PUBLIC WORKS PROJECT
مشـــروع الأشـغال العامة

Sustainable Fishery Development in Red Sea and Gulf of Aden (SFISH)

(P178143)

Environmental and Social Management Plan (ESMP) No. 1

Rehabilitation and Development of Al-Qurn Fish Landing Site, Ad-Dis Al-Sharqiah District, Hadhramout Governorate, Yemen

Project No. 07-9-16077

30 January 2023

CONTENTS

1. Project Summary....1

.2 Project Description....3

2.1. Scope of Work....4

2.2. Existing situation of Al-Qurn landing site 5

2.3. Location 8

3. Environmental and Social Baseline Condition....9

3.1. Introduction 9

3.2. Rainfall, Climate, and Weather 11

3.3. Cultural Heritage 12

3.4. Air Quality and Noise 12

3.5. Flora 12

3.6. Fauna 13

3.7. Critical Habitats and Protected Areas 14

3.8. Targeted Beneficiaries 15

4. Environmental and Social Impact Analysis....15

4.1. Applicability 15

4.2. Eligibility 15

4.3. Environmental and Social Screening 16

4.4. Potential Environmental Impacts 16

4.4.1. Potential Environmental Impacts during Construction Phase....16

4.4.1.1. Noise Pollution 16

4.4.1.2. Air Pollution 16

4.4.1.3. Solid and Liquid Waste Generation 16

4.4.1.4. Soil and sea water contamination from waste and liquid waste....16

4.4.1.5. Risks on coastal and marine habitats and related biodiversity....17

4.4.1.6. Risks of quarrying at ecologically important areas 17

4.4.1.7. Floods during implementation 17

4.4.2. Potential Impacts during Operational Phase 17

4.4.2.1. Liquid discharge to sea water reducing water quality and disturbing biodiversity 17

4.4.2.2. Solid Waste Disposal 17

4.4.2.3. Overfishing and targeting wrong species 18

4.4.2.4. Air Emissions from organic waste and power generations 18

4.4.2.5. Lack of maintenance 18

4.4.2.6. High energy usage during operational phase 18

4.5. Potential Socio-economic Impacts 19

4.5.1. Socio-economic Impacts during Construction Phase 19

4.5.1.1. Positive Impacts 19

4.5.1.2. Negative Impacts 19
4.5.1.3. Accidents and other Occupational Health and Safety Issues 19
4.5.1.4. Increased Traffic 20
4.5.2. Socio-economic Impacts during Operational Phase 20
4.5.3. Job Opportunities 20
4.5.4. Occupational Health and Safety Issues 20
4.5.5. Economic impact on fisheries 21
4.5.6. Land Acquisition 21
4.5.7. Resources and services' access restriction 21
4.5.8. Gender and Social Related Issues 21
4.5.8.1. Child Labour 22
4.5.8.2. Gender Equity 22
4.5.8.3. Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) 22
4.5.9. Conflict Sensitivity and Do No Harm 23
5. Environmental and Social Impact Analysis Plan and Mitigation Measures 23
5.1. Environmental and Social Risk management Plan: 24
5.2. The occupational health and safety risk management plan 37
6. Environmental, Social, and OHS Clauses and Liabilities for Contractors 61
6.1. Conditions for the Eligible Contractors 61
6.2. Environmental and Social Clauses for Contractors 61
6.3. Environmental and Social Liabilities for Contractors 64
6.4. Public Works Project Liabilities 65
7. Environmental and Social Monitoring Plan 66
8. Stakeholder Engagement Plan and Public Consultation 75
8.1. Public Consultation 75
8.2. Consultation and feedback Results 76
8.3. Sustainability of Subproject and Community Ownership 77
8.4. Stakeholders Engagement Plan 77
9. Capacity Building 78
10. Grievance Mechanism 78
11. Annex 1: Typical Drawings: 80
11. Annex 2: Environmental and Social Screening for Eligibility Environmental and Social Screening Checklist for the Proposed Subproject. 90
12. Annex 3 : Public Consultation Reports (Social agreements & consultation attendance sheets) – Arabic 94
13. Annex 4: Complaints Handling Mechanism Information/Brochures 95

LIST OF FIGURES

Figure 1: Solid waste and wastewater pollution observed in the landing site 7
Figure 2: Deteriorated auction yard..... 7
Figure3 : Eroded rocky shore because of strong waves..... 7
Figure 4: Damaged petrol pump for refueling fishing boats...... 7
Figure5 : The landing site power generator..... 7
Figure6 : Yemen division map shows the location of Hadhramout Governorate and its districts..... 9
Figure7 : Location of the landing site..... 9
Figure 8: Beach characteristics in the proposed landing site 11
Figure 9: Washed up dead algae scattered on the landing site beach 13
Figure 10: Green macroalgae Halimeda sp. found submerged in front of the landing site. 13
Figure 11 : Brown macroalgae Padina sp. found submerged in front of the landing site 13
Figure12 : Black cucumber Holothuria atra were found in front of the landing site..... 13
Figure13 : Gulls birds observed during the field visit..... 14
Figure14 Location of the landing site with respect to Sharma-Jathmune turtle nesting grounds 14
Figure 15: Show the typical drawings for Fish Landing Site..... 89
Figure 16: PWP Complain Handling Mechanism..... 95
Figure 17: PWP Complain Handling Mechanism..... 95

LIST OF Tables

Table 1: General Information about the Proposed Subproject 2
Table 2: Sub-project data..... 6
Table 3: The landing site coordinates 8
Table 4: The amount of catch in Al-Qarn landing site..... 10
Table 5 below shows the total number of beneficiaries segregated by gender:..... 15
Table 6: Environmental and Social Risk managment Plan table 24
Table 7: Occupational and Health Safety Plan 37
Table 8: Environmental and Social Monitoring Plan..... 66
Table 9: Public Consultation details 76

ABBREVIATIONS

CHM	Complaint Handling Mechanism
EPA	Environmental Protection Authority
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSs	Environmental and Social Standards
GAF	General Authority for Fisheries
GBV	Gender-Based Violence
GNI	Gross National Income
HQ	Head Quarter
ICE	ICE factory
ID	Identification Card
IPs	Interested Parties, UNICEF, other Clusters such as WASH
OHS	Occupational Health and Safety
PWP	Public Works Project
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SFD	Social Fund for Development
UNDP	United Nations Development Program
UNICEF	The United Nations International Children's Emergency Fund
UNOPS	The United Nations Office for Project Services
WASH	Water, Sanitation, and Hygiene
WB	The World Bank
WHO	World Health Organization

1. Project Summary

The ongoing conflict has weakened Yemen's institutions, resulting in one of the world's worst humanitarian crises with approximately 20 million people in need of humanitarian assistance and 4 million displaced (nearly 80 per cent of whom are women and children). An estimated 40 percent of households have lost their primary income source, contributing to an increase in poverty to 75 per cent of the population in 2019.

Furthermore, food insecurity which is a chronic problem in Yemen, has increased to unprecedented levels. In the first half of 2021, the Integrated Phase Classification (IPC) indicates that a total of 16.1 million people (54 per cent of the country's population) were estimated to be acutely food insecure (IPC Phase 3 and above for the population in the coastal zone), despite the presence of the ongoing humanitarian food assistance.

In response to this deepening crisis, UNDP Yemen has partnered with the World Bank's International Development Association (IDA), the Public Work Project (PWP), and Small and Micro Enterprise Promotion Service (SMEPS) to implement the new project Sustainable Fishery Development in Red Sea and Gulf of Aden (SFISH). SFISH aims to improve economic opportunities, increase food security and provide effective management of fishery production in Yemen.

The project focuses on reviving the fishery sector in select areas while ensuring its effective management for its resilience; contributing to food and nutritional security by increasing food availability, access, and utilization in the project areas; creating sustainable income and livelihood opportunities for the Yemeni households engaged in the fishery value chain. It will work with local partners, fishery cooperatives and associations, fishery communities, and the private sector to undertake activities to protect the fish and their ecosystems and to improve the fishery governance in select coastal governorates (critical in addressing overexploitation, equal access to resources and benefit-sharing).

The project incorporates complementary activities in food and nutritional security and economic opportunities in the coastal governorates that improve income generation; contribute to improved access to food; and restoring and improving fishery production addressing post-harvest losses and quality of fish - all ultimately increasing food availability and nutrition. Furthermore, involvement of fishing households will be scalable and can be expanded to other coastal governorates. This is particularly important for non-fishing seasons and for those adult family members not involved in restoring and developing small-scale infrastructure through cash-for-work; provision of access to financing (as grants); fishery inputs; value chain development; and facilitating access to markets.

Developing key fishery infrastructure - particularly the cold chain to address post-harvest losses and maintaining quality for consumption and trade and related fishery value chain infrastructure - will be key activities under the project, as detailed in Section 3.1. Scope of Work. It will also support a national-level country-specific fishery sector platform to coordinate various investments coming into Yemen, bring the voice of the local experts, and to collaborate with national institutions. The project will also integrate nutrition education into capacity-development initiatives so that women and men, especially from the fishery households, understand the importance of also consuming some of the fish they sell as part of a healthy diet for their families.

Use of cold chain will increase the energy consumption and thus the cost of harvest for the farmers. Use of energy efficient cold chain technologies and renewable energy is important to subside the energy cost. During the project implementation phase, the project team will

provide capacity building trainings to the community committee, local authorities and the Fishery Associations about the importance of regular maintenance of the cold chain factory and occasional energy audit during the operation phase. The institutions will use the knowledge to ensure the energy efficient use of the cold chain factory during their life time.
Introduction

The targeted area under this Environmental and Social Management Plan (ESMP) is located in Al-Qurn area, Ad-Dis Al-Sharqiah (Eastern Dis) District, Hadhramout Governorate. The subproject aims at the development of the existing fish landing site by taking into consideration the social and environmental standards that are adapted by the WB' Environmental and Social Management Framework (ESMF). The subproject will be implemented by PWP, which is adapted to environmental and climatic conditions, as well as taking into consideration health services and facilities to coastal communities including women, in addition to improving solid waste management systems. The total cost of the project is estimated to be 870,000 USD. Table 1 provides some general information about the proposed sub project.

The preliminary environmental and social screening of the landing site (Annex 1 Environmental and Social Screening Checklist) has been carried out by Public Works Project (PWP[1]) during the field visit to the site area. Based on the anticipated environmental and social risks and impacts of the current subproject, and the classification of the projects that are funded by the WB, the current project is categorized under the ESMP as a moderate environment, social, and occupation health and safety Risk Project. During the field visit, the technical, Social, and environmental teams have collected important information from the concerned stakeholders in the area, including fishermen community and local authorities (local council, Director of Fish Landing Projects, *etc.*). The filed visit also included an inspection of the already existing condition of the landing site constructed buildings that require rehabilitation for its use .

The major anticipated adverse impacts during the rehabilitation and construction activities of the landing site are considered to be reversible and temporary. Pollution that could by generated by the production of solid wastes during construction and rehabilitation, as well as generation of dust, chemicals and noise could be avoided by following a proper environmental management accordingly with the WB's Environmental and Social Safeguards (ESSs).

The social impacts from and during the intervention are also reversible and temporary. Child labour, SEA/SH, social exclusion of communities including vulnerable groups (Women, persons with disabilities and the youth) and conflict sensitivity, which could be avoided by following a proper social management in line with the WB's Environmental and Social Standards (ESSs) and relevant national laws.

Table 1: General Information about the Proposed Subproject

Name of the Subproject:	Rehabilitation and Development of Al-Qurn Fish Landing Site
Subprojects ID:	07-9-16077
Subprojects Locations	Al-Qurn area, *Ad-Dis Al-Sharqiah* District, Hadhramout Governorate
Sector and Type of Subproject:	Fish Sector

[1] PWP: is UNDP's implementing partner, who responsible to prepare and implement SFISH subprojects.

Subproject Implementer:	Public Works Project (PWP)
Estimated Cost of Subproject:	$ 870,000
Implementation period	12 months
Field Visit (Yes/No; Include Date):	Yes, February 2023 (another is not envisioned)
Was Consultation Carried out? (Yes/No):	Yes, Refer to Public Consultation Section
Proposed Class of Subproject (Low to High):	Moderate

2. Project Description

The proposed subproject will involve rehabilitation and developing Al-Qurn landing site, Hadhramout Governorate. The aim of this project is to improve effective fishery production and value chain in Yemen. Specifically, the subproject will improve the existing facilities to help fishermen and fishing communities develop their fishing processes and create new opportunities for beneficiaries which will provide them additional income. The subproject will enhance the living environment and conditions for targeted communities. Furthermore, the subproject will provide temporary employment opportunities for skilled and unskilled workers from local communities during implementation. Long term results will also include generating new fishermen, reducing the negative economic impacts.

The total number of direct and indirect beneficiaries that will benefit from this subproject are **47,000** persons of which 21,150 are men and 25,850 are women. The direct beneficiaries are the local fishermen using the landing site whereas the indirect beneficiaries include the local communities. The subproject will be implemented through a contracting modality and the implementation period varies twelve months. Initial technical studies indicates that the total estimated cost of sub-project is **$** 870,000.

The contractor will be responsible to protect its workers and communities during implementation and apply the E&S mitigation measures and provide the required training, tools, and necessary PPEs for workers. Contractors will hire the workforce from the targeted areas and when not available, the contractor shall hire workers from the surrounding areas. Given the fact that some parts of the activities require skilled labor, thus these tasks will be undertaken by appropriately skilled workers from the targeted areas and when not available, the contractors will hire skilled laborers from nearby areas[2]. In coordination with PWP and community committee (which is an elected committee which participate in the decision-making, need assessment, and public consultation. Also, they will participate in the monitoring of implementation), the contractor will rehabilitate the existing buildings such as guard's rooms and toilets to be used for workers accommodation, as well as the contractor will bring tents to cover minimum space 4m^2 per worker according to International Finance Corporation (IFC) and the European Bank for Reconstruction and Development (EBRD) guidance note. Contractor will provide worker's accommodation with beds, blankets, and suitable kitchen facilities.

[2] The project will require accommodation since it expects that workers will come from the surrounding areas and need accommodation. In coordination, with PWP and community committee, the contractor will provide a suitable accommodation for them to settle in during the implementation period. The contractor also will bring tents and toilets to be used for workers accommodation in terms of minimum space 4m2 per worker.

The PWP will ensure that the proposed subproject incorporates the proper environmental and social risk management principles and practices, and thus complies with the Environmental and Social Framework (ESF) of the World Bank, as well as with the applicable environmental policies and legal requirements of the Government of Yemen.

2.1. Scope of Work[3]

Al-Qurn landing center was established in 1998. The proposed project will involve demolishing deteriorated buildings and reconstructing it. This will include surveying works, removal of old and deteriorated auction halls and gas station, levelling of the landing site yard in addition to excavation and filling works. The project will also include construction of new concrete buildings[4], including auction hall, administration offices and storage area, ice factory and refrigerator rooms, gas station, guard rooms, health care unit, public toilets, and electricity generator room. Moreover, implement sanitary works, and rehabilitate the existing water supply network[5].

The project activities will include but not limited to the following:

- Demolishing deteriorated old buildings including collecting and transporting construction waste to areas appointed by local authorities[6].
- Site leveling works for an area of about 1,100 m^2.
- Unscrew, transport and reinstalling of the ICE factory.
- Excavation works for an area of 280 m^2 and depth 2,0 m.
- Backfilling works in layers using the extracted soil or proper materials in all part of works.
- Supply the construction materials such as stones[7], sand, and gravel.
- Implement masonry works under the ground beams.
- Construction of stone buildings for fronts.
- Constructing protection walls with cement mortar and stones which will be located on east inland side to protect landing site from rainwater runoff.

- Plain concrete works including:
  - Under the foundation for an area of about 367 m^2.
  - For the floors of the buildings, about 688 m^2.
  - For the floors of the water tank and gas station, about 194 m^2.

- Reinforced concrete works including:
  - For foundations which have a total size of about 185 m^3.
  - For ground beams, slabs, columns, stairs and ramps about 340 m^3.
  - For the drainage channel in the auction hall about 10 m^3, that will drain liquid wastes to the septic tank to be treated and then will be drain to drain field see drawings in Figure 15.
  - For the water tank, about 45 m^3.
  - For pavement auction yard and main entrance, about 18 m^3.
  - Implement concrete block partitions in all buildings.

[3] For Typical Drawings please see (Annex 1).

[4] In case of building landing sites, Yemeni Law No. 2 for the year 2006 encouraging the government to support fishermen communities by developing their villages as well as establishing the infrastructure including landing sites, taking into consideration the protection of coastal and marine environment.

[5] List of equipment and tools are wheel loader, dump truck, concrete mixing machine, compactor, vibrators, wheelbarrow, screeds, shovel, and hammers.

[6] Construction waste will be collected and transported and disposed to the authorized location in coordination with the local authorities.

[7] Quarries available in the area to be used for extraction of stones. , The standard stones dimensions are 25x25x25 cm. List of equipment and tools to be used i: excavator, dump truck, stone cuter, concrete mixing machine, vibrators, wheelbarrow, screeds, shovel, and hammers, masonry tools, safety equipment. List of materials such as stones, cement, sand, and water.

- Cement plastering works for interior, and external walls and roofs, the high of buildings various between 3,30 m to 7,60 m.
- Interior and exterior paint works, including the base and final layers
- Tile works for the building, stairs and walls.
- Installation of durable, and Corrosion Resistance steel doors, good-quality wood doors, and aluminum doors.
- Installation of high-quality aluminum windows.

- All sanitary works include:
  - Remove the old, deteriorated water supply pipes, and reinstalling new with Polyethylene pipes in 4-inch diameter, in depth 1,0 m, width 0,70m, and length 8.0 km.
  - Supply and Installing toilets, disabled toilet accessories.
  - Supply and Installations sanitary pipes of 6 and 4 inches in diameter.
  - Supply and Installations rainwater drainage pipes, 4 inches in diameter.
  - Valves chamber rooms (100X100) cm.
  - Construction a septic tank with dimensions 16.0m x 2.5 m with a depth of 2. 0m.
  - Supply and Installation Fuel tank with capacity 25,000 Liters with all protection systems according to USA (UL 58) standards to prevent leaks and contamination, it will be stored on concrete base.
  - Gravel backfills for roads and parking vehicles.
  - Supply and installation fire extinguishers.
  - Supply and Implementation of insulation layer of roofs and floors (Flow-applied epoxy resin floor layer).
  - Supply and Implementation of insulation layer of roofs (Acrylic).

- All electrical works.
  - Electrical wiring works in roofs, floors, and walls.
  - Supply and installation the electrical equipment and accessories of the project.
  - Supply and installation the main electrical distribution board.
  - Supply and installation lighting fixtures.
  - Supply and installation electrical roof mounted fans.
  - Supply and installation electric socket.
  - Installation of an electrical bell and internet network
  - Supply and installation ventilation exhaust fans.
  - Supply and installation roadway luminaires.
  - Works for connecting the electricity to the buildings.
  - Supply and installation earthing system.
  - The main electrical distribution board.
  - Reinstalling the existing electricity generators on concrete base.
  - Planting native non-invasive trees around the sub-project area.
  - Collecting and transporting the construction waste residues to areas appointed by local authorities.

2.2. Existing situation of Al-Qurn landing site

Al-Qurn landing site has been constructed in the Year 1998, and it is one of the most important sites in the Governorate of Hadhramout. Due toharsh climatic conditions and occasional cyclones, some buildings of the landing site have deteriorated and have to be reconstructed and rehabilitated. Rocky shore in front of the landing site has been subjected to strong wave action, which resulted in its erosion (Figure 3).

According to the social survey that was conducted by PWP social mobilized teams, 60% of the people in the targeted community are unemployed from those who are between 15- and 65 years old and 20% is the percentage of disabled people from which 50% can do light works like selling and writing bills. Because of the high cost of fishing and its required equipment the migration reached 20% and the immigration 40%. The main income is the fishing in the targeted area and the trade in the fish products. The women main daily works focus on fetching water, taking care of the children, house duties, animals' husbandry, and making some handicrafts.

Despite the fragile situation in the country and its entities in addition to the cyclones in the last years, Al-Qarn Landing site is still operating and giving minimum services for the beneficiaries. On the other hand, some facilities went out of service and others destroyed through the cyclones. According to the beneficiaries, the fishing boats mainly suffer from the difficulty of reaching to the shore in the heavy tide seasons and the unsuitable shore for landing. The fish prices usually became high because of insufficient selling yard for the fishermen. In addition to the regular interruptions of electricity supplies from the electricity network because of improper network, there is also the nonexistence of the drinking water in the site.The targeted area does not have access to the fundamental basic social services. The education situation is very week where no schools or learning centers. More than that no medical centers which reflect the suffering the locals live if they need any care. No drinking water sources near to them and no sanitation infrastructure. Al-Dais market is the nearest market to this landing site. The following table shows some of the sub-project data.

Table 2: Sub-project data

Project ID	Subproject Name	Governorate	Estimated Cost US$	Average estimated cost for ESMP implementation US$[8]	Estimated/ planned No. of Labour[9]
07-9-16077	Rehabilitation and Development of Al-Qurn Fish Landing Site	Hadhramout	870,000	42,000	327

During the field visit to the proposed landing site, it was noticed that activities of fishermen in the landing site have left the area polluted with several substances. Liquid waste produced from activities that are conducted in the landing site. Washing water of the auction yard, in addition to washing and cleaning of fish lead to produce wastewater contaminated with detergents, organic matter, blood, in addition to fish remaining. At the end, polluted wastewater finds its way to the marine environment, and cause marine ecosystem deterioration. Anyway, the General Authority for Fisheries (GAF) will be responsible of management landing site. Plastic items and remaining of fishing gears and

[8] Some of estimated costs of ESMPs implementation will be part of the subproject-contracted cost such as PPEs, first aid box, and providing latrines in sites; other cost, staffing, transportation, administration, and consultations will be covered from the safeguarding budget that is mentioned in the ESMP.

