على النوع الإجتماعي

- إعداد مدونة سلوك مناسبة تنص على التزام العمال تجاه فئات المجتمع والسلوكيات التي يجب تجنبها
  - يجب تدريب جميع العاملين على قواعد السلوك.
  - يجب توقيع قواعد السلوك من قبل المقاول من الباطن
- تعريف بمدونة قواعد السلوك يتم إجراؤه كل أسبوعين للعاملين الدائمين والوافدين الجدد قبل بدء العمل.
  - تطبيق المتطلبات الكاملة المتعلقة بتشغيل آلية التظلم بما في ذلك القنوات المجهولة
- زيادة وعي السكان المحليين حول التزام المشروع تجاه المجتمعات والتدابير المتخذة لذلك من خلال المشاورات العامة ومناقشات على شكل مجاميع.
  - تطبيق العقوبات على العاملين المخالفين لقواعد السلوك

## البنية التحتية والمرافق

- في حالة تلف أحد المرافق الموجودة تحت الأرض وأنابيب البنية التحتية ، يجب اتباع الإجراءات القياسية ،
   بالإضافة إلى إعداد تقرير توثيقي للحادث.
  - في حالة قطع المياه، يجب إعلام المجتمع المحلي قبل القطع
    - تنفبذ آلبة للشكاوي

## إدارة الخدمات الموقعية

- إقامة المخيم داخل أراضي محطة المياه

- ضمان إقامة كرفانات البناء الملائمة ومرافق الصرف الصحي للبناء، أي إنشاء خزان لتخزين المياه العادمة المنزلية الناتجة عن المخيم.
  - اتباع أفضل ممارسات إدارة المخلفات وتدابير التخفيف الواردة في خطة الإدارة البيئية والاجتماعية.
    - مراقبة ظروف العمل عن كثب ، وفرض تدابير للتحكم في انتقال الأمراض المعدية.
  - الحفاظ على آلية فعالة للتظلم (تمت مناقشتها في فصل مشاركة أصحاب المصلحة). يجب أن تكون آلية معالجة المظالم هذه حساسة للنوع الاجتماعي وتضمن السرية
- انخراط محدد مع النساء والفتيات يتضمن التوعية بالعنف القائم على النوع الاجتماعي والوصول إلى قنوات مجهولة للإبلاغ عن الحالات.

# العقوبات وإلغاء التعاقد

إذا فشل المقاول في الوفاء بأي من الالتزامات المذكورة أعلاه بموجب العقد ، فسيتم تطبيق العقوبات التالية:

التفاصيل	الإجراء	المراحل
يجب أن يتلقى المقاول بيان تحذير يتضمن الإجراء التصحيحي المقترح.	التحذير	المرحلة الأولي
يجب أن تبدأ جميع الإجراءات التصحيحية في مدة لا تزيد عن أسبوعين.		
يجب على المقاول اتخاذ الإجراء التصحيحي بشكل سريع.		
في حالة عدم التزام المقاول بخطة الإدارة البيئية والاجتماعية ، لا يحق للمقاول الحصول على الدفعات النقدية بموجب شروط هذا العقد.	الدفعات النقدية	المرحلة الثانية
لن يتم صرف المدفوعات حتى يتم وضع خطة عمل واضحة ويبدأ المقاول في تنفيذ الإجراءات المتفق عليها.		
لن يتم إنهاء العقد بسبب عدم الوفاء بالتزامات خطة الإدارة البيئية والاجتماعية. ومع ذلك ، سيخصم مالك المشروع تكلفة تنفيذ خطة الإدارة البيئية والاجتماعية من العقد. وفي هذه الحالة يجب إرفاق دليل واضح على فشل المقاول في تنفيذ خطة الإدارة البيئية والاجتماعية	الغاء التعاقد	المرحلة الثالثة

## Annex (5): Cultural Heritage Chance Find Procedure

Cultural property includes monuments, structures, works of art, or sites of significance points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. During the project induction meeting, all contractors will be made aware of the presence of an on-site archaeologist who will monitor earthmoving and excavation activities.

The initial phase of the proposed emergency rehabilitation operations pose limited risks in damaging cultural property since subprojects will largely consist of small investments in community infrastructure and income generating activities, rehabilitation of existing structures, and minor public works. Further, it is understood by the Consultant that any activity that would adversely impact cultural property would make a subproject ineligible. Nevertheless, the Consultant will check that the following procedures for identification, protection from theft, and treatment of discovered artifacts should be followed in the event that archaeological material is discovered:

- Stop all construction activities in the area of the chance find.
- Delineate the discovered site or area.
- Record the find location, and all remains are to be left in place.
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Culture immediately (within 24 hours or less);
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Culture (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values.
- Decisions on how to handle the findings shall be taken by the responsible authorities and the Ministry of Culture. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage.
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and
- Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Culture concerning safeguard of the heritage.
- The Consultant will ensure that during project supervision, the Site engineer will monitor the above regulations relating to the treatment of any chance find encountered and observed. Relevant findings will be recorded in World Bank Project Supervision Reports (PSRs), and Implementation Completion Reports (ICRs) will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.