[9] - Number of workers is calculated as follows: 10% of estimated project cost of all projects /(daily wages for each worker(11$)/no of working days per month (22)= 327; Skilled labours is estimated as 1/3 of total no of labours; Non Skilled labour is estimated as 2/3 of total no of labours.

nets have been also observed on the landing site beach. Other solid wastes that have been found in the landing site areas are rusted metals, damaged boats, plastic bags water tanks in addition to construction wastes (Figure 1). This present waste will be removed by the subproject before the start of the construction phase. And to ensure this waste issue will not re-occur in operation phase SMEPS will raise the capacity of the fish foundations and fish authority about the management, operation and maintenance according to SFISH's ESMF.

Figure 1: Solid waste and wastewater pollution observed in the landing site

Figure 2: Deteriorated auction yard.

Figure3 : Eroded rocky shore because of strong waves.

Figure 4: Damaged petrol pump for refueling fishing boats.

Figure5 : The landing site power generator.

Al-Qurn landing site is an important source of several commercial fish for the region as well as a vital source of economic income for fishermen, fish traders, and workers in the fish market sector inhabiting Ad-Dis district and its neighboring suburbs. This landing site is serving about 950 fishermen, out of which only 495 boats are functional. Likewise, sometimes in cases of overcrowding in neighboring landing sites of Ash-Shihr and Al-Hami, fishing boats have to move and anchor in Al-Qurn landing site by using anchor cables in order to unload their fish catch.

Local fishermen suffer from spoilage of their fish and marketing linkage failure because of the lack of an ice factory in the landing site as a result of electrical power deficiency. This situation forced them to transport their fish catch to the closest ice factory which is about 8 km away from the landing site in order to preserve their catch and get it transported to other governorates in a good condition. This will add costs on their fish price, which makes it difficult for them to compete in the market.

2.3. Location

The targeted landing site is located on a semi-protected area to the east with an extension of the land known as *Ras Al-Siniyah*. It is exposed to strong waves resulting from the southwest winds during autumn season, which caused erosion of the rocky edge of the area (Figure 6). The access to the landing site is through a paved road which passes through Al-Qurn Village until it reaches the landing site (Figure 7). This road leading to the landing site lack basic services such as lighting, sidewalks, Rehabilitation or maintenance of the access road is beyond the scope of the subproject.

Table 3: The landing site coordinates

Governorate	Subproject-ID	Sub-project title	E	N
Hadhramout	07-9-16077	Rehabilitation and Development of Al-Qurn Fish Landing Site	50° 0'45.54"	14°50'57.59"

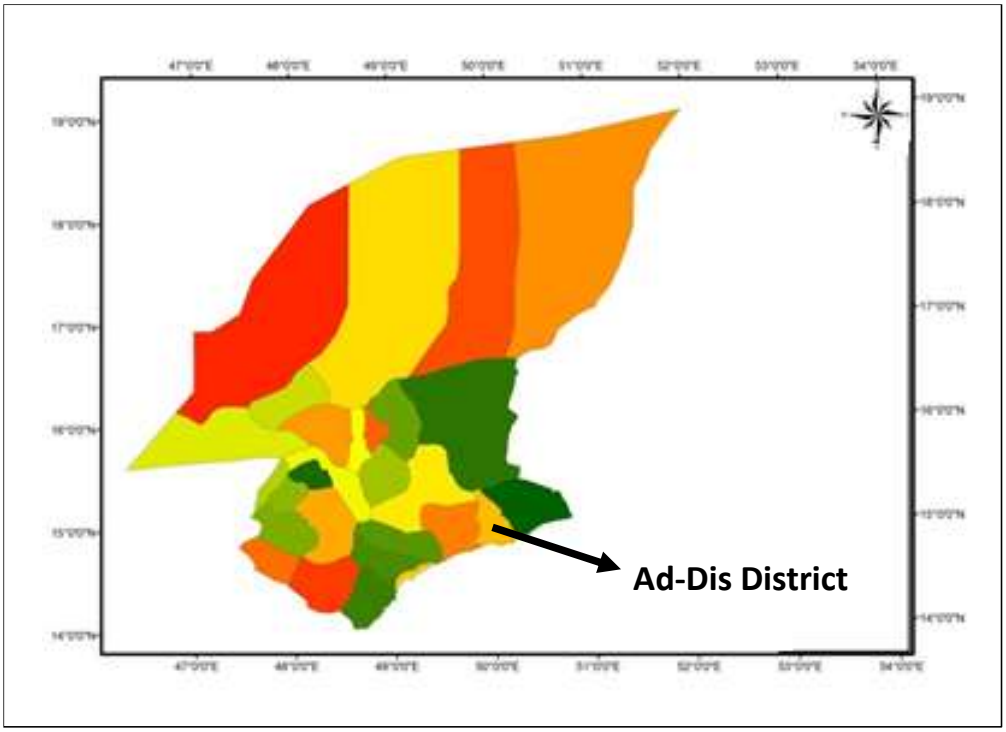


Figure 6 : Yemen division map shows the location of Hadhramout Governorate and its districts.

Figure 7 : Location of the landing site

3. Environmental and Social Baseline Condition

3.1. Introduction

Hadhramout governorate is located in the southeastern part of the Republic of Yemen, 794 kilometers east of the capital of Sana'a, between Al-Mahrah to the east and Al-Jawf, Marib, and Shabwah to the west. The governorate is divided administratively into 28 districts, with the city of Mukalla as its capital. Hadhramout is the largest governorate of Yemen by area. The population of Hadhramout governorate, according to the results of the 2004 census, reached (1,028,556) people, with a population annual growth of (3.08%). The socioeconomic profile in Hadhramout is represented by agriculture, animal husbandry, fishing, and bee farming.

The southern coastal line of the Republic of Yemen is characterized by rocky cliffs alternating with long stretches of littoral and sub-littoral sand along a narrow coastal plain. These cliffs generally terminate at the low water level and area heavily scoured. As a result, with the exception of the exposed headlands, the coastline is predominantly a high energy, soft substrate environment. The southern coastline is approximately 1,482 km that overlooks the Gulf of Aden and the Arabian Sea, which are parts of the Indian Ocean. It has a continental shelf area of approximately 20,225 square kilometers (almost twice that of Yemen's Red Sea shelf).

Al-Qurn landing site is located at the coastal strip of Hadhramout Governorate. It is about 13 km far from Ad-Dis Al-Sharqiah town: the administrative center of the district. The shoreline of Hadhramout Governorate extends for approximately 303.9 km, the overlooks the waters of the Gulf of Aden (Figure 2.2). It is characterized with its northeastern direction with a mixture of straight long coasts intervened with several wave-cut platform **s**uch as *Ras Rajemah, Ras Dhaloma, Ras Broom, Ras Khalf, Ras Sharma, Ras Baghashwa, Ras Rayqoob*, *etc.* Ad-Dis District is one of the six coastal districts in Hadhramout Governorate. This district has a coastal line of about 51 km in length (Nagi, 2021)[10].

The main concerns will be revolved around significant levels of poverty and limited access to essential services such as auction hall, water supply, sanitation, etc. a. The total population of Al-Qarn area is 47,000, including 950 fishermen according to the Fish Association[11] in the landing site. However, Yemen beaches are rich with the fish because of its strategic location. Around eight tons of fish is received each month.

According to the Fish Association also, the income from fish will increase if a boats marine park is installed that will let the medium and large fishing boats (Abri) land and when the essential infrastructure is repaired or rehabilitated. The fishermen look for the landing site that contain the services to save their catch. The works on the water was discussed during the mission with the WB and an agreement reached to deal with the works on land only. The amount of catch in Al-Qarn landing site according to the fisheries authority in 2022 record is as follow:

Table 4: The amount of catch in Al-Qarn landing site

Month	Catch Kg
January	3700
February	7333
March	6203
April	3835
May	6770
June	7200
July	6900
August	8500
September	6700
October	9100
November	9500

[10] Nagi, H. M. H. 2021. Delineating and calculating the Length of Yemen's Mainland Shoreline; International Journal of Alternative Fuels Energy

[11] Al-Qurn Fish Association.

December	7200
Total	83,241

3.2. Rainfall, Climate, and Weather

Yemen has a predominantly semi-arid to arid climate, with rainy seasons during spring and summer, and with high temperatures prevailing throughout the year in low- altitude zones. Three large bodies of water affect Yemen's climate: The Indian Ocean (including the Gulf of Aden and Arabian Sea), the Red Sea, and the Mediterranean Sea. Those become the sources of moisture and have an impact on the general atmospheric circulation. The Indian Ocean has an impact on Western Asia and Eastern Africa and it causes the monsoonal wind system.

Hadhramout governorate is characterized by mountainous to coastal area with humid worm climate. it is hot in summer and warm in winter. The temperature of Hadhramout governorate varies according to the diversity of terrain. It reaches its maximum air temperature (35°C) in the coastal plains during the summer season, while the average temperature in the winter drops to (20°C). In the last months and because of climate change, the highest temperature record reached to 47°C which is the highest reached until now.

The targeted landing site lies on a sandstone coastal shore (Figure 8). This coastal area is dominated with strong wave actions that have been eroding the sandstone shore intensively. However, it is worth mentioning that the beach sediments could be changed in characteristics depending on the wave intensity and directions prevailed in the area throughout the year.

Figure 8: Beach characteristics in the proposed landing site

Rainfall seasons in Hadhramout are spring and autumn. Most rainfall periods consist of intense but brief showers followed by light rain. In general, the weather of the Southern Yemen coast and Gulf of Aden is hot and dry. Two monsoon seasons are prevailing in the southern part of the Republic of Yemen. From January to March (winter), the northeast (NE) monsoon forces surface waters to flow westwards from south south-east (SSE) towards Bab-el-Mandab and the Red Sea, while during the summer, south-west (SW) monsoon prevails from May to September blowing winds towards the east. Although, monsoon generally implies heavy rain, they are often dry and bring little moisture in the Republic of Yemen. Normally, most rainfall occurs during summer season between June and September as it is

influenced by the SW monsoon winds, while rain falls on the coastal plain in winter and autumn usually in small quantities.

Water vapor is contained in varying amounts in the air masses that collectively make up the lower atmosphere. The amount present depends upon the origin of the air mass and its recent history (Stone, 1963)[12]. Annual relative humidity in the area ranges from its maximum during summer (July-August) to its minimum during winter season. On the other hand, the targeted area is characterized with scarcity of fresh water that has led to most fishermen community forced to settle far from Al-Qurn landing site where fresh water is available.

3.3. Cultural Heritage

The district which subproject is located do not encompass any archaeological sites. The subproject is located at a limited scope which is away from any heritage sites. The social agreements[13] include provisions of all required procedures, as in situations of discovery of any such sites or artifacts, the contractor will stop work and protect the sites and contact the Antiquities Department. PWP ensure training of the staff/supervisors to be able to handle the emergence of any potential archaeological discoveries, including the need to contact the Antiquities Department in the Ministry of Tourism and the local council to assess the situation quickly.

3.4. Air Quality and Noise

With respect to Al-Qurn proposed landing site project, it is located in a remote area. The main sources of air pollution are the emissions expected from vehicle traffics to the landing site, in addition to the emissions from artisanal fishing boats. In general, it is noticed that the air quality in the targeted landing site is fresh and clear and there is no relevant source of air pollution. However, air pollution is considered low in the location as it is far away from any industrial areas or congested transportation roads.

Data on air quality and noise in Yemen in general and in the areas within the subprojects are extremely scarce. No air quality and noise monitoring data for the subprojects' areas were found. Typical existing noise levels in the landing site are generally limited due to absence of extensive human activities. The only noise source could be from the fishing boat engines during fishing activities.

3.5. Flora

The scarcity of rain and high temperature in the targeted area have created a harsh environment for plant species to grow. The area is characterized with a lack of sand dune, or any freshwater dependent, vegetation. On the other hand, the intertidal zone is found to be narrow and rocky where no life was found during the field visit. Only dead algae were found washed up on the landing site beach (Figure 3.3). Although, rocks in the beach and nearby rocky headlands supposed to be supporting algal growth, but because of the site is located in an open shore and characterized with high wave energy and water movement, thus algal communities are constrained from growing in such condition Rushdi *et al.*, 1994)[14]. The area below low tide found to be rocky mixed with sandy areas where green macroalgae specimens of *Halimeda sp*. were found scattered in the submerged area (Figure

[12] Stone, E. C. 1963. The Ecological Importance of Dew; The Quarterly Review of Biology;

[13] In situations of discovery of any such sites or artifacts, the contractor will stop work and protect the sites and contact the Antiquities Department.

[14] Rushdi, A. I; Abubakr, M. M.; and Hebba, H. M. 1994. Marine Habitats of the Red Sea at AlUrj-AlSalif and Dhubab-Yahktul Areas: Their Ecology, Environment and Management Recommendations; UNDP and Sana'a University.

10.11). Also, brown macroalgae of *Padina sp.* were also found scattered in small quantities (Figure 9).

3.6. Fauna

Lack of vegetation cover and scarcity of water resources have limited the existence of terrestrial fauna in the targeted village. Also, due to heavy activities by the fishermen in the area, and the high energy waves dominating have added limitation to make the area suitable for the growth of several fauna specimens at the landing site beach.

Figure 9: Washed up dead algae scattered on the landing site beach

Figure 10: Green macroalgae Halimeda sp. found submerged in front of the landing site

Figure 11 : Brown macroalgae Padina sp. found submerged in front of the landing site

The submerged area below the low tide line, specimens of black cucumber *Holothuria atra* were found (Figure 12).

Figure 12 : Black cucumber Holothuria atra were found in front of the landing site

Some bird specimens were observed in the landing site such as Black-Backed Gull (*Larus heuglini*) (Figure 13). Despite the fact stating that, the Arabian Peninsula is an important "land Bridge" between Africa, Asia and Europe, however, the site is not reported as a bird sanctuary due to absence of wetlands or any other bird preferred habitats.

Figure 13 : Gulls birds observed during the field visit

Fishing sector in Yemen depends on small-scale fisheries, also referred to as traditional or artisanal fisheries. Yemen has been gifted with a coastal zone that is characterized by high primary productivity, which is considered a basic feeding and nursery ground for marine organisms. It is reported that around six hundred species of fish and marine organisms were recorded in Yemen's coastal waters (Shaher, 2007)[15]. The most common commercial fishes available are tuna, Spanish mackerel, Sardines, Anchovies, Indian mackerel, Emperor, Snappers, Groupers, Barracudas, Carangoides, Sharks, …… *etc "Social mobilized team site visit"*.

3.7. Critical Habitats and Protected Areas

The visual inspections of the targeted site showed that there is no vegetation cover, nor any important and sensitive critical habitats. Strong waves hitting the southern coast has made it difficult for mangrove seedlings to settle down on the intertidal zone of the Gulf of Aden and Arabian Sea. Mangrove habitats were not reported in the coastal zone of Hadhramout governorate (Nagi, 2012). No coral reefs nor habitats of sea grasses were reported from the area, however there are seaweed which were reported in the nearby of the landing site coastal zone. Fishermen stated that the closest barrier reefs exist in the area are approximately 4 km far from the coastline opposite the landing site.

Nesting beaches along the southern coast of Yemen are considered to be some of the best remaining nesting ground in the world (EPA, 2009)[16]. One of those nesting grounds along the coastal zone of Yemen is Sharma-Jathmun coastal beaches, particularly for marine green turtles. It has been cited by the Government of Yemen as an area needed to be declared as a protected area. The targeted landing site is approximately 3.5 km far from this environmentally important area (Figure 14). It is not expected from the activities to be carried out in the landing site to have threatening impacts on sharma-Jathmun ecological habitats if proper management is followed while operating the landing site.

[15] Shaher, 2007, Biology and status of sharks fishery in Yemen; Food and Agricultural Organization.
[16] Environmental Protection Authority report, 2009.

3.8. Targeted Beneficiaries

The selection of the community beneficiaries is based on transparent eligibility criteria and consultations with communities and local leaders. Through transparent allocation of funds that is based on national statistics indicators in the governorate and district levels, followed by coordination with local actors and inclusive participatory process, PWP will be reducing conflict over resources. Before implementation and during the participatory consultations with local communities to define the interventions, PWP's teams confirm the priority of the need between the society and ensure that the intervention is in its suitable place.

The activities in the subprojects will serve the local communities that are considered direct beneficiaries. Table (7) below shows the total number of beneficiaries segregated by gender:

Table 5 below shows the total number of beneficiaries segregated by gender:

Subproject-ID	Project name	Benefited Neighborhoods	Beneficiaries			Fishermen	Fisherwomen
			Male	Female	Total		
07-9-16077	Rehabilitation and Development of Al-Qurn Fish Landing Site	1	21150	25850	47000	950	0

4. Environmental and Social Impact Analysis

4.1. Applicability

The World Bank Environmental and Social Framework (ESF) is applied because this subproject may engender some moderate environmental and social impacts such as residual wastes and occupational health and safety (OHS).

4.2. Eligibility

These subprojects are eligible for support as per the PWP Environmental and Social Responsiveness (ESR) Criteria (Annex 3).

4.3. Environmental and Social Screening

An Environmental and Social screening has been conducted by PWP Environmental and Social safeguards staff and designer engineers through site visits to subprojects sites, using the screening checklist attached in Annex 1. The subproject will have a positive impact on the local communities in the targeted areas. This would include providing job opportunities during implementation for workers from local communities and will generate positive impacts on the economy in the targeted areas. Potential positive and negative impacts of the subproject are described in the next section.

4.4. Potential Environmental Impacts

The environmental and social impacts could be categorized into two distinct phases. These two phases are the construction phase and the operational phase. The prediction will be based on the available environmental baseline information of the project area. The construction phase is considered temporary with short term effects, while the operation phase is considered to affect the environment for a long term.

4.4.1. Potential Environmental Impacts during Construction Phase

The construction works have the potential to cause hindrances and nuisances and temporary disruptions of local activities on the proposed site. It would also cause interferences on the water body within the coastal area. The environmental considerations include the risks of pollution by the construction wastes from the yard, and the risks of accidents during the construction. The construction related impacts could be:

4.4.1.1. Noise Pollution

A minor noise pollution is expected during the construction operation due to the moving machines, trucks that transport construction materials to the site, workers' activities, as well as other activities related to construction.

4.4.1.2. Air Pollution

Emission of particulate matter is expected to be generated during the rehabilitation and construction of the site. Transportation, loading, and unloading of the raw materials and construction waste are going to aggregate dust in the air.

4.4.1.3. Solid and Liquid Waste Generation

Civil engineering works would generate solid and liquid wastes from the construction sites. dust and rubbles from site preparation, excavations, foundations, drained oils from engines, *etc*. are the major sources of wastes generation. As the landing site is already constructed and only preparations are required for rehabilitation, there would be limited waste generation from site preparatory activities. However, a fair amount of construction wastes produced from constructing new offices, rooms, toilets, *etc*. is expected.

Piles of solid waste that are going to be generated during the construction of the project. Those wastes may include concrete remaining, metal cutting, paper bags, cartons, empty paints containers, broken glass, *etc.* If solid wastes are not managed properly, there would be a potential of diseases spread due to the suitable breeding conditions for vectors of diseases.

4.4.1.4. Soil and sea water contamination from waste and liquid waste

Construction waste may pollute the coastal area and the sea environment. Liquid waste including accidental oil spills may also pollute the soil and seawater environment.

Additionally, sediment particles from construction may get disposed into the seawater causing sea water turbidity and reduction in visibility. This may in turn impact habitats (example: seaweed/macroalgae and related biodiversity).

4.4.1.5. Risks on coastal and marine habitats and related biodiversity

Solid waste and liquid waste (including chemicals) and sediment particles may disturb biodiversity.

4.4.1.6. Risks of quarrying at ecologically important areas

Stone collection and quarrying may disturb the ecosystem and related terrestrial species during construction phase.

4.4.1.7. Floods during implementation

Potential risk during working in the rainwater drainage channel during the rainy season, as water streams flow to sea beside the fish landing site. Considerations has taken in designs as site will be protected by implement protection wall, also site levelling to draing water forward the sea. Mitigation measures to avoid flood risk during implementation see in section 6.1.

4.4.2. Potential Impacts during Operational Phase

4.4.2.1. Liquid discharge to sea water reducing water quality and disturbing biodiversity

The most concern about negative impacts that could be generated from the landing site during operation phase is discharge of polluted substances into sea water which could lead to marine pollution and deteriorate marine life and habitats. This include waste and wastewater discharges, spillage , sewage and wastewater from fish processing and wash of marketing yard which may have a potential to pollute marine water or the soil of the landing site if not managed properly and disposed untreated. Additionally, gas station and fuel storage area may also contribute in soil and water contamination from leaks.

Leaking petrol, oil derivatives, liquid chemicals or other liquids could be emitted from boats and the generator site and could lead to contaminate the marine waters. This kind of pollution could cause harmful effects and adversely jeopardize the health of human being as a result of consuming contaminated aquatic fauna. Liquid wastes generated from boats as a consequence of cleaning cisterns and loading holds and well as engines maintenance are other sources of marine pollution, if discharged directly to sea water. Waste management at the landing site must be taken very seriously by the landing site beneficiary and users. Please see the mitigation measures in section 6.2

4.4.2.2. Solid Waste Disposal

Fisheries sector produces qualitatively and quantitatively variable wastes according to several activities conducted during operation phase. Domestic wastes, commercial packaging, fermented stuff, as well as wastes that are generated from maintenance and repair activities. Fishing processing activities generate adverse impacts on the surrounding environment and public health. Organic waste and by-products could find their way to the coastal sea water and need to be managed daily in order to avoid adverse impacts on the environment and public health. Unused and broken fishing gears usually disposed to the shore of the landing sites such as hooks, nets, traps, *etc.* causing solid waste pollution in the area and disturbing aquatic fauna which may consume solid waste and get trapped in nets.

Some measures have to be recommended in the ESMP that would help to reduce the production of solid wastes and by-product. Please see the mitigation measures in section 6.1.

4.4.2.3. Overfishing and targeting wrong species

The subproject may increase risks of overfishing, wrong fishing techniques and using non sustainable fishing gear and methods may pose a risk on biodiversity and threatened species. Additionally, fishing during the wrong seasons such as spawning seasons may also decrease the number of fish in the area. Furthermore, improper maintenance of boats and accidental oil and fuel leaks may impact the biodiversity in the area.

Moreover, anchorage of fishing boats in the landing site shore may cause disturbance of marine life habitats. Traditional anchors may damage animals and plants on the seabed, either temporarily by increasing suspended sediments from the disturbance of the bottom or through direct contact with dragging anchors. Disturbance from anchoring depends upon the frequency, magnitude and location of activity, type of sediments, and the sensitivity of benthic communities. Damage caused by anchoring is likely to be minimal and any disturbance is generally temporary. However, when the area where boats are anchoring is inhabited with sensitive communities, *e.g.* seaweed the effects may be more damaging.

Mitigation measures are proposed in section 6.1. knowledge enhancement trainings to the fishery association, local authorities and community committees about the impact of overfishing and species of fishes is expected to mitigate or minimize the risk.

4.4.2.4. Air Emissions from organic waste and power generations

Odour is often the most significant form of air pollution in fish processing. Major sources include storage area of organic wastes, fish drying processes, and odour emitted in the marketing yard if not washed properly on daily basis. Odour control and prevention measures will need to be applied of the purpose of mitigation. In addition, the landing site currently use public electricity also it has two power generators (30 KV) which will cause emissions of Cox, Nox but there will not be cumulative impacts and it will be mitigated with measures as mentioned in section 6.1. If you are using a generator, can you please identify if there is a risk of air contamination from this generator. If the generator size is large/ medium/small.

4.4.2.5. Lack of maintenance

Lack of maintenance through operation phase which will lead environmental risks.

4.4.2.6. High energy usage during operational phase

Increased Operational Costs: High energy usage can result in significant operational costs for the cold chain factory. The cost of electricity or fuel required to power refrigeration systems can be substantial, impacting the overall profitability of the facility.

Environmental Impact: High energy usage contributes to increased greenhouse gas emissions and environmental degradation. The generation of electricity often relies on fossil fuels, leading to carbon dioxide emissions and contributing to climate change. This can have long-term negative consequences for the environment and sustainability.

During the project implementation phase, the project team will provide capacity building trainings to the community committee, local authorities and the Fishery Associations about the importance of regular maintenance of the cold chain factory and occasional energy audit

during the operation phase. The institutions will use the knowledge to ensure the energy efficient use of the cold chain factory during their lifetime.

4.5. Potential Socio-economic Impacts

As the proposed subproject will enable the fishery communities to safely load and unload their catches, the socio-economic impacts of the proposed landing site project is overall positive in terms of their contributions to development, poverty alleviation and the creation of economic opportunities, particularly in the coastal communities. This is in accordance with the soci—economic study conducted among the target groups.

4.5.1. Socio-economic Impacts during Construction Phase

4.5.1.1. Positive Impacts

Temporary employment opportunities will very likely be available for many local individuals particularly for casual worker, especially given high unemployment rates. Employment opportunities are beneficial both in economic and social sense. Several workers including casual labourers, carpenters, electricians, plumbers, *etc.* are expected to work in the landing site for a period that the project will start to the end. Also, semi-skilled and unskilled labour and formal employees are also expected to obtain gainful employment during the period of construction. The project is expected to create employment opportunities to the local people, who suffer from unemployment condition, and hence improve their living standards.

There will be gains in the local and national economy. Consumption of locally available materials such as: cement, rebar, woods, plumbing and electricity tools, *etc.* will help in improving economic situation to local people as well as to the government.

4.5.1.2. Negative Impacts

The major impacts that could be faced during rehabilitation and construction works of the landing site could be considered reversible and temporary if managed properly. Those negative impacts could be:

4.5.1.3. Accidents and other Occupational Health and Safety Issues

Working close to a large water body, and sometimes, working within the water body itself could expose workers to major health and safety risks associated with the project construction activities. Works in such risky areas must be carefully planned to mitigate the risk of drowning for instance. Emergency response plan should be developed and emergency response equipment, especially those relating to emergency rescue readily made available on site.

Protection of workers on the construction sites should be supported immediately once the works started. Poor protection for the workers could cause discomfort, and nuisances by noise, dust and emitted gases, does not only lead to deterioration of their health, but also contribute to accidents at work. Lack of training on the use of hand-held tools and providing staff with protective equipment may lead to unfortunate accidents.

Some of the OHS risk on the site such as:

Risks of drowning, breathing problems from dust emissions from excavation and levelling work, handling chemicals (cement, epoxy, oil, and fuel) that may cause skin and eye irritation, physical exhaustion, working during bad weather conditions (heat wave, dust

storm, storm periods), ear disturbance from noisy activities, accidents during materials and equipment transport, lack of toilets and latrines and hygiene, falling from ladder, injuries while performing construction work using tools and machines, and electrical shocks while performing electrical works, falling in excavated zones,. Risk of working in the Rainwater drainage channel during the rainy season. Vehicles running into workers (pipeline area). Work in closed or confined spaces (Water Tank or Septic Tank).

4.5.1.4. Increased Traffic

During construction phase, roads leading to the project site will serve additional vehicles that are going to be used for transportation of raw materials to the site which will increase the chances of traffic accidents within the community.

4.5.2. Socio-economic Impacts during Operational Phase

Generally, the project is expected to produce significant environmental benefits in terms of resource conservation, pollution reduction, and improvement of public health. The community development and poverty abatement will generate mostly beneficial impacts. Negative impacts are expected to be Minor, localized, reversible, and could be mitigated if appropriate measures and effective control and management are to be followed. The discussion below summarized both the expected beneficial and adverse impacts related to the proposed project during operation stages.

Resource conservation has not taken place from the existing site which has been in place for 25 years. It will be a condition of the investment that site management and management of fish stocks through community and administration management are commitments made by the community and the responsible fisheries administration.

4.5.3. Job Opportunities

The project is expected to create new job opportunities and minimize the unemployment problem for the local people. Employment opportunities are one of the long-term major positive impacts of the project during the operation and maintenance of the proposed project. These will involve security personnel, solid waste management staff, and the persons who are going to be employed within the proposed project.

Also, it will support fishermen communities with required facilities that help them in increase their fish quality such as ice storage and clean water network. This definitely will raise their economic income and improve their economic and livelihood situation.

4.5.4. Occupational Health and Safety Issues

Health and safety of fishermen and other labours working in the landing site should be guaranteed. Working in such unhealthy areas where bacteria and other diseases that are spread all over the landing site must be carefully considered. Outbreaks of infectious disease such as diarrheal diseases and their consequences as cholera and dysentery, in addition to intestinal parasites among fishermen, vendors and other workers are common in such conditions. This is inevitable when unhygienic conditions and poor sanitation are prevailed. Furthermore, risk from drowning and fishing during bad weather and sea storms seasons.

Awareness programs should focus on providing the trainee with knowledge that illustrate the benefits of proper fish handling and its impact on health and economy. Other programs could also help fishermen to acquire and build necessary skills and good practices to raise quality and reduce manifestations of fish spoilage according to scientific and health

standards with high efficiency "the other part of SFISH fund that will be conducted by SMEPs".

4.5.5. Economic impact on fisheries

During the rehabilitation phase there might some minor temporary restriction on the use of the landing site, which addressed to avoid less income to fisheries during that period. This will be mitigated by implement rehabilitation works during low fishing seasons (autumn and winter) as a result of high winds season, as well as work activities will be implemented section by section in coordination with fisheries associations and community committees, as fishermen will use the Al-Quarn association's auction hall until contractor implemented phase one the new auction hall see annex 1 places No. (3 and 4) in the site plan.

4.5.6. Land Acquisition

Al-Qurn landing site and since 1998 was built in a public land that belongs to the fish association that is part of the Fish Wealth Ministry. This landing site is fenced surrounding its components that reflect the ownership of the land to the association and that is what was heard from the local council. Moreover, PWP reached social agreements[17] with targeted communities and local authorities to implement these sub-projects. Copy of social agreement is found in Annex 03 Al-Qurn land Registration.

4.5.7. Resources and services' access restriction

The PWP and contractor will ensure not causing any restriction for the services and resources available in the area while implement the subproject. The contract specifications would content that the contractor will provide all possible access with health and safety responsibilities. With collaboration with local authorities, the project management will work towards ensuring the access of local community to services and resources.

Continuing the function of the landing site during the implementation of the civil works is one of the points PWP focused on. In collaboration with the Fish Association in the landing site the work will be commenced part by part to guarantee the non-restriction on the daily work of the fish activity.

4.5.8. Gender and Social Related Issues

Males and females were consulted and participated in developing and designing the subprojects to ensure responding to the needs of all community groups including men, women, and disabled people. More information in section 9.1 public consultation. The project will take into consideration providing local communities with all support that increase their livelihoods and beneficiaries. This will include people with disabilities, females, males, and children.

[17] The social agreement include that the local authorities and the community committees ensure that there is no land acquisition in the targeted sub-projects, and if these occur during the implementation, they are the ones who are responsible for solving the argument with the one who claimed the ownership. Also, they are the ones who are responsible for any compensations if needed in such situation. Otherwise, PWP will exclude the intervention. Also, the agreement mentioned that PWP will conduct the studies and civil works and the local authorities will facilitate the work of the engineers and contractors in the field. Moreover, the local authority accepted the intervention in the appointed site specified in the technical study. In addition, the local authorities agreed to continuously present in the subproject site during the implementation period to know the components of the intervention that will help in knowing the required operation and maintenance. The local authorities committed to use the subproject according to what is designed for.

4.5.8.1. Child Labour

According to project ESMF and LMP no child labour/forced labour will be hired for these activities at all work sites including subprojects' quarries. The minimum accepted age is 18 years old, and verification of age will be done before starting the work by checking IDs and other available documents before the commencement of any work. A labour log will be kept, and all workers will be registered, according to contract conditions the contractors and workers should be aware of and sign the code of conduct that states that child labour is not allowed.

4.5.8.2. Gender Equity

PWP has ensured gender equity in the subproject's cycle as a core principle for the subproject's success (section 5.10.2 describes the gender inclusion during the project life cycle). PWP is mainstreaming Gender in all aspects of the subproject cycle as well as raising awareness amongst the communities both male & female on Job opportunities during subprojects implementation. The landing site project is located in Al-Qurn Village, that is part of Ad-Dis District that has a total population of approximately 47,000. Out of which, 21,150 are males and 25,850 are females. The number of beneficiary families is approximately 9,700 families. The total number of fishermen who are benefited from the landing site are 950 individuals. Educational situation of females is worse, in addition to, the middle and young generations. However, girls go to school outside the village as no schools are available in Al-Qurn village. Women in the village work on housekeeping and animal husbandry.

PWP has successfully established community committees in the targeted areas, by designating social consultants' teams (male and female). Focused group discussions were conducted with the participation of both women and men within the elected community committees. The elected community committees should participate in the decision-making, need assessment, and public consultation. Also, they will participate in the monitoring of implementation, receiving the subprojects, as well as subprojects operation and maintenance.

Raising awareness of the fishing communities was also conducted through public participation, as well as occupational, social, and health safety. Participation of women in the proposed project and importance of gender in development were also highlighted see Annex 3. The team has elected the fishing community those who important as the Beneficiary representatives.

4.5.8.3. Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH)[18]

PWP raised the awareness of community members, both men, women, and persons with disabilities regarding Sexual Exploitation and Abuse (SEA)/Sexual Harassment during the public consultation process as well as raising community awareness on Grievance Mechanism (GM) processes and how it can be used to gender discrimination and incidents of SEA/SH. Such incidents shall be treated with the highest level of confidentiality and anonymity of complaints, in a survivor-centered process. Mandatory awareness training and sessions about refraining from unacceptable conduct towards local community members, specifically, women are will be conducted by PWP through supervisor engineer and subarea staff for all contractors and workers throughout the project lifecycle. This also includes

[18] World Bank Good Practice Note Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing involving Major Civil Works https://thedocs.worldbank.org/en/doc/6f3d9ddc6010c4221315dd1282958e41-0290032022/original/SEA-SH-Civil-Works-GPN-Third-Edition-Final-October-12-2022.pdf

informing workers about the national laws that make sexual harassment, abuse, and gender-based violence a serious and punishable offense.

4.5.9. Conflict Sensitivity and Do No Harm

PWP has its conflict sensitivity manual to manage any conflict cases during the project's cycle. Conflict sensitivity is given high priority and integrated into decision-making criteria in project approval. PWP adopts specific approaches when targeting the beneficiaries and defines their prioritization. Targeted communities provide their consent, acceptance, and satisfaction for the chosen interventions. No concerns were raised by the communities against the subprojects. Public consultation included ensuring Conflict Sensitivity screening. In case of Conflicts that cannot be resolved, the Subproject will be rejected. Also, Conflict sensitivity is taken into consideration in the monitoring and reporting processes during the implementation. Furthermore, the elected community committees are trained to manage, monitor, and report any conflict that might be generated during the project's cycle. Generally, the subproject will help to build the resilience of the communities and improve their living condition positively.

5. Environmental and Social Impact Analysis Plan and Mitigation Measures

This section consists of a set of mitigation, monitoring and institutional measures to be taken during the construction and operation of the project to eliminate adverse environmental impacts, offset, or reduce them to acceptable levels. On the other hand, it is meant for maximizing the positive impacts associated with the project activities. The ESMP for this project is based on the potential impacts that have been assessed during assessment stage. It defines the responsibilities of contractors and role players towards different environmental and social issues. It is expected that this plan will be used as the basis for the contractor environmental and social management plan before any activities conducted. The contractor shall develop the plan that is site and activity specific to ensure that impacts identified in this investigation and those that may be identified by the contractor on site are managed.

The environmental and social impact analysis plan and mitigation measures will also include the actions needed to implement these measures, which is illustrated in the following table.

5.1. Environmental and Social Risk management Plan19:

Table 6: Environmental and Social Risk managment Plan table

Sup-Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[20]	Estimated Cost/ SP
Social and community Impacts				
Implementation	Child Labor: families push their children to work due to need of money	• Ensure child labor is not permitted; all workers will be verified to be over 18 years of age • Verifying age by checking IDs and other available documents. • Ensure a Labor Log is available, and all workers are registered. • Avoid buying raw material from suppliers that employ children through checking the requirements and policies of the primary supplier, reviewing labor conditions and labor log of the primary supplier and communicating the requirements of PWP and UNOPS regarding child labor to the supplier. • Mandatory and repeated training and awareness-raising sessions for refraining child labor. • Ensure the contractor looks for a different supplier who meets the requirement if current supplier fails to meet the requirements.	• Resident Engineer • PWP Safeguard Officer • Community Committee • Contractor	N. A

[19] All the ES mitigation measures are obtained based on WB ESF and WB EHS sector-based guidelines.

[20] During Construction Phase, the contractor is responsible for implementing the mitigation measures. PWP field staff/ resident engineer is responsible, monitoring and reporting on ensuring mitigation measures are implemented. During O&M phases, the Local councils and the Beneficiary Committees are responsible for O&M.

Implementation	Sexual harassment, sexual exploitation and abuse,	• Mandatory and repeated training and awareness-raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women. • Informing workers about national laws that make sexual harassment, sexual exploitation and abuse a punishable offense that is prosecuted. • Raise awareness of the GM system and how it can be used to report any SEA/SH cases. • All workers fully understand and sign the CoC and to adhere to it.	• Contractor • Resident Engineer • Community Committee • Gender Focal Point	N.A
	Discrimination against women and persons with disabilities when selecting beneficiaries	• PWP adopts a non-discrimination policy that ensures a non-discriminatory and inclusive manner, including women and persons with disabilities when selecting sub-project. The policy also ensures the inclusion of women in community committees as well. • Provides opportunities for women and other vulnerable groups to be consulted in a place and time convenient to them and which allows them to freely express their views.	• PWP Sub-area Staff • Community Committee • Gender Focal Point[21]	N.A
	Lack of workers' awareness and knowledge on respecting local community cultures, and social safeguard issues on Gender, SEA/SH.	• Implement a systematic awareness campaign to increase workers' awareness of local community tradition and cultures and the need to respect them. • The contractor and its workers to sign the Code of Conduct. • Ensure workers respect and adhere to the Code of Conduct (CoC) for the local community's protection and do no harm. • GM system in place to handle any issues on Gender, SEA/SH.	• Contractor • Resident Engineer • Community Committee • Gender Focal Point	N.A

[21] The Gender Focal Point is responsible for conducting Public Consultation, ensuring women participation in the selection of subproject, consensus on the subproject, site location, establishing Community committees including women representatives, resolving complaints related to GBV, SEA issues and monitoring during construction phases. PWP staff participate in the public consultation, discuss details, raise awareness on SEP, and discuss stakeholder concerns vis a vis the subproject community committee's formation and collection of community data / profiles. Community committee is responsible for raising the awareness between society, helping in solving problem and obstacles, accordingly, supporting the monitoring in sites and helping to solve GRM complaints in site as possible.

	Financial exploitation of community or beneficiaries	• Inform the beneficiaries that the subproject is provided for free, and they should not pay anyone to get benefits from the sub-project. • Prepare and publicize in the community a transparent recruitment procedure. • Raise awareness among PWP consultants and resident engineers that there is zero tolerance for any cases of financial exploitation. • Raise the awareness of the community committee, workers, and communities on the GM system and how it can be used to report any financial exploitation. • Inform consultants, resident engineers, and the community about PWP regulations that make financial exploitation a serious contravention.	• PWP • Community Committee	N.A
	No latrines near the project site and workers may have to practice open defecation.	• Providing temporary latrines or constructing well-insulated temporary latrines, hand-washing basins, and supplying them with water.[22] Or finish the existing buildings such as guard's rooms and toilets to be used for workers • In case the presence of women workers, ensure latrines are separated by gender and with the same facilities and capable of being locked from inside. • Managing and supplying water and soap in the latrine daily. • Ensure latrine areas are properly insulated and waste is managed and removed regularly.	• Contractor • Resident Engineer	$700 for the sub-project

[22] -Constructing temporary latrines, away from any water source, and social disputes, according to the pour flush toilet with water seal, connected directly by pipe to single close cesspit to disposal of a human faeces, and waste, with ventilation pipe, which will be built from bricks in proper height with steel sheet cover, and water tank 1 m3 as drawings attached with tender documents, this system complete isolation of waste and getting rid of insects and odors and provide privacy through good housekeeping practices. and will provide privacy. After the project is completed, the latrine will be demolished with the transport and disposal of its construction waste in the approved landfill and the cesspit will be buried well. The cesspit will be properly covered.

		• Ensure proper collection and disposal of sewage by workers.		
	No skilled workers in the targeted areas for construction works.	• Skilled workers will be hired from neighboring areas if not available from targeted area	• Contractor • Resident Engineer	N.A
	Temporary economic restriction on the use of the landing site	• This will be mitigated by implement rehabilitation works during low fishing seasons (autumn and winter), as well as work activities will be implemented section by section in coordination with fisheries associations and community committees. • In coordination with fishers' associations the fishermen will use the Al-Quarn association's auction hall until contractor implemented new auction hall see annex 1 places No. (3 and 4) in the site plan.	• Community Committee • Contractor • Resident Engineer	N.A
	Public Health includes risks of public and children's access to the worksite	• Install fences, barriers, dangerous warning/prohibition sites around the construction area which show potential danger to public people. • Place appropriate warning and directional signs at areas where construction is taking place. • Erect removable barriers • Limit in coordination with traffic authorities the movement of heavy vehicles on roads/lanes used by the public during traffic peak hours. • Implement regular inspection by site guard. • Awareness of the public about risks and hazards at the project construction areas before the commencement on site • Ensure all types of wastes are removed appropriately	• Community Committee • Contractor • Resident Engineer	N.A

	Community dissatisfaction by Sub-project activities and Community participation	• Hold public interviews to address concerns/comments about construction and bypass issues. • Inform public/beneficiaries before activities commencement about GM. • Install an on-site, identification stand, containing how to lodge complaints in the GM. • Ensure that Complaint forms are available on the site.	• PWP • Resident Engineer • Community Committees	NA
	Damage to existing infrastructure (phone networks, electricity, etc.)	• Coordinate with local authorities on network lines to avoid their disruption. • Any damage will be rehabilitated by the contractor. • Be sure to identify the locations of the ground services extensions and coordinate with the relevant authorities to provide the plans and their delegates to come to the site and put signs on them before starting the excavation work.	• Contractor • Resident Engineer	NA
	Complaints Occurrence	• GM should be established by the Contractor and PWP • Inform the public about GM contact information and the method of submitting complaints. • Details of complaints received should be incorporated into the audits as part of the monitoring process. • All complaints must be addressed quickly within the timeframe given in the GM.	• Contractor • PWP	NA
Environmental Impacts				
Implementation	Air pollution due to dust from activities and gas emissions from machines	• Spray the work area with water regularly to reduce the dust. Water spray should be done efficiently to avoid wasting water. Water spraying can be carried out by using greywater if available or rainwater if possible. • Use dust sweeping methods to avoid wasting water in dust suppression. • Avoid working during dust storms and windy days.	• Contractor	N.A

		• Ensure workers wear masks. • Material loads must be suitably secured/covered during transportation to prevent the scattering of soil, sand, materials, or dust[23]. • Properly cover waste during transportation • Exposed soil and material stockpiles must be protected against wind direction and the location of stockpiles shall take into consideration the prevailing wind direction. • Maintain machinery in good working conditions to minimize emissions including exhaust emissions of COx, SOx, NOx, and soot. • Provide adequate protective wear/gear for workers, and equipment must be maintained regularly to avoid any emissions. • Offer good practice awareness to workers to turn off vehicles and machinery when not in use.		
	Loud noise and severe vibration are caused by machines and vehicles.	• Avoiding or minimizing transportation through or processing material in community areas (like concrete mixing). Machinery must be maintained regularly to avoid exceeding noise emissions from poorly maintained machines. • Limit noisy activities to normal daylight hours. • Limit vehicle speed at critical locations (Limits of 10, 15 or 20 mph may be appropriate depending on the vehicles used, site layout and hazards). • Provide workers with ear mufflers. • Measures to reduce noise to acceptable levels must be implemented and could include silencers, mufflers.	• Contractor	N.A

[23] WBG General EHS Guidelines as good practice references are used during the implementation as Guidelines.

	Soil contamination from accidental oil spills and from liquid waste	• Properly store all types of waste and hazardous chemicals if any in insulated areas and provide secondary contaminated storage areas to avoid spillage and away from runoff areas (i.e. oil) • Properly store chemicals (i.e. oil and cement) according to their Material Safety Data Sheets (MSDSs) • Ensure oil changes, machine maintenance or mixing cement is done at designated insulated areas away from the soil, water areas, and drains. • Carry out machine maintenance and oil change at service centers if present. • Only use well-maintained equipment to avoid potential leaks. • Oil change and maintenance must be handled by trained personnel. • Construction waste should be stored and handled in designated areas away from the soil and water runoffs. • Avoid working during bad weather seasons, and dust storms. • Ensure the presence of spill prevention kits. • Provide training on environmental safety measures and hazardous materials and waste management measures.	• Contractor • Resident Engineer	N.A
	Flood risks during the implementation	• Avoid working in the rainy seasons. • Coordinate with weather and climate authority to discover the expected rainy days. • Train the workers on the evacuation procedures in the sudden floods' cases. • Avoid storage of the construction materials in the floods paths.	• PWP • community committee • contractor	N.A

		• Consult the local communities on the flood's seasons in the area.		
	Solid waste produced by workers (trash and plastic bags) accumulates and pollutes the environment and Stones extraction and waste accumulation and soil excavation	• Ensure that workers regularly collect all solid trash in enclosed bags stored at inaccessible areas to animals and transport them to the designated landfill or dispose of it in a proper way that does not impact the environment. • Ensure good housekeeping practices at latrines. • Ensure no waste is stored near wadis or runoffs and ensure regular disposal by certified contractors. • An appropriate mechanism was agreed upon for the management of waste resulting from the excavation to be transported to pre-designated areas. Dust residues that may be produced are moved to the designated areas. • Properly covering trucks that transport collected waste to avoid spillage during transportation. • Attach the waste receipt from the relevant landfill authorities. • The Contractor's staff should be trained in waste handling. • Ensure that the quarries are not located in ecologically sensitive zones, not zones with community conflicts. • Quarries need to be inspected before being used.	• Community Committee • Contractor • Resident Engineer	N. A

	Hazardous materials/waste	• Ensure proper storage of hazardous materials and wastes. Any potentially hazardous materials or wastes will be stored, handled, and disposed of according to their Material Safety Data Sheets. • Ensure that hazardous wastes (i.e., oil containers, etc.) are properly stored and insulated away from drainage areas and runoffs, managed and disposed of safely and legally. • Ensure the presence of spill prevention kits if possible. • Ensure workers do not spend long exposure times to chemicals. • Ensure hazardous wastes and materials are handled by trained workers.	• Contractor • Resident Engineer	N.A
	Sewage and liquid pollutions discharge to sea water and Risks on coastal and marine habitats and related biodiversity	• Establish a liquid waste management plan from all the landing site components and proper disposal at authorized areas by EPA and other relevant authorities. • Regular monitoring and inspection should be carried out on the temporary latrine. • Ensure providing special containers to dispose the used oil from the generator. • aware contractor and the implementation staff about the sensitivity of the marine environment and the importance of not pollute the sea and the suitable ways and places to dispose the liquid waste to its places. • Ensure regular maintenance by trained workers. • Ensure Designs the fuel station and gas / fuel storage area involve suitable concrete base and far away from water area. Ensure all chemicals are stored, handled and disposed according to their materials safety data sheets by trained workers.	• Community committee, • Local Authority • Fish Association • Contractor • EPA	N.A

		• Carry out regular biodiversity monitoring and inspection on the status of habitats (seaweed, and other organisms present in the area) via snorkeling or diving. This could be done in collaboration with the environmental protection agency (EPA). • Carry the construction work outside of biodiversity sensitive seasons (fish spawning seasons etc.) This could be done in collaboration with the environmental protection agency (EPA).		
Operational and maintenance phase	Liquid waste discharge to sea water	• Establish a liquid waste management plan for all the landing site components and ensure perfect reflection in the intervention designs like for the selling yard, toilets, … etc. • Ensure proper disposal of wastewater and other types of waste at authorized areas in coordination with EPA and other relevant authorities. • Regular maintenance and inspection should be carried out on the septic tank. • Ensure providing special containers to dispose of the used oil from the generator and give awareness to the locals about its important. • Fishing boats' engines, Vehicles, and equipment such as petrol pumps must be subjected to regular maintenance to avoid any leakage of hazardous liquids. • Ensure that site machine repair workshops and petrol pump area have impermeable floors to confine pollutants. • Ensure the presence of spill prevention kits near the gas station.	Community committee, Local Authority Fish Association	N.A

		• Ensure refueling of boats is done in an environmentally safe manner (i.e enclosed surface to prevent leaks from boats into the sea). • Remove spills right away. • Implement a penalty fee for boats/fishermen who release waste into the sea. • Inform the public of maintenance times. • aware fishermen about the sensitivity of the marine environment and the importance of not pollute the sea and the suitable ways and places to dispose the liquid waste to its places. • Handing the sub-project to the respective local authorities. • Sign an agreement with local authorities on the maintenance requirements. • Ensure regular maintenance of project components and septic tanks.		
	Air Emissions from organic waste and power generations	• Cleaning regularly the selling yard to avoid the bad odors. • Disposing regularly of the organic waste • Maintain machinery in good working conditions to minimize emissions including exhaust emissions of CO, NOx, and fumes. • Provide adequate protective wear for workers, and equipment must be maintained regularly to avoid any emissions. • Offer good practice awareness to fisheries to turn off boats, and electric generators when not in use	• Community committee, • Local Authority • Fish Association	N.A
	Solid Waste Disposal	• Insert solid waste management plan form all the landing site components and ensure perfect reflection in the intervention designs like for the selling yard, toilets, … etc. • Regular maintenance and inspection should be carried out.	• Community committee, • Local Authority • Fish Association	N.A

		• Ensure providing special containers to dispose the solid waste and give awareness for the locals about its important. • Inform the public of maintenance times. • Aware fishermen about the sensitivity of the marine environment and the importance of not pollute the sea and the suitable ways and places to dispose the fish gears to its places. • Handing the sub-project to the respective local authorities. • Sign an agreement with local authorities on the maintenance requirements. • Ensure regular maintenance of fish landing. Disposing regularly the organic waste		
	Biodiversity Conservation	• Proper management of fishermen by using eco-friendly fishing gear and specifying fishing season and managing the carrying capacity of the area. • Implement a fishing season away from the spawning season and sensitive fish seasons (this can be managed with fish authorities and EPA) • Raising awareness of fishermen about the importance of marine habitats and measures used for conservation of marine species including the negative impacts of overfishing. • Encourage the use of mooring anchorage instead of traditional anchors. • Ensure not disturbing turtles that reach the landing site shore and release any caught sea turtle right away. • Carry out regular biodiversity monitoring and inspection on the status of habitats (seaweed, and other organisms present in the area) via snorkeling or diving. This could be	• Community committee, • Local Authority • Fish Association	N.A

		done in collaboration with the environmental protection agency (EPA). • Allow fishing in specific seasons outside of biodiversity sensitive seasons (fish spawning seasons etc.) This could be done in collaboration with the environmental protection agency (EPA) and fishing authority.		
	Lack of maintenance	• The GAF and fisheries associations are committed to maintaining the intervention. • Raise the awareness of the fishermen represented by local authorities and communities' committees. • Sign an agreement with local authorities and communities' committees to ensure subproject maintenance and sustainability of the project. • Inform the beneficiaries about maintenance periods and times beforehand. • Training a maintenance team from fisheries associations. • Regular maintenance and inspection should be carried out.	• GAF • Local Authority • Fish Association • Community committee,	N.A
	High energy usage	• Energy-efficient appliances and equipment, such as ENERGY STAR-certified products, will significantly reduce energy consumption. These devices are designed to operate more efficiently, using less energy while providing the same level of functionality. • Enhancing insulation and sealing air leaks will improve energy efficiency by reducing heat transfer and minimizing the need for cooling. • Using energy-efficient lightening LED bulbs. • Regular maintenance of energy-consuming systems and equipment will ensure they operate at optimal efficiency levels, reducing energy consumption and waste.	• GAF • Local Authority • Fish Association • Community committee,	NA

		• Raising awareness about energy conservation and promoting energy-saving behaviors.		

5.2. The occupational health and safety risk management plan

Table 7: Occupational and Health Safety Plan

Tasks with risk possibilities	Hazard	Risk degree			Risk mitigation measures	Risk degree after			Responsible	Estimated Cost
		H	M	L		H	M	L		
General Requirements (OHS general actions for all activities of the sub-project)	• (General): Conduct comprehensive training about occupational and health safety (OHS) aspects before the beginning of the sub-projects implementation by PWP. This includes (hazards associated with the activities., how to use tools properly mitigation measures, and workers' responsibility as well as the disciplinary action against any violation. • (General): Weekly repeated awareness sessions on OHS hazards associated with the activities, mitigation measures, and workers' responsibility as well as the disciplinary action against any violation. • (General): Workers sign that they have received awareness about the implementation of the activity, and that they understood the special procedures that help mitigate, minimize and avoid potential risks. • Conduct daily toolbox talks for workers. • Integrate the OHS measures in the activities' detailed implementation plans (DIPs) to ensure the implementation of OHS measures on time. • Activation of the Permit to Work (PTW)[24] system for the activities of the moderate and high risk. • Ensure the right authorization procedures are in place for the permit to work in the worksites. • (General): Ensure maintain occupational health and safety system in the site to protect workers from hazards and risks.								• Contractor • Resident Engineer • Workers	provide safety equipment for workers 35000 $ 4% from the intervention cost

[24] A work permit is a permit that gives the contractor approval to begin carrying out the activity specified in the permit after reviewing the risks and control procedures for this activity.

	• (General): Workers sign that they have received awareness about the implementation of the activity, and that they understood risk assessment that help mitigate, minimize and avoid potential risks. • (General): Ensure the necessary personal protective equipment (PPE) is always worn by workers and they get it for free. • (General): Involving the community committee in the monitoring of safety procedures and reporting any risks. • (General): Emergency response plan to be in place with details of the nearest hospital or medical center, responsibilities are understood for all works, first aid boxes are available and a list of trained first aiders is posted and known by all workers. • Ensure effective monitoring to the worksites including inspections and spot checks to ascertain compliance with OHS measures. • Conduct regular inspections for any unsafe acts, near misses, or accidents. • Discover the root causes of any non-compliance cases or/and accidents occurring and suggest the corrective actions to avoid reoccurring. • Conduct regular inspections for any unsafe acts, near misses, or accidents. • Discover the root causes of any non-compliance cases or/and accidents occurring and suggest the corrective actions to avoid reoccurring. • Provide training on handling, storing and disposing cement and any type of chemicals . • Wear high rubber boots to protect from snake bites • Ensure no work is conducted during bad weather conditions (i.e., sand storm, dust storm, rainy seasons etc.) • In case ladders are used, inspect their stability prior standing on them • In case scaffold are used, inspect their stability and well insulted by competent person prior using it. • Ensure proper speed limit and driving safety measures are adhered to including wearing seatbelts		

	• Ensure workers are trained on handling, storing and disposing chemicals including cement and are aware of its health hazards. Additionally, ensure that workers handle and store and dispose chemicals and cement according to its MSDS. • Aware workers on the risks and hazards of water, enabling them to identify and avoid dangerous weather conditions and unsafe waterbodies. • Adequate supervision to prevent swimming and provide a trained lifesaver. • Provide life and health insurance to all project workers. • Allot regular breaks and provide drinking water for workers • Report major accidents to the WBG within 48 hours by UNDP.									
Excavation and Backfill Works	• Workers fall from the edge of the 'excavated sites. • Excavation sides get demolished or soil slides during excavation or excavation residues slide on the worker during excavation. • Dust, sand and small parts volatilize while excavating in sandy soil. • Limb injury while using drilling and excavation equipment. • Exposure to hot sun during drilling causes headaches • Misuse of equipment necessary for excavation or removal of waste and the like.		x		• Site preparation and proper organization of the stacked material in order to ensure the safety of workers during work • Install warning signs, barricading of working area with safety tapes and fencing to prevent unauthorized access of public and pedestrians to openings, excavation, and backfilling work areas in particular and the work sites in general. • Conduct inclined excavation if the soil is collapsible or saturated with water. Also,			x	Contractor / Resident Engineer / Workers	Part of PPEs cost first item

					the sides of the excavation shall be supported with timbering work if required. • Use appropriate equipment for levelling and excavation and pay extra attention while using mechanical excavators. • Removal of falling blocks objects or sliding soil in any area above the level of excavation in and around the pit. • Ensure collection and transportation of the excavation residues to the designated landfills right away. • Safety gloves, dust masks, protective helmets, protective boots and all necessary PPE to mitigate the risks of conducting the activity are to be used by workers at all time on-site. • Deposit soil extracted 0.80 meter away from the edges. • Allow for regular breaks and provide water • Workers have the option to remove themselves from					

					unsafe working conditions without any reprisals.					
Mixing the concrete materials.	• Serious injuries due to contact with cement mixture equipment when it is working. • Blisters on the hands due to the cement component impact during the mixing and direct contact with liquid cement.		x		• Use of professional labor force to implement activities that are obligatory while mixing and pouring concrete. • Use safety gloves while loading, transporting, and distributing stones while building. • Long, rubber safety boots shall be worn while mixing concrete. • Ensure concrete mixture equipment is in good condition. • Workers to be aware of concrete mixture equipment risk and keep a safe distance during its movement and rotation. • Locate the cement mixer equipment on firm level ground to avoid collapse during operation and locate it away from traffic.			x	• Contractor/ Resident Engineer	Part of PPEs cost first item
Construction of rooms walls, plastering, painting, and	• Falling from height. • Injury or severe fractures caused by falling. • Blisters on the hands due to direct		x		• Ensure that the stairs or scaffolding are stable and set up on the leveled ground and must be affixed to any stable			x	• Contractor/ Resident Engineer	Part of PPEs cost first

floor pouring and tiling.	contact with cement. • Chemical inhalation. • Injury of the worker's head or construction while transporting stones. • Foot injuries while mixing concrete. • Eye Injuries while applying plastering scratch or base coat. • Injuries of the shoulders and back muscles because of lifting the wrong way or lifting heavy load for long, far distances between the worker and construction. • Injuries in hands and feet due to using of hand tools like hammers, and chisels. • Misuse of equipment during plumbing work.				body with no movement. • The used scaffold shall be in excellent condition in addition to ensuring the quality of the supporting floors casting works and scaffolds supported by the supervising engineer. • Inspect ladders before usage • Wear fall protection devices and helmets • Use a safety harness working at height. • Use safety gloves while loading, transporting, and distributing stones • Long, rubber safety boots shall be worn while mixing concrete. • Eye protection must be worn to protect the eyes from volatile cement while applying plastering scratch or base coat or braking and forming stones as well as use safety gloves while mixing concrete.					item

Installation of pipes lines and plumbing works	• Risk due to excavation works for pipes lines. • Injuries during the pipe's connection works. • Misuse of equipment during plumping work. • Traffic Accidents. • Vehicles running into workers (pipeline area)		x		• Hire skilled labor to implement these activities. • Follow the mitigation measures for excavation risks mentioned above in the excavation risk part. • Coordinate with local councils, beneficiary committee before excavation of water supply pipelines. . • Install traffic signs to reduce speed and alternative roads, as well as install the warning signs for the work area.Ensure a flagman is present to warn vehicles of work area and to arrange traffic on site.			X	• Contractor/ Resident Engineer	Part of PPEs cost first item
Demolition work for the existing buildings	• Serious accidents/ injurious due to demolition works. • Working on heights • The collapse of demolition works on workers • Workers' ignorance of safety hazards at the worksite. • Using ladders while Demolition. • Using wrong equipment's for wrong purposes	x			• Safely remove the damaged parts. • Avoid using ladders during demolition works • Inspect ladders before usage • Wear fall protection devices and helmets • Ensure workers are not working during environmentally risky periods (sand storm, rainy periods etc.)			x	Contractor / Resident Engineer /Workers	Part of PPEs cost first item

Working at heights	• Injury/death - inadequate ladder; inadequate use of ladder; failure to wear fall arrest gears; inadequate scaffold erection; inadequate safe work procedure	x			• Use safe scaffolding for working at height and ensure it is according to safety standards and specifications. • Check the scaffolding specification before using it and ensure it is according to international safety standards. • Inspect ladders before usage • Wear fall protection devices and helmets • Daily check for scaffolding before starting the work at heights to ensure the working platforms with guard- rails, fence, toe-boards are according to safe specifications standard. • Ensure the scaffolding is erected to fixed buildings and on safe ground. • Using of scaffolds sufficient large to allow safe use and movement and ensure there is sufficient bracing into scaffolds. • Determine the allowed loads for use on the platforms to prevent its collapse.			x	Contractor / Resident Engineer /Workers	Part of PPEs cost first item

					• Erecting scaffolds by competent workers. • Inspect the scaffolds before starting the work. • Issue special permit to work for scaffolds to ensure it is safe to use. • Ensure that the stairs or scaffolding are stable and set up on the levelled ground and must be affixed to any stable body with no movement. • Use safety harnesses by workers during working at height. • Ensure cautious supervision of the workers during working at height. • Use safety gloves while loading, transporting, and distributing stones while building. • Long, rubber safety boots shall be worn while touching the concrete. • Eye protection must be worn to protect the eyes from volatile cement while applying plastering scratch or base coat or braking and					

					forming stones. as well as use safety gloves while mixing concrete. • Wearing isolation boots and gloves are obligatory while using the electrical tools. • Overalls, eye protection, and face visors are provided for workers who work on welding or cutting. • Ensure ladders are stable and provide fall prevention devices.					
Dealing with hazardous material Paint,epoxy and insulated materials	• Skin and eye irritation and allergies from hazardous material such as wet cement, paint, epoxy and insulation materials.		X		• Store, handle and dispose hazardous material and waste according to their MSDSs • Hazardous materials and wastes should be handled by trained workers. • Workers should be provided with proper PPEs • Using local exhaust ventilation systems or open windows/doors to ensure good airflow and reduce inhalation of paint fumes • For tasks with higher chemical exposures, limit the work duration and rotate workers to reduce total			x	Contractor / Resident Engineer /Workers	Part of PPEs cost first item

					exposure. • Keep tools and equipment, and their safety features, in good working order. This can be achieved by routine inspection of working equipment. • Select paints with lower VOC content- Use water-based paints instead of solvent-based varieties where possible. • Ensure adequate storage and labeling of chemicals items according to safety data sheets helps reduce accidental exposures. • Safety goggles help protect eyes against splashes or airborne chemical particles that can cause irritation. • Presence of Hand washing and showering after chemical works can remove residual chemicals and reduce dermal absorption. • Consider alternative products where possible that do not contain harmful chemicals like aromatic hydrocarbons					

					and lead. • Alternative products where possible that do not contain harmful chemicals like aromatic hydrocarbons and lead. • Train workers on chemical hazards, exposure symptoms, and safe work practices to minimize chemical absorption and inhalation. • Use drops cloths, masking tape, plastic sheets and other coverings to protect floors, walls, furniture and equipment from chemical splashes and overspray. • Clean up spills immediately • Restrict access to the painting, and insulation areas to only the workers actively involved in the job.					
Breaking, reshape, quarrying and transferring of stones	• Eyes get injured while cutting stones. • Hand Injuries. • Foot injuries • Stones fall on workers while transporting, or loading. • Workers fall while standing on stones to cut or walk on them.		X		• Issuance of special permits by the resident supervising engineer to carry out the work. • The use of Personal Protection Equipment (PPE) during the work of cutting and braking stones is			x	• Contractor/ Resident Engineer	Part of PPEs cost first item

	• Car accidents occurrence against workers while transporting materials. • Improper use of equipment while cutting, and reshape stones. • Use of explosives to cut or drill on stones or rocky areas. • Stone splinters resulting from cutting stones cause damage to the worker's body. • Hearing injury.				obligatory. Ensure that all necessary protection measures are properly considered. • Inspect quarries before entering • Raise awareness to workers on safe cutting techniques • Use of safety gloves while loading, transporting, and distributing stones. • Wearing appropriate safety boots is obligatory during the activity implementation. • Safety eye wear must be on to protect the eyes from stone splinters during the breaking and cutting of stones. • Full precautions should be taken into consideration during cutting stones from high elevations. • Use ear plugs to protect the ears from the noise made by the mechanical excavators and cutters in addition to wearing dust mask to protect from volatile dust. • Use safe and appropriate					

					equipment for cutting and forming of stones, with continuous maintenance. • Store and organize stones in the work area so as not to block the pathways, or cause danger to pedestrians and workers. • Use of explosives is forbidden, and only safe excavation equipment to be used.					
Work in closed or confined spaces (Water Tank or Septic Tank)	• Injuries due to lack of oxygen or toxic gases. • Variation in temperature (cold, hot). • Trapping risks inside these places.		x		• A permit must be cut issued entering any closed area from the site official to review the safety equipment before starting work in anticipation of any emergency. • A proper supervision to ensure OHS measures are in place and access control logbook to record all trained workers working in the confined areas including register of workers names, Location, and working shift, maximum shift time, start time and finish time of entry to the confined areas to ensure safety of workers.			x	• Contractor/ Resident Engineer	Part of PPEs cost first item

					• A proper ventilation for confined areas prior allowing any work and gas test to be conducted prior work shift to ensure the areas are free from any toxic and harmful gasses. • Specific PPEs suitable to the type of activity, including provision of self-contained breathing apparatus (SCBA) with oxygen tanks to workers when working inside areas where there is insufficient oxygen with proper training on how to use them properly. • Hire skilled labor to implement these activities. • A suitable lighting shall be provided inside the confined areas during work hours. • Ensure limited time spent in confined areas. • Leave the place immediately in the event of an emergency. • Do not use any smoke generators or sources in enclosed spaces. • The presence of an observer outside the closed place					

					permanently during work in anticipation of any emergency situation.					
Reinforcement Concrete works include reinforcement steel bars installation and concrete pouring (columns, beams, slabs),	• Workers fall from height (more than two-meter) which may lead to death or serious injuries. • Injuries or serious fractures as a result of reinforcement steel bars placing and concrete pouring. • Various typical injuries to the hands during shuttering work and reinforcement steel bars placing. • Falling materials from high surfaces on the workers or pedestrians may cause death or serious injuries. • Collapsing of working scaffolding, platforms, concrete formwork on the workers or pedestrians may cause death or serious injuries. • injuries due using of cutting equipment. • Injuries in hands and feet due to using of hand tools like hammers, and chisels.		x		• Use safe scaffolding for working at height and ensure it is according to safety standards and specifications. • Check the scaffolding specification before using it and ensure it is in accordance with international safety standards. • Do daily check for scaffolding before starting the work at heights to ensure the working platforms with guard- rails, fence, toe-boards are properly installed in accordance with safe specifications standards. • Ensure the scaffolding is erected to fixed buildings and on safe ground. • Using of scaffolds sufficiently large to allow safe use and movement and ensure there is sufficient bracing into scaffolds.			x	• Contractor/ Resident Engineer	Part of PPEs first item

					• Check the platforms big enough to allow safe use of equipment and materials, safe passage, clean and tidy. • Determine the allowed loads for use on the platforms to prevent its collapse. • Erect scaffolds by competent workers. • Inspect the scaffolds before starting work. • Issue special permit to work for scaffolds to ensure it is safe to use. • Ensure that the stairs or scaffolding are stable and set up on the leveled ground and must be affixed to any stable body with no movement. • Use safety harnesses by workers during working at height. • Ensure cautious supervision of the workers during working at height. • Use safety gloves while loading, transporting, and distributing stones • Long, rubber safety boots shall be worn while touching					

					the concrete. • Eye protection must be worn to protect the eyes from volatile cement while applying plastering scratch or base coat or braking and forming stones as well as use safety gloves while mixing concrete. • Wearing isolation boots and gloves are obligatory while using electrical tools. • Overalls, eye protection, and face visors are provided for workers who work on cutting.					
Implement and install electrical works	• Injuries during electrical foundation works. • Injuries from electrical shocks. • Injuries because of stumbling by random power wires.	X			• Identify buried electrical cable prior the activity. • Hire skilled labour to implement these activities. • Issuance of work permits by the resident supervising engineer to carry out the work • Ensure adhering to electricity resistant PPEs. • Do not work during wet seasons			**X**	Contractor Resident Engineer Workers	Part of PPEs first item

Risk of Lifting Activity	• Hazards related to the loads, e.g. crushing due to impact of moving objects or loads falling because they are not aligned properly or the wrong type of slings were used • Hazards from cranes falling over because of improper fixation or strong wind, unsafe loads, loads exceeding the safe weight limits, trapping/crushing risk while working at height, falling from height. • Hazards related to poor environment that may interfere with communication between workers or concentration needed for the task (noise) or cause sweaty, Slippery objects (heat, poor ventilation) • Contact with overhead electrical cables. • Risk of High wind speed, Poor communication and poor visibility	X			• Close the lifting area with fence to prevent access to the lifting area during lifting work; • Install warning Signs in lifting activities site; • Carry out lifting work by well trained, qualified, and certified lifting team; and provided means of communication and flagman; • Use well-maintained equipment for lifting that are appropriate for the weight; well checked and tested by a third party; • Secure loads when lifting and use strong and reliable fixation materials to make sure that the load is well tighten and no solid parts falls from the load during lifting; • Protect the units against staining, discoloration and other damage until they are installed in their final location. • Lifting device capacity shall be 1.65 times the maximum			**X**	• Contractor/ Resident Engineer /Workers	Part of PPEs first item

					calculated static load at that point. • An ultimate load shall be ≥ 4 times the maximum static load. • Ensure to coordinate with local authority on areas with electricity grids/networks and cables in order to avoid electrical shocks. • Prohibit working during rainy periods. • Ensure a proper buffer distance between workers and lifting areas is kept.					
Manual Handling	• Risk of heavy, Bulky, or unwieldy load • Risk of Unstable/ unpredictable loads • Risk of PPE clothing hindering the movement or posture • Risk of poor communication on safety between workers • Risk of workers' back injuries due to wrong manual handling.		**x**		• Avoid the need for unnecessary manual handling as possible when suitable equipment is present. • Reduce the load risk by using lighter weights or more stable containers. • Reorganize the activity to further reduce the impact on the individual(s). • Utilize mechanical lifting aids or equipment as appropriate. • Ensure appropriate rest breaks, job rotation, and training are involved.			**x**	• Contractor • Resident Engineer • Workers	Part of PPEs first item

					• Raise awareness to workers on safe lifting techniques to avoid back injuries • Provide personal protective equipment (e.g., gloves, foot protection, and non-slip footwear). • Ensure trained workers are dealing with cement and wearing proper PPEs including gloves, googles and masks • Provide training for workers on handling and storing any hazardous substances and materials if any.					
Transfer of equipment and workers	• Road accidents from bad driving		**x**		• Ensure drivers are aware of good driving practices such as wearing seat belts and maintaining speed limit.			**x**	• Contractor • Resident Engineer • Workers	Part of PPEs first item
Operation Phase										
Working at Night	• Poor or insufficient light at project site increase chances of accidents • Pushing female to work at night which may lead to increased social risk or conflict in their families etc**.**		**X**		• Use of permit to work for working at night. • No more than 6 hours of work per day are allowed during Ramadan as per the legislation and LMP. • Work hours are limited to the approved 6 hours per day that			**X**	• Resident technical Engineer/ • Consultant Engineer/ • Contractor	Part of PPEs first item

					can be done in one shift at night or divided into two shifts (day and night times) 3 hours each for each shift according to the local law. • Workers are voluntarily agreed to work at night. • Ensure proper lights with adequate distribution are installed at project site. • Ensure work site is properly secured and in/out is fully controlled. • Ensure activities conducted at night are not high risk. • Provide head lights to all workers at project site. • Install reflective /Florescent signs around the work areas. • Ensure proper PPEs are provided for workers, including reflective vests, etc. • Ensure supervisors are available at all times. • No alone worker is allowed at night. • Ensure GM system is place and awareness is given to all workers and they sign the code of conduct.					

					• Raise awareness on risks of working at night with all workers. • Ensure Emergency Response Plan is in place. • Ensure Communication means are in place. • No female worker is permitted to work at night at any outdoor interventions. • Female is encouraged to participate at household interventions when possible. Raise awareness towards Gender, GBV and PESA.					
Working in unhealthy areas	• Outbreaks of infectious disease such as diarrheal diseases and their consequences as cholera and dysentery, in addition to intestinal parasites among fishermen, vendors and other workers are common in such conditions. • unhygienic conditions and poor sanitation are prevailed. • risk from drowning and fishing during bad weather and sea storms seasons.		X		• Awareness programs should focus on providing the trainee with knowledge that illustrate the benefits of proper fish handling and its impact on health and economy. • Other programs could also help fishermen to acquire and build necessary skills and good practices to raise quality and reduce manifestations of fish spoilage according to scientific and health standards with high efficiency.			X	• Fish Association • Fish Authority • SMEPS during their training program • community committee	N.A

					• Awareness sessions to fishermen on the risks and hazards of water, enabling them to identify and avoid dangerous weather conditions and unsafe waterbodies. • Adequate supervision to prevent swimming, and provide a trained lifesaver. • Provide and train the fishermen on rescue means like lifejackets, GPS, etc. • Install early warning system for fishermen • Train the fisheries on the evacuation procedures in the sudden sea storms' cases.					

6. Environmental, Social, and OHS Clauses and Liabilities for Contractors

6.1. Conditions for the Eligible Contractors

1. Provision of adequate and suitable equipment for the activities of the subprojects
2. A financial capability that ensures the subprojects will be executed and completed as per agreed terms and conditions.
3. Provision of health and life insurance policies for the workers as a condition of signing the contracts.
4. The OHS tools should be provided with acceptable quality according to the BOQ with conducting training for the workers. These materials should be conditional for the handover of the site to the contractors.
5. Contractors are fully responsible for any accident or incident that may occur
6. Contactor's strict compliance with the ban on the use of explosives.
7. Contractors and contractors' site representatives have undertaken OHS training and are fully aware of the risks, mitigation measures, and responsibilities.
8. Contractors should abide by the principle of non-discrimination in all aspects of employment.
9. Banning the use of explosives should be enforced and monitored.
10. The contractor will be terminated if they do not comply with the E&S and OHS mitigation measures during implementation.
11. Contractors shall ensure compliance with the Code of Conduct in the contract

6.2. Environmental and Social Clauses for Contractors

The contractors shall supply and execute the necessary works on-site to mitigate the environmental and social impacts of the subproject in accordance with the bidding and contractual E&S requirements. The Environmental and Social Clauses for Contractors should at least reflect the following but not exhaustive items:

1. Worker Health and Safety:

To avoid work-related accidents and injuries, the contractors will:

- 1.1 Provide occupational health and safety training to all employees (including the contracted community workers if any) involved in the work.
- 1.2 Provide protective masks, helmets, overalls and safety shoes, and safety goggles, as appropriate.
- 1.3 Provide workers in high noise areas with earplugs or earmuffs.
- 1.4 Ensure availability of first aid box.
- 1.5 Provide employees with access to toilets and potable drinking water and soap.
- 1.6 Train workers regarding the handling of hazardous materials and storing and managing hazardous materials.

2. Labor Management Plan:
   The contractor is responsible for all sub-contractors and suppliers working under him and ensure that they met the requirements of the national law and the ESF

The estimated / planned number of labors for rehabilitation and enhance Al-Qurn Landing Site is **109** (33%) skilled and **218** (67%) unskilled labor which will be working according to implementing activity during the project life (as classified in Table 2) in which the expected life project contracts will be twelve months, it is expected the skilled laborers will not be given accommodation. Contractor shall ensure that all workers are hired formally with proper

contract, in accordance with national regulation, ESS2, and the LMP. In which the contractor is responsible on:

2.1 Wages and Deductions: The contractor shall be in line with the current market rates paid for skilled, semi-skilled, or unskilled labor. Also, the daily rates could differ from one governorate to another; hence, they should be equivalent to the wages paid in the specific location. PWP field staff shall monitor and ensure the contractor pays all workers males and females based on market rates in the area.

2.2 Child Labor and Forced Labor: Ensure all workers are 18 Years old and above, and no child, forced, involuntary or unpaid labor will be used in any work.

2.3 There will be no discrimination in the wage rates between males and females for that there will be no forced labor employed.

2.4 Labor influx: The contractor should use workers from the local communities as possible. Some parts of the activities include special works that require skilled labors, these tasks may undertake by appropriately skilled workers from the targeted areas and when not available, the contractors may hire skilled laborers from nearby areas.

2.5 Gender-based Violence (GBV)/Sexual Exploitation and Abuse (SEA)/Sexual Harassment (SH): The contractor and its workers should sign the Code of Conduct and ensure workers respect and adherence to the Code of Conduct CoC for the local community's protection and do no harm. Any breach of the code of conduct will attract sanctions as provided in the CoC. Ensure that workers respect local community cultures, and social safeguard issues on Gender, SEA/H, and GBV. Raise awareness of the GRM system and how it can be used to report any GBV cases.

2.6 Community Health and Safety: The contractor shall protect the local communities from any risks that might be generated during the implementation as mentioned in the OHS plan above.

2.7 Occupational Health and Safety (OHS): The contractor shall maintain occupational health and safety system on the site to protect workers from hazards and risks and provide adequate health and safety training[25], required PPE, first aid box, toilets and potable drinking water, and as mentioned in the OHS plan above.

2.8 Overtime Work: The contractors shall provide workers basic wages per hour of overtime on normal working days and on the day of weekly rest, and official holidays and leave, in addition to the entitlement to standard wages for such holidays according to the Yemeni Laws.

2.9 Gender and Social Inclusion: Contractors to adopt a non-discrimination in job opportunities during the implementation to ensure a non-discriminatory and inclusive manner, including women, as mentioned in this Environmental and Social Management Plan.

2.10 Training of workers: PWP staff and Contactors shall provide the workers with required training and daily toolbox talk in the OHS, GBV, SEA, GRM, and as mentioned in the Environmental and Social Management Plan.

2.11 Addressing worker grievances: Contactors shall provide the worksite with a GM system for all workers (contracted workers) including providing the complaints box and the project board with complaint means. The mechanism will also allow for anonymous complaints to be raised and addressed. Training on handling grievances in a positive manner shall be provided to the contractor. Ensure that workers are aware that grievances will be handled positively. Contractors, resident engineers, and community committees are trained to handle grievances in a positive manner

[25] This project will be implemented by national / traditional contractors. However, the contractor will be responsible for providing training and PPEs for each worker

3. Supply and implement roadblocks and traffic signs to prevent the entry of non-workers to work sites (zinc - timber - concrete blocks - warning tapes - traffic signs).
4. Conduct work section by section and keep enough access to spaces for fishermen for the remaining functioned parts of the landing site.
5. Assign a permanent safety supervisor to follow up the implementation of an environmental and social management plan as well as OHS requirements during the implementation of work activities at the site
6. Apply a safety work permit system for all working activities at the site to ensure full implementation of ESMP and OHS requirements.
7. Supply of personal safety equipment and tools including boots, helmets, gloves, goggles, masks, earplugs, safety belts, air breathing apparatus, full body harness etc. in quantities enough for all laborers at the expense of the contractors and ensure the adherence of using by all.
8. Provide first aid boxes in the worksites (as per the emergency response plan) which contain (adhesive plaster of different sizes - sterile gauze - scissors – disinfectant- forceps - etc.).
9. Provide a contingency plan containing the names and numbers of the nearest health center and local assistants, the routes to be used, and the means of transport.
10. All necessary PPEs gears required for the job are distributed to each worker who will be participating in the implementation.
11. Provision of water for these bathrooms and or trenches with covers and obliging all workers and supervisors to use them.
12. Separate the material and store them accordingly and provide enough space for movement and maneuvering.
13. Removal of all waste during the implementation period to a dedicated location outside the work area (allocated landfills) and following the instructions of the consultant.
14. Commit to placing disturbing equipment away from populated places, not at accessible zones for the community, nor at sensitive zones and watercourses, and operating them at the appropriate times.
15. Commit to storing hazardous materials away from workers and not to change oils or leave grease residue in the work area.
16. Commit to the repair of public services (electricity, telephone, water, sewage) that are broken during the implementation of the project.
17. Report immediately severe accident or injury occurring during the execution of the work and within a maximum period of 24 hours.
18. Conduct awareness sessions about OHS before the beginning of work by the contractors this includes hazards associated with the activity, mitigation measures, workers' responsibility, GRM, sexual harassment, abuse, and gender-based violence as well as the disciplinary action against any violation.
19. The contractors shall adhere to the use of the Permit to Work system (PTW) for all activities and ensure all workers are aware of the system.
20. Contractors must address the risk of gender-based violence, through:
21. Mandatory and repeated training and awareness-raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women.
    20.1. Informing workers about national laws that make sexual harassment and gender-based violence a punishable offense that is prosecuted.
    20.2. Introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for non-compliance (e.g., termination)
    20.3. Adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.

22. Contractors must not employ workers below the age of 18 and must ensure verification of documents is conducted before hiring.
23. Provide proof of insurance for all laborers, including the third party, before the implementation of the project.
24. Commit to not use any type of explosive materials for the extraction of stones required for the project or any relevant works.
25. Movement of Trucks and Construction Machinery: The Contractors moving solid or liquid construction materials and waste shall take strict measures to minimize littering of roads by ensuring that vehicles are loaded in such a manner as to prevent falling off or spilling of construction materials. This could be done by sheeting the sides and tops of all vehicles carrying mud, sand, other materials, and debris. Debris should be transferred to assigned places in the landfill.
26. Traffic Safety Measures: The Contractors shall provide, erect, and maintain such traffic signs, road markings, barriers, traffic control signals, and other measures as may be necessary for ensuring traffic safety around the rehabilitation site. The Contractors shall not commence any work that affects the public motor roads and highways until all traffic safety measures necessitated by the work are fully operational.
27. Gas, Noise, and Dust Control: The Contractors shall take all practicable measures to minimize nuisance from noise, vibration, and dust caused by heavy vehicles and construction machinery. This includes:
    - Respecting normal working hours.
    - Maintaining equipment in a good working order to minimize extraneous noise from mechanical vibration, creaking, and squeaking, as well as emissions or fumes from the machinery.
    - Shutting down equipment when it is not directly in use.
    - using operational noise mufflers
    - Provide a water tanker and spray water when required to minimize the impact of dust.
    - Limiting the speed of vehicles used for construction.
    - Environmental training on machinery efficiency, the importance of maintenance, transportation efficiency and good practice usage of machinery in order to mitigate impacts from dust, gas, noise and climate change.
28. Protection of the Existing Installations: The Contractors shall properly safeguard all buildings, structures, works, services, or installations from harm, disturbance, or deterioration during the concession period. The Contractor shall take all necessary measures required for the support and protection of all buildings, structures, pipes, cables, sewers, and other apparatus during the concession period and will be required to repair any damage that may occur, in coordination with the Municipality and the relevant authorities.
29. Working in rainy seasons is not allowed where there is a risk of flooding, endangering workers or equipment.

6.3. Environmental and Social Liabilities for Contractors

Contractors will be legally and financially accountable for any environmental or social damage or prejudice caused by their workers and it is thus expected that controls and procedures are put in place to manage environmental and social performance. These will include:

1. Mitigation measures to be included in the contract will be specified in the subproject bidding documents.

2. Deductions for environmental noncompliance will be added as a clause in the Bill of Quantities (BOQ) section.
3. The contractor should fully comply with all instructions; otherwise, according to the contract documents, suitable sanctions should be applied depending on the severity of the expected risk from this noncompliance, such as alert, final alert, and termination of the contract.
4. Environmental penalties shall be calculated and deducted in each submitted invoice.
5. Any impact that is not properly mitigated will be the object of an environmental/social notice by PWP.
6. Any action from the perspective of PWP is severing and can cause a huge impact on the occupational health and safety, in the environment or in the social aspects, PWP has the power to terminate the contractor's contract, but the contractor in the blacklist, and Warranty confiscation.
7. For minor infringements and social complaints: if an incident occurs, that causes temporary but reversible damage, the contractors will be given the notice to remedy the problem and restore the environment. No further actions will be taken if the PWP project engineer confirms that restoration is done satisfactorily.
8. For social notices, the PWP project engineer will alert the contractors to remedy the social impact and to follow the issue until solved. If the contractor does not comply with the remediation request, work will be stopped and considered under no excused delay.
9. If the contractors have not remedied the environmental impact during the allotted time, the PWP will stop the work and give the contractors a notification indicating a financial penalty according to the non-compiled mitigation measure that was specified in the bidding document. No further actions will be required if that restoration is done satisfactorily. Otherwise, if Contractors have not remedied the situation within one day any additional days of stopping work will be considered no excused delay.
10. In the event of repeated non-compliance totaling 5% of the contract value, the Project Engineer will bring the environmental and social notices to the PWP procurement to take legal action.

6.4. Public Works Project Liabilities

1. Provision of insurance policies for the workers as a condition of signing the contracts.
2. PWP site engineer and community committee OHS officer have undertaken OHS training and are fully aware of the risks, mitigation measures, and responsibilities.
3. The contractor will be warned and banned if they do not comply with the E&S and OHS mitigation measures during implementation.
4. Labor management plan.
5. Training of workers: PWP staff and Contactors shall provide the workers with required training and daily toolbox talk in the OHS, GBV, SEA, GM, and as mentioned in the Environmental and Social Impact Analysis Plan and Mitigation Measures above.
6. PWP site engineer Conduct awareness sessions about OHS before the beginning of work by the contractors this includes hazards associated with the activity, mitigation measures, workers' responsibility, GM, sexual harassment, abuse, and gender-based violence as well as the disciplinary action against any violation.

7. Environmental and Social Monitoring Plan

The monitoring plan will clearly indicate the linkages between impacts identified in the ESMP report, measurement indicators, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions.

The implementation of the mitigation measures will be monitored through daily checks by the supervisor engineers, daily by resident technician, biweekly by the OHS/SES staff at the branches as well as monthly visits by PWP subareas managers. The roles and responsibilities of each responsible personnel are as follows:

- Gender Focal Point: is responsible to monitor the implementation of measures under gender action plan, including those related to gender equity, gender discrimination, GBV, SEA, women workforce, beneficiaries' awareness, and GRM.
- Safeguard Specialist: is responsible to monitor all the safeguards process (as a general supervisor) as detailed in the ESMP and other ES documents, including SEP, and ensure their compliance.
- GM Officer: is responsible to monitor the GM processes, including awareness raising, receiving complaints, and following up, and reaching closure.
- Resident Engineer: conduct the daily monitoring and guarantee the compliance in the field in subproject bases.
- Community Committee: support in monitoring and solving the problems if any, support in raising the awareness of the community, monitor the community inclusion and Community satisfaction.
- Subarea Staff: follow up the compliance in sites and ensure everything is implemented according to the ESMP.

Following aspects will be monitored (though the list will keep updated to accommodate any emerging issues or updated aspects that may be recommended by the monitoring reports):

Table 8: Environmental and Social Monitoring Plan

Action	Monitoring methodologies and Indicators	Responsible[26]	Timeframe
Community Health and safety			
Contractor and their workers are aware to respect the local community's protection and do no harm.	**Methodology**: • Provide awareness-rising. • GM system in place. • Contactor and its workers to sign the COC. **Indicators**: • 100% of contractors, and their workers signed the Code of Conduct (CoC)	• PWP Safeguard • Contractor • Resident Engineer • Gender Focal Point	• Before the commencement of work • biweekly

[26] The indicators are shared between the Responsible agencies, some of them are the responsible for implement the action and others are responsible for monitoring the actions' implementation according to the level of the position.

	• The number of complaints received.		
Knowledge of the local community, the community committee, and workers about the GM, as well as the contact numbers.	**Methodology:** • Provide a complaint box, awareness-raising, Signboard with GM contact details in place and brochures distributed. **Indicator:** • The number of awareness-raising. • Presence of sign board with GM contact details • The number of complaints	• Sub-area Staff • Resident Engineer	• Within one week before commencement of work • Bi-weekly
Regular awareness sessions to community members, the community committee, and workers about the use of GM	**Methodology:** • Awareness records **Indicator:** • Number of awareness session.	• Resident Engineer	• At the onset of subproject • Regularly
Public safety during the construction work	**Methodology:** • Visual observation and photos **Indicator:** • Number of recorded injures. • Number of awareness sessions for community	• Resident Engineer • Contractor	• Daily
Community satisfaction	**Indicator**: • Number of grievances raised and types • Number of resolved complaints • Number of accidents	• Community Committee	• Monthly
No child labor is permitted, and workers must be 18 years or older.	**Methodology**: • Verifying age by checking IDs and other available documents • Ensure a Labor Log is available, and all workers are registered • Visual inspection **Indicator**:	• Contractor • Resident Engineer • Community Committee	• Daily

	• Number of child labor (employed/ used or number of recorded workers under the age of 18		
Involvement of the community in the monitoring of the implementation of the sub-project and reporting any findings	**Methodology**: • Disclosure of project activities with designs • Using GM system **Indicator**: • No. of GM complaints from the community • The number of resolved complaints	• Community Committee • Sub-area Staff • Resident Engineer	• Daily
Ensure non-discrimination and inclusion of women and persons with disabilities when selecting beneficiaries	**Methodology**: • The beneficiaries of the project **Indicators**: • Number of women beneficiaries during consultations versus men • Number of women and men in community committees • Number of GM complaints regarding discrimination and solved complaints • Number of consultations with exclusively women groups	• Gender Focal Point • Sub-area staff • Resident Engineer • Safeguard Specialist • Community Committee	• Before the commencement of work • During the implementation
Ensure no financial exploitation of communities or beneficiaries	**Methodology**: • GM complaints • Awareness sessions **Indicator**: • Number of GM complaints regarding financial exploitation	• Sub-area staff • Resident Engineer • Safeguard Specialist • Community Committee	• Weekly • Monthly
Monitoring and reporting GBV and SH issues and GM cases related to GBV, and SH are well treated and mitigated quickly.	**Methodology**: • Provide GM system **Indicator**: • Number of recorded grievances and • Number of resolved complaints	• Gender Focal Point • Safeguard Specialist • GM Specialist	• Weekly

		• Resident Engineer	
Ensuring awareness is raised regarding Gender-Based Violence GBV and Sexual Harassment SH among all the community. Ensure laws are known for any violations	**Methodology**: • Use of Photos • Provide an awareness session about punishing violations. **Indicators**: • Number of awareness sessions • Number of GBV and SH cases	• Gender Focal Point • Resident Engineer • Community Committee	• Monthly
Environmental Impacts			
Soil contamination from accidental oil spills and from liquid waste	**Methodology**: • Visual inspection and photographs **Indicator**: • Change in soil color • Presence of waste outside designated zones • Number of complaints from locals Number of spill events	• Resident Engineer • Contractor	• Daily
Monitor improper waste management by visual inspection	**Methodology**: • Grievances system related to waste mismanagement • Periodic inspection for non-compliance with waste storage **Indicators**: • Number of non-compliance with waste storage and handling • Number of times waste was improperly accumulated, or wasted was recorded and stored outside a designated area. • Number of grievances related to waste mismanagement	• Resident Engineer	• Daily
Air pollution, gas emissions, noise, waste, and traffic management	**Methodology**: • Complaints records. • Visual inspection **Indicators**:	• Resident Engineer	• Daily

	• The presence of fumes /dust observed. • Number of society complaints on the air quality, noise level or waste at work site		
Hazardous materials and wastes storage	**Methodology**: • Visual and photographic inspection **Indicator**: • Number of times hazardous materials and waste were recorded outside designated zones. • Visible soil leak	• Resident Engineer • Contractor	• Daily
Ensure not to work in flood (rainy) season or during water stagnation	**Methodology**: • Knowledge of the rainy seasons • Monitor the weather in the area. **Indicators**: • Number of accidents • Number of flooding events	• Resident Engineer • Contractor • Community committee	• During rainy season
Biodiversity risks	**Methodology:** tion/site visits **Indicators:** ant change in species re and composition ce of dead animals ant decrease in ed cover r of spill events	• Resident Engineer • Contractor • Community committee • EPA	• Monthly
Operation and Maintenance			
Biodiversity Conservation	**Methodology**: Proper management of fishermen. Raising awareness of fishermen. Encourage the use of mooring anchorage instead of traditional anchors. Monitoring and inspection of biodiversity	• Fish Association • Local Council • EPA and fish authority	• Monthly

	Indicators: **Methodology:** Inspection/site visits **Indicators:** Significant change in species structure and composition Presence of dead animals Significant decrease in seaweed cover Presence of fishermen during spawning seasons Number of spill events Presence of mooring buoys instead of traditional anchors Number of awareness sessions provided to fishermen		
Occupational health and safety			
Adherence of contractor to permit to work system for activities as identified by the risk assessment[27] and ensuring all safety measures for the task are in place	**Methodology**: • Issuance of the permit to work. **Indicators**: • Number of issued permits of work and safety measures with the type of work. • Number of incidents/ accidents recorded and type	• Contractor • Resident Engineer • PWP safeguard	Daily as required
All OHS requirements for the sub-project are identified and available in the workplace.	**Methodology**: • Incorporating OHS requirements into project documents. • OHS inspections and audits. **Indicators:** • Number of incidents and types	• Subarea Staff • Resident Engineer	• Daily as required

[27] Risk assessment should be undertaken once in the project cycle and when its required as when we have new activities in the subprojects or when a severe accident happens, in which the risks and their mitigation measures should be attached with sub-project documents.

	• The record of injuries in project reports		
Workers aware of the safety requirements are conducted	**Methodology**: • Awareness sessions records • Visual observation and photographic documentation **Indicator**: • Number of awareness sessions for workers. • Number of injuries	• Resident Engineer	• Weekly
Occupational Health and Safety Hazards	**Methodology**: • Inspection on Availability of the correct type of PPEs and the adherence to proper use of PPE by all workers **Indicators**: • Number of workers adhering to the suitable PPEs • Number of injuries accidents and details on recovery	• Contractor • Resident Engineer	• Daily
Workers' satisfaction	**Methodology**: • Workers' grievances system **Indicators**: • Number of workers' grievances and type • Number of resolved grievances	• Contractor • Resident Engineer	• Weekly
An emergency response plan with details of the nearest hospital or medical center shall be in place and responsibilities are understood by all workers. First aid boxes are available and a list of trained First aiders is posted and known by all workers	**Methodology**: Photos and site inspection **Indicators:** • Emergency plan banner in the site photo • Photos that reflect workers' training in the emergency plan and the first aid. • Photo for the first aid box on site	• Contractor • Resident Engineer • Safeguard Specialist	• From the beginning of the implementation

Inspections are conducted to verify the safety measures are in place and documented	**Methodology**: • Forms and reports filled in every visit. **Indicator**: • The number of problems found/noncomplianc	• Sub-area Staff • Resident Engineer	• Daily •
Severe accidents and incidents are reported to head office within 24 hours and communicated to UNDP and within 48 hours to the WBG	**Methodology**: • Accident, and injuries reports within 24 hours **Indicators**: • Number and types of accidents, and injuries reported and recorded and time of reporting. • Number of reported accidents within 24 hours to UNDP and within 48 hours to the WBG versus the number of reported accidents after 24 hours to UNDP and after 48 hours to WBG	• Safeguard specialist • Resident Engineer	• within 48 hours
Ensure all activities that require specific skills are done by skilled workers.	**Methodology**: • Labor data with skill level **Indicator**: • Number of skilled workers, and type of work	• Resident Engineer	• Daily
Tools and equipment are to be regularly maintained and inspected to ensure they are of acceptable quality and in good working condition for the required activity	**Methodology**: • Periodic inspection of tools and equipment **Indicator:** • Results of the periodic report Number of maintenance performed on tools	• Resident Engineer	• Monthly
All constructions works are to be conducted during daylight and when required night works are allowed	**Methodology**: • Using GM system **Indicator**: • No. of GM complaints and number of resolved complaints.	• Resident Engineer • Community Committee	• Daily

	Presence and number of workers on site		
Operational phase monitoring			
Maintenance works during operational phase	**Methodology:** • Complaints recorded. • Visual inspection • Maintenance records **Indicator:** • Visible deterioration detected. Number of complaints regarding quality/deterioration • Number of maintenance performed for the structures	• Community Committee • Local Authority • Fish Association	• Monthly
Working in unhealthy areas and presence of wastes	**Methodology:** • Complaints recorded. • Visual inspection • Number of trainings on OHS, environmental issues and social issues **Indicator:** • Number of complaints regarding health issues. • Number of trainings provided regarding OHS, environmental and social topics.	• Fish Association • Fish Authority • community committee	• Every three months

8. Stakeholder Engagement Plan and Public Consultation

8.1. Public Consultation

Meetings with different stakeholders in Ad-Dis district have been conducted, including meetings with governmental departments, Fisheries Association, local authorities, fishermen, and coastal communities. PWP social team has conducted several focused group discussions and interviews with concerned persons regarding the proposed sub-project. Through those meetings, information has been collected related to the current situation of the fish landing site and the priorities of rehabilitating needs. Social and environmental impacts, either negatively or positively, have been discussed with different stakeholders and used in proposing the environmental and social management plan (ESMP) measures.

Discussions with different official stakeholders and key staff in Ad-Dis District were also focusing on the importance and benefits that fishermen community will gain with the rehabilitating and completing the fish landing site in Al-Qurn area with regards to improving services to the beneficiaries.

A consultation focused meeting was conducted at the landing site with several fishermen and some local officials. Another meeting was conducted with females in the landing site separately in administration office.

Table 9: Public Consultation details

Sub Project Intervention		Dates	Beneficiaries		
			Male	Female	Total
Rehabilitation and Development of Al-Qurn Fish Landing Site	Local people	18/2/2023	29	18	47
	Fishing community	18/2/2023	38	10	48
Total			67	28	95

The Beneficiary's Committee has been chosen and declared, which **consists of 6 males and one female (Annex 2).** The team then conducted a meeting with the Beneficiaries Committee and trained them on carrying out their tasks, the proper way of communication, and conflict resolution principles and methods.

8.2. Consultation and feedback Results

Topics of the Consultations:

1. Ensure communities' needs are in line with their priorities.
2. Inform local communities about the activities to be undertaken, the sub-projects timetable, and the work plan.
3. Inform them about their rights to have a job opportunity during implementation.
4. Raise their awareness about the subproject's potential risks such as safety, health, environmental, and social risks and required control measures.
5. Inform them about their roles in monitoring the compliance of contractors and workers in the worksites and their rights to give their concerns.
6. Document and address the local communities' concerns, expectations, and feedback.
7. Ensure the participation of subproject beneficiaries both females and males.
8. Discuss the positive impacts that the subprojects will have on improving services to the beneficiaries.
9. Inform them about how to use the GM to give their opinions regarding social safeguard, OHS, and any complaints and concerns without fear.
10. Raise their awareness regarding social safeguards such as GBV, SH, and abuse, that may occur during the implementation and the required measures that should be taken in case of occurrence.

During the meetings, questions were asked in order to evaluate their main concerns and to find out the current requirements of the project. The consulted beneficiaries have expressed their support to targeted subprojects as it will have positive social impacts on the community. No concerns regarding land, noise, nor SEA/SH have been expressed by the beneficiaries. Local community raised their concerns about that all construction waste should be removed and transferred to a designated area out of their village. All the beneficiaries' concerns and feedback are considered and addressed with mitigation measures in this ESMP.

The consultation with public and key stakeholders has concluded several essential needs for the fishing community as a priority for their economic and social interests. Those priorities are including but not limited to the following:

- Rehabilitation of the existing auction yard and its required administrative offices.

- Providing a landing site with necessary facilities such as: water network, electricity, communication, and sanitary system (Toilets, sewage network, a septic tank for collecting sewage, etc.).
- Development of the external works/services (driveway, car parking lots, vehicular gate access, pedestrian access, site landscaping, etc.).
- Construction of a concrete pier for the sake of landing site protection.
- How the site will be managed in the future see section 9.3 second paragraph.

8.3. Sustainability of Subproject and Community Ownership

PWP engages all affected parties of subprojects within the subprojects cycle. Consultations are conducted at various stages including consultation with the communities for selection of interventions based on focal group discussions with women and men. Formation of the Community committee by electing members including a female member with the total number of seven (6 males and 1 female). Also, coordination with Local Authorities/Councils to inform on activities taking place, and the possibility of their role in operation and maintenance, in addition to their role as facilitators in case of security issues or any disputes, *etc*. Moreover, coordination with other IPs such as SMEPS, and other agencies in the Field. Furthermore, PWP conducts public feedback sessions with targeted communities during site visits to listen to their concerns and feedback as well as to ensure their acceptance of the interventions .

Before the subproject handing over, PWP sub-area manager invites the beneficiaries' representative to participate in this occasion. The beneficiaries' representative could be the head of the community committee, Fisheries Association, local council member, district manager, or any entity representing the beneficiaries. The site handing over ends with minutes of subproject handing over between PWP sub-area manager and the contractor with signing of the beneficiaries' representative. During this occasion, the sub-area manager makes awareness to the attendance beneficiaries about the importance of the sub-project maintenance to ensure the sustainability of the intervention. Also, community will be consulted on how a rehabilitated site will be managed in the future, what lessons can be learnt from the absence of management over the past 20 years. The community committee will have the right also to monitor this site. The Fish association will be given the responsibility to manage the activities, collect the fees, provide the services and provide the maintenance.

8.4. Stakeholders Engagement Plan

According to SFISH stakeholder engagement plan (SEP)[28]PWP will continue to engage the stakeholders during the subproject's implementation through conducting meetings with beneficiaries, community committees, and local authorities to discuss any raised issues, implementation aspects, as well as listen to stakeholders' concerns and feedback. Subarea's managers will conduct monthly meetings with community committees, and Fish Association around ten to twelve times during the implementation to coordinate with them for the implementation and safeguard issues, conducting awareness and training sessions regarding ESF requirements and their monitoring roles. Also, PWP resident engineers will be in cooperation and coordination with the community committees and Fish Association at the sites to discuss any issues that might be raised. Furthermore, different meetings with the local authorities may be conducted to work in cooperation to facilitate the implementation. In addition, at the end of implementation, meetings with beneficiaries, Fish Association,

[28] https://pwpyemen.org/index.php/en/media-center-en/publications/category/14-sustainable-fishery-development-in-red-sea-and-gulf-of-aden-sfish

community committees, and local authorities will be conducted to prepare for the subproject submission and operation process. Also, to conduct the training for beneficiaries and community committees on the project operation and maintenance to ensure subprojects sustainability.

9. Capacity Building

PWP conducts capacity building for different levels in all subproject's life cycle. An annual comprehensive training is always done for PWP main and sub-areas staff in which revision and updates are reflected according to the world bank's new ESF.

During the public consultation, awareness raising session was conducted covering all topics. The executive staff29 as the main responsible for managing projects implementation at the governorates level will have training session in place to understand their responsibilities, liabilities, risk\impact assessment. Also, plan for mitigation measures will be represented, and they should sign their commitment to apply these procedures. Also, another training will take place for resident engineers where every person's responsibility, implementation procedures, needed forms, risk assessment methods, and general OHS procedures will be explained. As part of the procedures for -project site handing to the contractor, PWP sub-area representatives will conduct awareness sessions for workers, community committees, and some of the community members that will represent the required Environmental, social, and OHS aspects needed in the implementation phase. During the implementation phase, different awareness sessions should be done in the different sub-projects period. The resident engineer with help from the contractor OHS assistant will conduct daily awareness sessions as much as possible in which works daily expected risks should be clarified for workers. GBV&SEA, GRM, code of conduct will be part of this awareness as well. Every two weeks, PWP sub-area assistant will raise the awareness of workers and local communities during the site visit. PWP sub-area managers will conduct awareness raising sessions for workers and local community monthly as well. The procedures for project maintenance on project site handing, will be explained to local authorities, Fish Association, and communities' committees as part of the project closing phase.

10. Grievance Mechanism[30]

As part of an ongoing move to improve its accountability, PWP has developed a Grievance Mechanism (GM) system for managing, responding to, and monitoring issues within its Programs. The accumulated experience in PWP to respond and interact with all partners and beneficiaries enables it to improve and adopt an efficient GM, focusing on institutionalizing the experience in dealing with complaints and mainstream it in the system context. GM awareness sessions have been conducted to explain the mechanism and introduce the system to the local communities, including female members and workers. GM brochures distributed to the local community that have full details on the system and complaint boxes placed in the subproject sites which will be opened weekly in a formal meeting with supervision from the local community committee that is selected earlier during the early intervention stage. The complaints are then registered and classified according to their type and raised to branch offices to be addressed and solved. Other communication means also introduced to beneficiaries and listed below.

- Complaints box at subproject location, which is open every week,
- Telephone: 8002626

[29] The contractor, supervisor engineer, and contractor OHS assistant.

[30] https://www.undp.org/sites/g/files/zskgke326/files/2023-05/SFISH_SEP_April2023.pdf

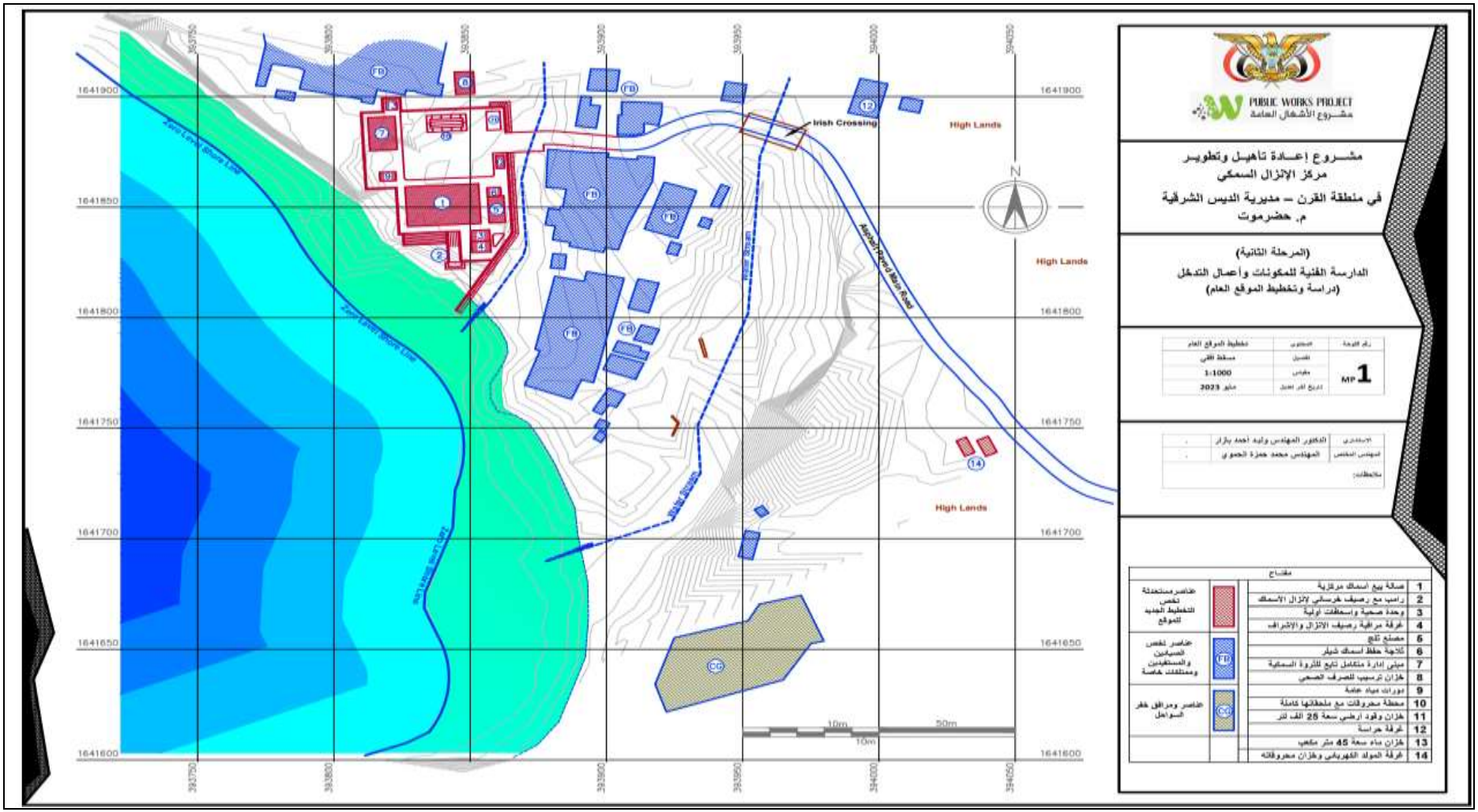
- SMS, Telephone, and What's Up Number 775626262
- Face to face during visits of PWP teams.

PWP has GRM staff at Head Quarters (HQ) and locally at the subproject for GRM handling. Each complaint is resolved either at the field by the Supervisor, or the Branch Office Manager or raised to the HQ. Complaint boxes are collected by PWP staff during bi-weekly field visits. Ensure registering all complaints and address all that can be resolved in the field. The designated GRM Officer monitors complaints to ensure they are resolved satisfactorily, and complaints are closed. Complaints received will be recorded and investigated and the person who submits the complaints will be notified with the updates of his/her case. Similarly, all complaints received anonymously will be treated at the same level and as seriously as other complaints.

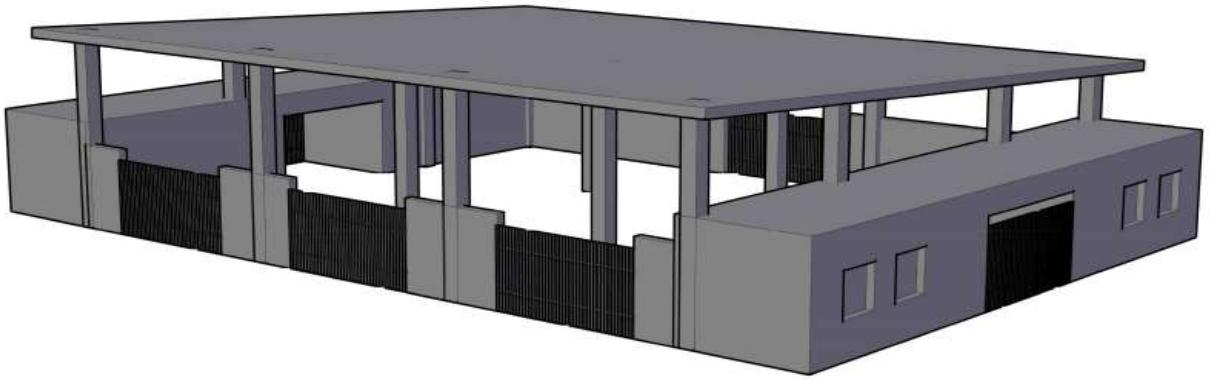
Every effort is made to resolve any issue at the community level and within a time frame of 14 days by community committee members, sub-area staff, and residential engineer, in case they could not be able to solve complaints raised to the HQ's specialists. UNDP will monitor the implementation of the Grievance Mechanism (GM) system and follow up on pending complaints and provide any needed assistance in case PWP is not able to solve the complaints themselves or higher involvement is required through SRM- Stakeholder Response Mechanism- to help project-affected stakeholders, governments and other partners jointly resolve concerns and disputes. GBV/SEA/SH related complaints will be managed within the overall GM in which complaints will be managed according to GBV/SEA/SH action plan[31] procedures. After one year, the GM system will be reviewed in order to improve it. For instance, by examining the nature of complaints, complaints made by which gender, If the GM is adapted to women, if no women made complaints, *etc*.

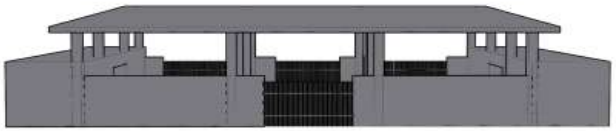
[31] https://drive.google.com/file/d/1oPq0QSPFY8N8PXf40b6SssxpsA7dmjx0/view?usp=drive_link

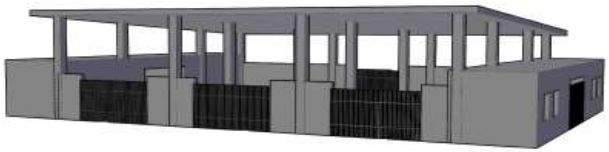
11. Annex 1: Typical Drawings:

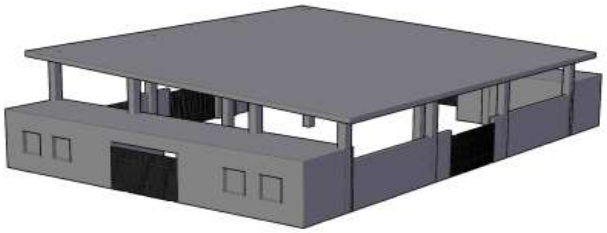


Drawings showing the master Plan of the project









PUBLIC WORKS PROJECT
مشـروع الأشغال العامة

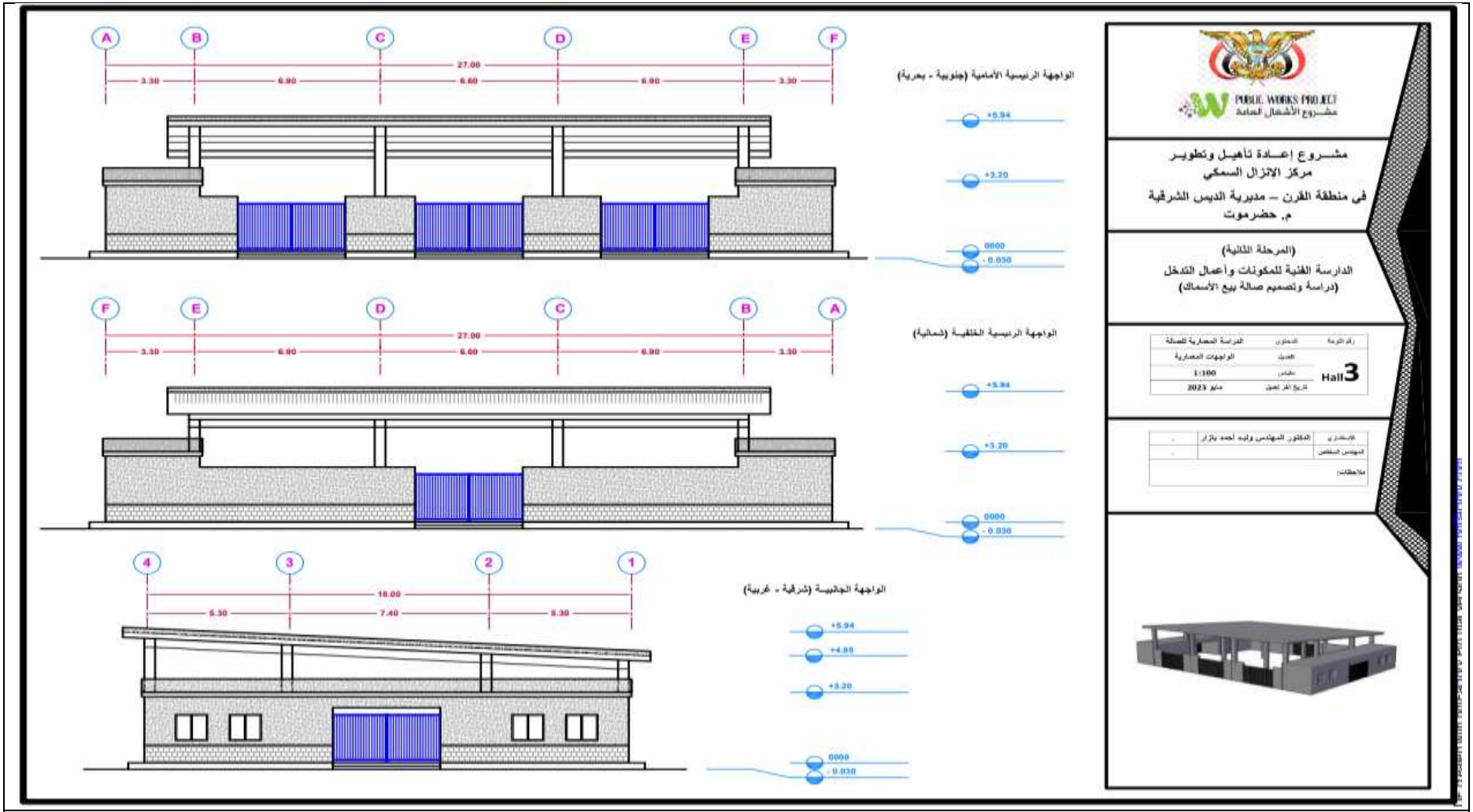
مشـروع إعـادة تأهيـل وتطويـر
مركز الإنزال السمكي
في منطقة القرن – مديرية الديس الشرقية
م. حضرموت

(المرحلة الثانية)
الدارسة الفنية للمكونات وأعمال التدخل
(دراسة وتصميم صالة بيع الأسماك)

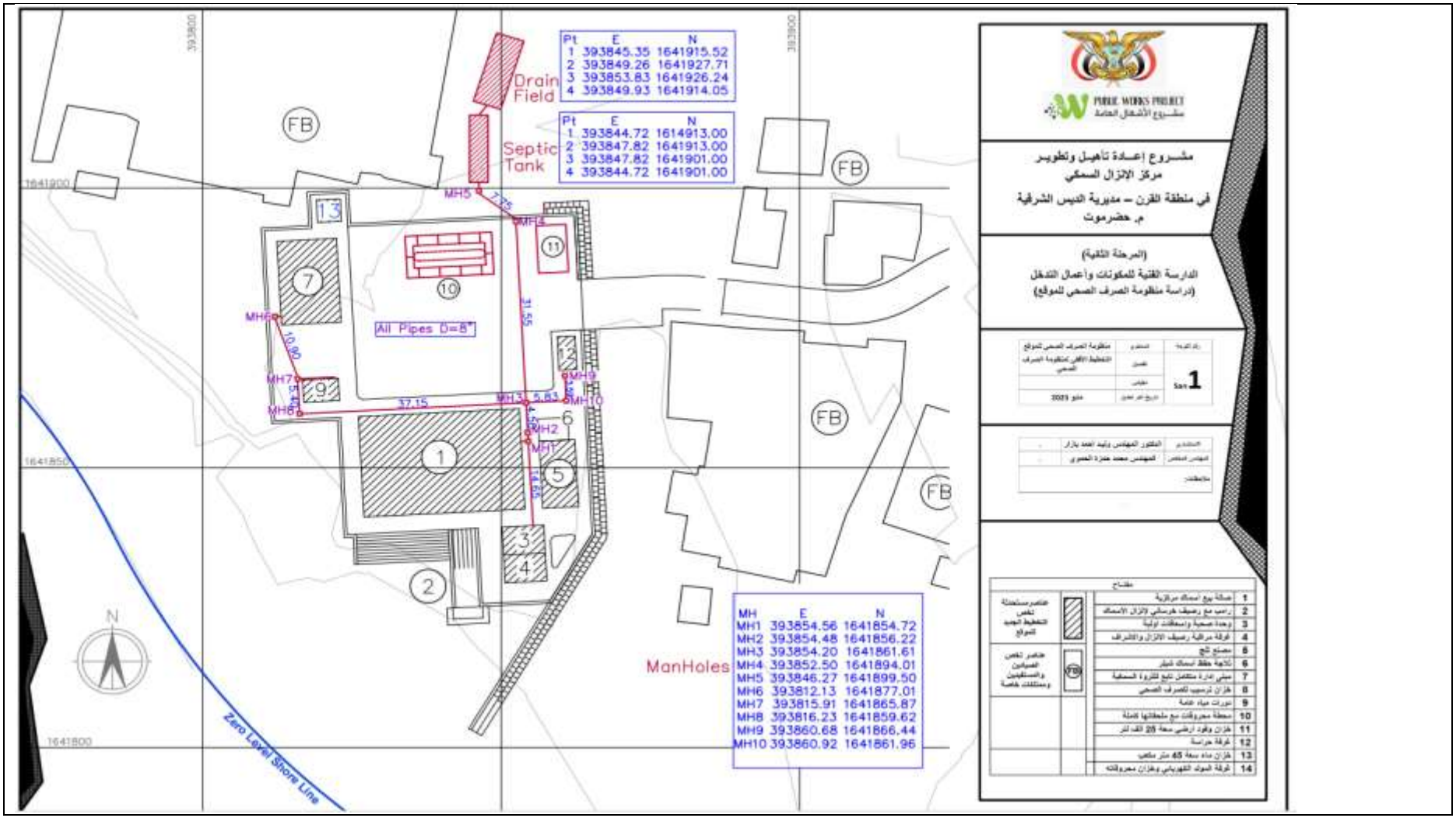
رقم اللوحة	المحاور	الدراسة المعمارية للصالة
Hall 1	تفصيل	منظور
	مقياس	--
	تاريخ آخر تعديل	مايو 2023

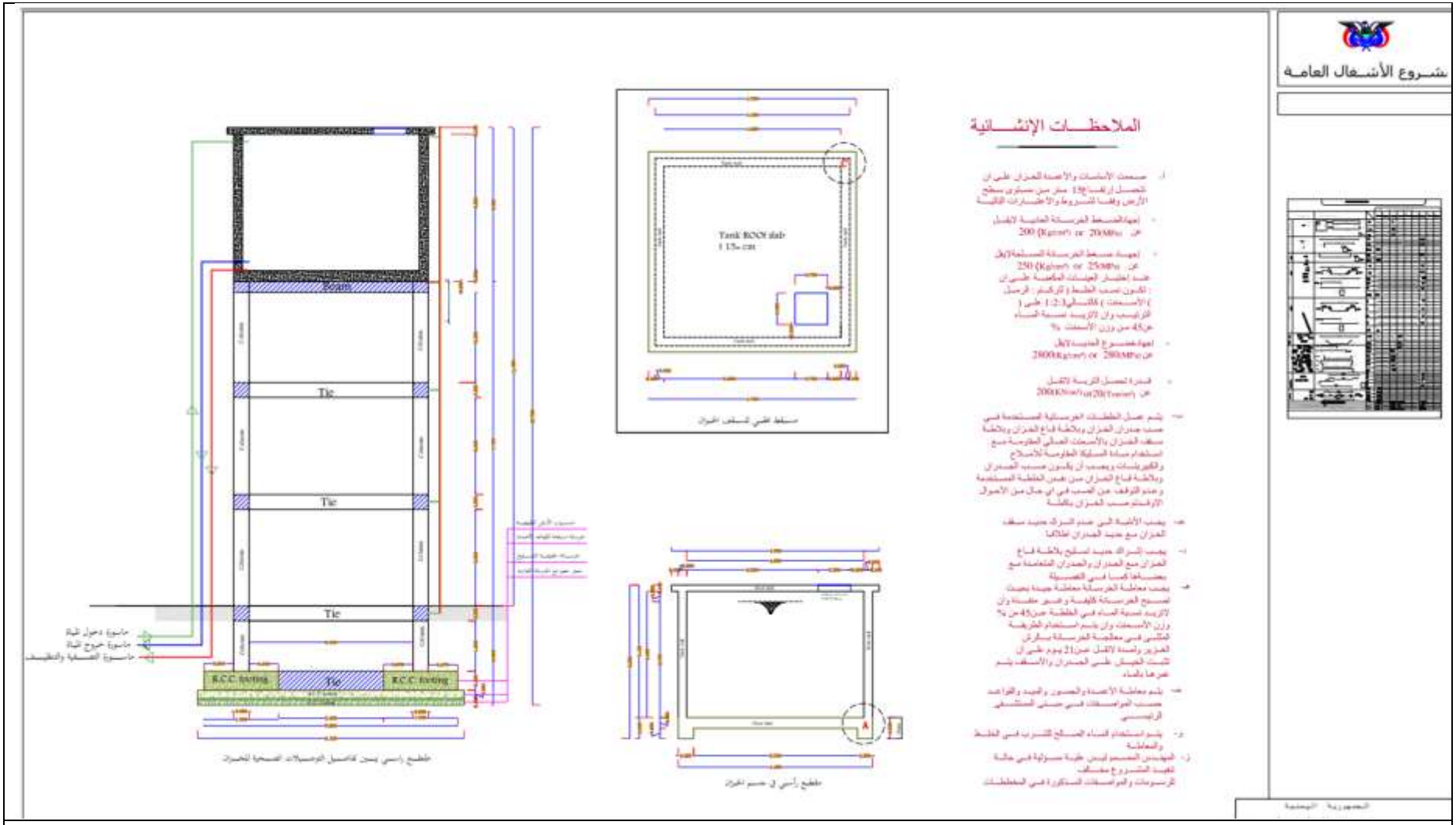
الاستشاري	الدكتور المهندس وليد أحمد بزار	.
المهندس المختص		.

ملاحظات:

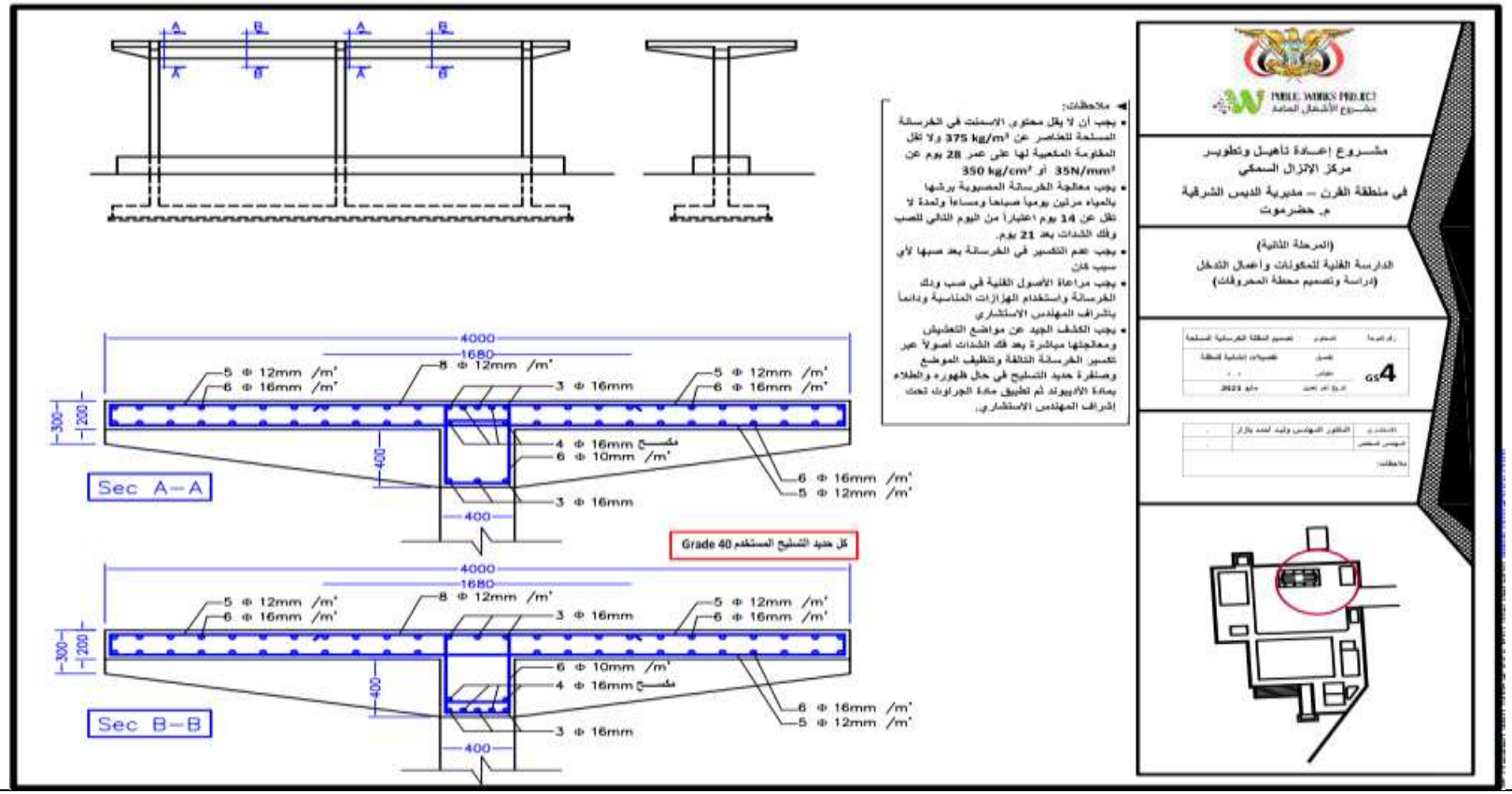


Drawings showing the auction hall

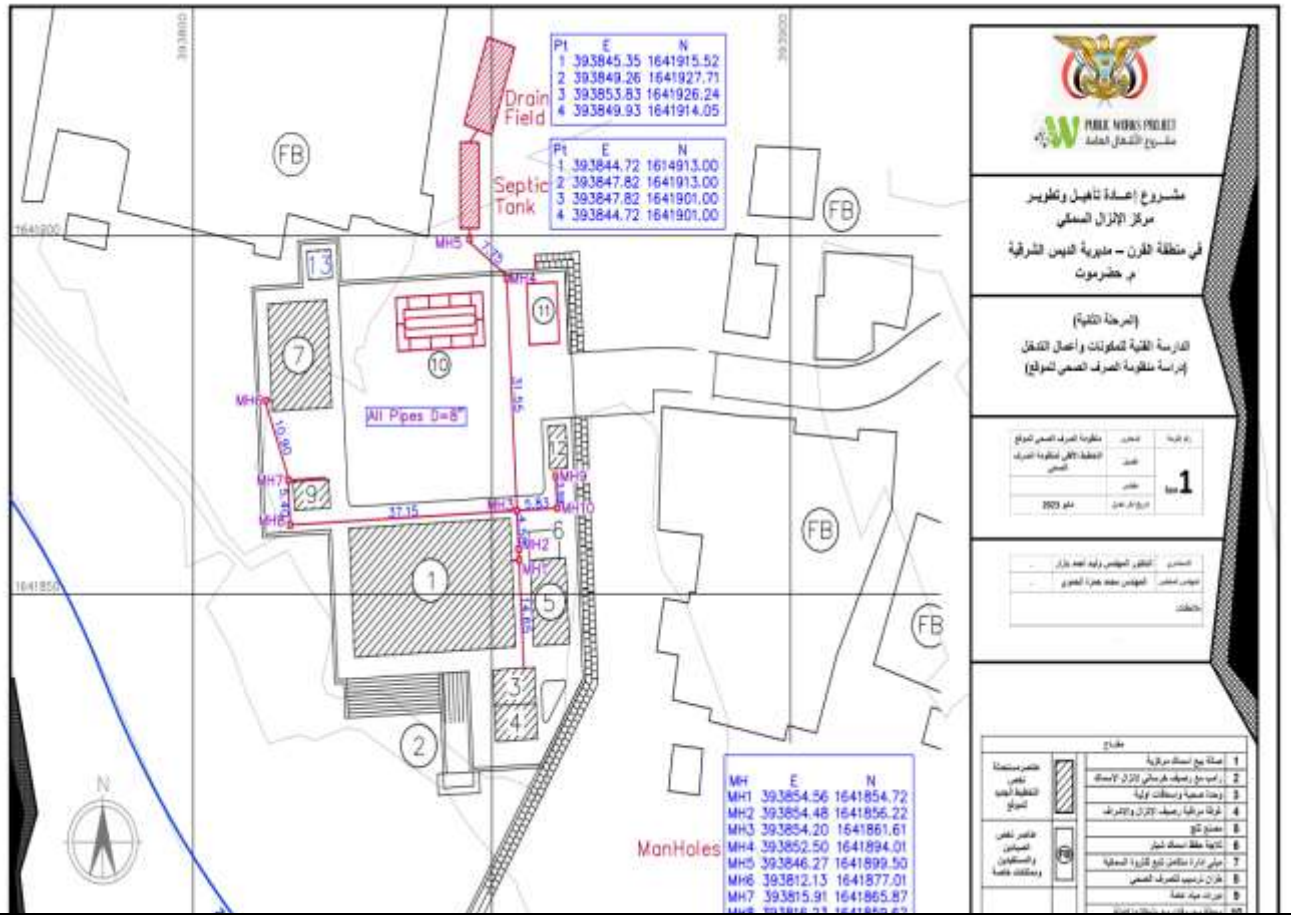

Drain Field
Septic Tank
All Pipes D=8"
ManHoles
Zero Level Shore Line
مشروع إعادة تأهيل وتطوير
مركز الإنزال السمكي
في منطقة القرن – مديرية الديس الشرقية
م. حضرموت
(المرحلة الثانية)
الدارسة الفنية للمكونات وأعمال التدخل
(دراسة منظومة الصرف الصحي للموقع)

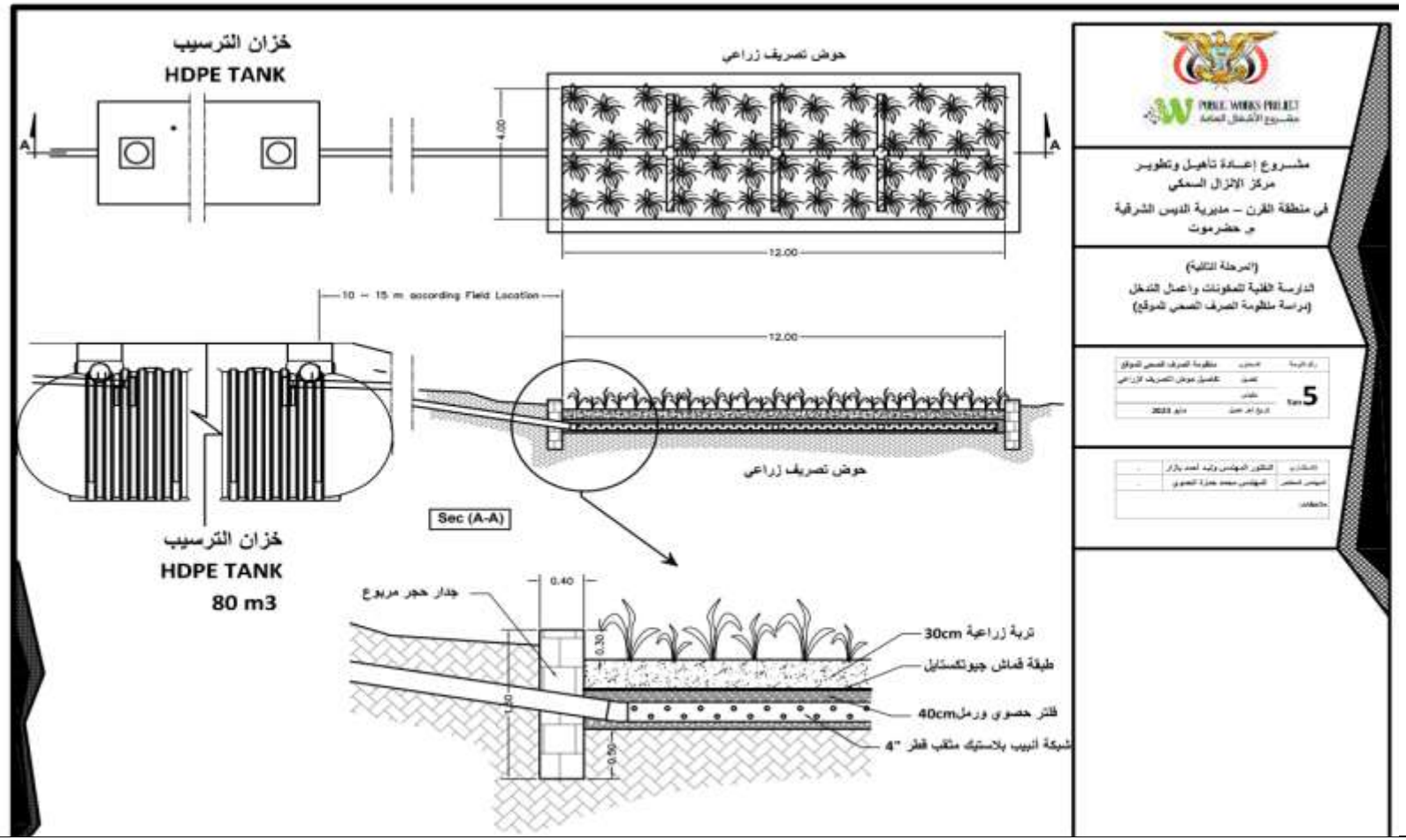


Drawings showing the sanitary and Water Tower Tank

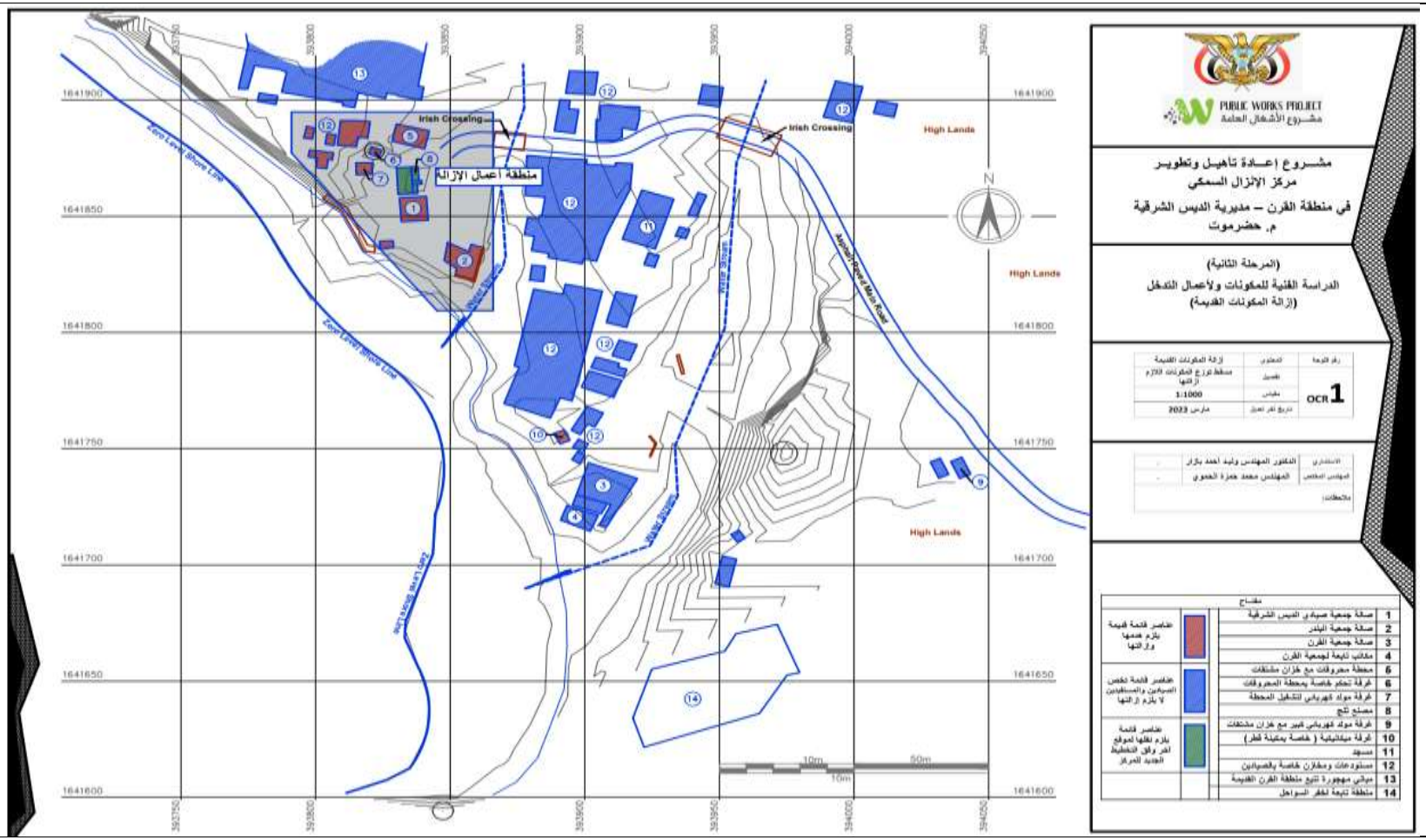

A
B
A
B
A
B
ملاحظات:
• يجب أن لا يقل محتوى الاسمنت في الخرسانة المسلحة للعناصر عن 375 kg/m³ ولا تقل المقاومة المكعبية لها على عمر 28 يوم عن 350 kg/cm² أو 35N/mm²
• يجب معالجة الخرسانة المصبوبة برشها بالمياه مرتين يومياً صباحاً ومساءاً ولمدة لا تقل عن 14 يوم اعتباراً من اليوم التالي للصب وفك الشدات بعد 21 يوم.
• يجب عدم التكسير في الخرسانة بعد صبها لأي سبب كان
• يجب مراعاة الأصول الفنية في صب ودك الخرسانة واستخدام الهزازات المناسبة ودائما بإشراف المهندس الاستشاري
• يجب الكشف الجيد عن مواضع التعشيش ومعالجتها مباشرة بعد فك الشدات أصولاً عبر تكسير الخرسانة التالفة وتنظيف الموضع وصنفرة حديد التسليح في حال ظهوره والطلاء بمادة الأبيوند ثم تطبيق مادة الجراوت تحت إشراف المهندس الاستشاري.
PUBLIC WORKS PROJECT
مشروع الأشغال العامة
مشروع إعادة تأهيل وتطوير مركز الإتزال السمكي
في منطقة القرن – مديرية الديس الشرقية بـ حضرموت
(المرحلة الثانية)
الدراسة الفنية للمكونات وأعمال الدخل
(دراسة وتصميم محطة المحروقات)
GS4
4000
1680
5 Φ 12mm /m'
6 Φ 16mm /m'
8 Φ 12mm /m'
3 Φ 16mm
4 Φ 16mm مكسح
6 Φ 10mm /m'
300
200
400
Sec A–A
Sec B–B
كل حديد التسليح المستخدم Grade 40

Drawings showing the Structure of Gas Station





Drawings showing the Septic Tank and Drain Field



Drawings showing number 1 and 2 the first implementing phase and number 3 and 4 the auction hall that will be used during implementation

Figure 15: Show the typical drawings for Fish Landing Site

11. Annex 2: Environmental and Social Screening for Eligibility Environmental and Social Screening Checklist for the Proposed Subproject.

Sub-Project No.	16081-9-03
1: The Natural Environment	Answer (NA, minor, moderate, substantial, or high)
1.1 Are there any environmentally sensitive areas or threatened species that could be adversely affected by the subproject (specify below)?	
Intact natural forests	No
Riverine forest	No
Wetlands (lakes/rivers/seasonally inundated areas)	Moderate
If yes, how far are the nearest wetlands (lakes, rivers, seasonally inundated [flooded] areas)? A stretch of turtle nesting beaches located between Sharma and Jathmune approximately 3.5 km far from the proposed site, and Coral Reefs patches scattered opposite of the landing site at distance of about 4 km.	HIGH
Habitats of endangered species for which protection is required under Yemeni laws and/or international agreements	YES No
Marine sensitive Areas	No
Others (describe) (e.g. cultural sites, burial places, etc.)	
2.Fauna and Flora	
2.1 Will subproject involves the disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes)?	No
2.2 Will the subproject lead to the destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development?	No
2.3 Will the subproject lead to the disruption/destruction of wildlife through interruption of migratory routes, disturbance of wildlife habitats, and noise-related problems?	Minor
3.Destruction/Disruption of Land and Vegetation	
3.1 Will the subproject lead to unplanned use of the infrastructure being developed?	Minor
3.2 Will the subproject lead to long-term or semi-permanent destruction of soils in cleared areas not suited for agriculture?	No
3.3 Will the subproject lead to the interruption of subsoil and overland drainage patterns (in areas of cuts and fills)?	No
3.4 Will the subproject lead to landslides, slumps, slips, and other mass movements in soil?	No
3.5 Will the subproject lead to erosion of lands?	No
3.6 Will the subproject lead to health hazards and interference of plant growth by the dust raised and blown by vehicles?	Minor
4. Protected areas	
4.1 Does subproject occur within/adjacent to any protected areas designated by the government (national park, national reserve, world heritage site, etc.)	YES
4.2 If the subproject is outside of, but close to, any protected area, is it likely to adversely affect the ecology within the protected area (e.g. interference with migration routes of mammals or birds)	Moderate
4.3 Would this project increase the current impact on the surrounding environment for example by using more water, chemicals, or machinery than previously? If yes HOW More water will be used for construction process as well as water that are going to be used during operation for toilets, cleaning and washing in the auction yard, *etc*. Chemicals will be used temporarily during rehabilitation of the landing site through painting processes and possible oil spills from fishing boats if not managed properly.	Moderate
5. Geology and Soils	

5.1 Based on visual inspection or available literature, are there areas of possible geologic or soil instability (erosion-prone, landslide-prone, subsidence-prone)?	No
5.2 Based upon visual inspection or available literature, are there areas that have risks of a large-scale increase in soil salinity?	No
6 Landscape/aesthetics	
6.1 Is there a possibility that the subproject will adversely affect the aesthetic attractiveness of the local landscape?	No
7. Historical, archaeological or cultural heritage site	
7.1. Based on available sources, consultation with local authorities, local knowledge, and/or observations, could the subproject alter any historical, archaeological, or cultural heritage site or require excavation nearby?	No
8. Resettlement and/or Land Acquisition	
8.1 Will the subproject require land acquisition?	No
8.2 If so, will this land acquisition be involuntary?	-
8.3 If so, will this involuntary land acquisition lead to relocation or loss of shelter, loss of assets, or access to assets?	-
8.4 If so, will this involuntary land acquisition lead to loss of income sources or means of livelihood (whether or not affected persons must move to another location)?	-
8.5 Will the subproject lead to involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of displaced persons?	No
8.6 Will the subproject led to permanent physical or economic displacement	NO
8.7 Will the subproject led to temporary physical or economic displacement	Minor
8.8 Will the project bring about consolidation or adjustment of tenure rights?	NO
9. Noise pollution during Construction and Operations	
9.1 Will operating noise level exceeds allowable/ambient noise limits?	No
10. Solid or Liquid Wastes, including Medical Waste	
10.1 Will subproject generate large amounts of residual wastes (solid or liquid wastes), including medical waste?	Moderate
10.2 If “Yes”, does the subproject include plan for collection & disposal?	Yes
11. Pesticides, Insecticides, Herbicides or any other Poisonous or Hazardous Chemicals	
11.1 Will the subproject require the use of such chemicals?	Minor
11.2 If, “Yes”, does the subproject include plan for safe handling, use & disposal?	Yes
12. Water and Soil Contamination	
12.1 Will the subproject require large amounts of raw materials/construction materials?	Moderate
12.2 Will subproject generate large amounts of residual wastes, construction material waste, or cause soil erosion?	Moderate
12.3 Will the subproject result in soil or water contamination (e.g. from oil, grease, and fuel from equipment)?	Moderate
12.4 Will the subproject lead to contamination of ground and surface water bodies by herbicides for vegetation control and chemicals for dust control?	No
12.5 Will the subproject lead to an increase in suspended sediments in streams affected by road cut erosion, a decline in water quality & increased sedimentation downstream?	No
12.6 Will subproject lead to the destruction of vegetation and soil in the right-of-way; borrow pits, waste dumps, and equipment yards?	No
12.7 Will the subproject lead to the creation of stagnant water bodies in borrow pits, quarries, etc., encouraging mosquito breeding and other disease vectors?	No
12.8 Will this project include the development of a large irrigation scheme?	No
12.9 Will this project aims at improving an irrigation scheme (without expansion)?	No
12.10 Will this project change the water quality and quantity in the project area or areas connected to it	Minor

12.11 Will this project involve the intensification of production systems that leads to land-use changes (e.g. deforestation), higher nutrient inputs leading to soil or water pollution, changes in water regimes (drainage, irrigation)?	No
13. Decent Work	
13.1 Will this project affect the current or future employment situation of the rural poor and in particular the labor productivity, employability, labor conditions, and rights at work of self-employed rural producers and other rural workers?	YES
13.2 Will this project affect the labor conditions, child and force labour?	Minor
14. Gender Inclusion Risks	
14.1 Could this project risk overlook existing gender inequalities in access to productive resources, goods, services, markets, decent employment, and decision-making? For example, by not addressing existing discrimination against women and girls, or by not taking into account the different needs of men and women	Minor
14.2 Will this subproject pose risk on community related to sexual harassment, sexual exploitation and abuse.	NO
14.3 Will this subproject cause any conflict among communities	NO
15. Indigenous People	
15.1 Are indigenous peoples present in the Project area (including Project area of influence)?	No
15.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
15.3 Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	No
15.4 Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
16. Community Health, Safety	
16.3 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	Minor
16.4 Would the Project pose potential risks to community health and safety due to transport, storage, construction?	Minor
16.5 Would the Project pose potential risks to community health and safety due to the use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel, and other chemicals during construction and operation)?	minor
16.6 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)?	No
17. Working Conditions	
17.1 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases)?	No
17.2 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Moderate
17.3 Will the Project activities cause any risks for workers during the construction?	Moderate

PWP Environmental and Social Responsiveness (ESR) Criteria at Proposal Stage

Proposal Title	**Rainwater drainage in Urban Areas**	
Proposal Location	**Hadramout governorate**	
ESR Criteria at the Proposal Stage		Confirmation Write Yes or No
Consultation with the local community including a community leader, men, women, and girls were conducted in the proposal stage regarding the design and location of the project. Their opinions were included in the proposal.		Yes
Poor and vulnerable beneficiaries were defined, and the community was obliged to provide help for them in the r**ainwater drainage channel** paving subproject implementation.		Yes
The project will not have a significant adverse environmental and social impact		Yes
The project will not raise land acquisition problems		Yes
Stakeholders are aware of the PWP policy and have agreed to follow/apply them towards a successful implementation of the urban road pavements.		Yes
Targeted beneficiaries are highly in need of this project		Yes
All communities including (Male, female, and children) will benefit from the intervention.		Yes
The operation and maintenance requirements of the project were explained to the community, and an acceptable system was developed for this purpose		Yes
Responsibility for operation and maintains are defined and committed		Yes
Local communities are aware of project risks and GRM.		Yes
The project will not cause any conflict among communities		Yes
If the answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If the answer is 'Yes' then incorporating this information in the project proposal		

12. Annex 3 : Public Consultation Reports (Social agreements & consultation attendance sheets) – Arabic

Meetings with different stakeholders in Ad-Dis district were organised on 18 February 2023 in the district office and at the Al-Quarn landing site. The meetings included governmental departments, Fisheries Association, fishermen, and coastal communities, with total participants 67 males and 28 females. During the meetings, the participants asked several questions to understand about the project and its requirements. Following is the agreement about the projects among the stakeholders, an outcome of the stakeholders consultation meetings.

بسم الله الرحمن الرحيم

الجمهورية اليمنية
مشروع الأشغال العامة
وحدة إدارة المشروع
لمدينة .....

اتفاقيةتنفيذ مشروع ترميم واعادة تأهيل مراكز النزال سمكي

اسم المشروع : مشروع ترميم وتأهيل مركز النزال السمكي بالعزلة (القرن) - مديرية الديس - محافظة / حضرموت كود المشروع : .....

انه وفي يوم الاربعاء الموافق ١٥ / ٢ / ٢٠٢٣م تم الاتفاق بين كل من مشروع الأشغال العامة ويدعى في هذا الاتفاق بالطرف الأول والإخوة ممثلوا السلطة المحلية مع الأخوة ممثلي أهالي (لجنةالمستفيدين والتي تم تشكيلها وانتخاب الهيئة الادارية لها).....- مديرية ..... ويدعوا في هذا الاتفاق بالطرف الثاني وبعد التأكد من احتياج المنطقة المذكورة للمشروع المذكور وضرورة التدخل في إعادة تأهيل مركز الانزال السمكي في المنطقة والتي يقر الطرف الثاني بموجب هذا الإلتزام بان هذا المركز لا يتعلق بملكية خاصة أوعامة وأنه ملزم بحل اي إشكال قد يظهر في اي موقع في المدينة بعمل التنازلات أو التعويض أو خلافه، وإن الأطراف تلتزم بما يلي:

(1) يقوم الطرف الأول بتنفيذ أعمال الدراسة والتصميمات والرسومات والتي توضح كل مكونات المشروع والملزمة لكل الأطراف كل بمساهمته التي تم الإتفاق عليها، ويتمثل جزء من مساهمة الطرف الثاني في تسهيل أعمال المهندسين والفنيين والمقاول المنفذ وتذليل كافة الصعوبات التي قد تظهر خلال أعمال الدراسة من قبل أهالي المنطقة مثل الاعتراضات على أماكن الحفر والردم، ، وعمل الطرقات اللازمة لخدمة المشروع والعمل على حل كافة المشاكل الأخرى مع الأهالي (مهما كان نوعها) والتي قد تظهر خلال أعمال الدراسة أو التنفيذ أو حتى عند التسليم أو بعد التسليم لمكونات المشروع المساهمة العينية أوالمساهمة النقدية المطلوبة.

(2) يقوم الطرف الأول بواسطة المقاول المعين من قبله بتنفيذ مكونات المشروع وبموجب الرسومات وجداول الكميات الخاصة بالمشروع،ويلتزم الطرف الثاني في هذا بالموافقة على المواقع التي تم اختيارها لمكونات المشروع خلال أعمال الدراسة والمسح، وبعدم توقيف تنفيذ العمل في هذه المواقع ، سواء كانت أعمال حفر او ردم و خلافه ،وكذلك يلتزم الطرف الثاني بتوفير مقاطع الأحجار في المنطقة والتي يقرها المهندس المشرف ويتعهد الطرف الثاني بعدم اعتراض المقاول عند أخذ الأحجار من تلك المقاطع والقيام بحل المشاكل في هذا الموضوع مع الأهالي مهما كان نوعها.

(3)يوافق الطرف الثاني على التواجد الميداني المستمر قبل وخلال فترة التنفيذ مع فريق التنفيذ وذلك للإحاطة بكل مكونات المشروع على الطبيعة ومعرفة طريقة التنفيذ والتشغيل حتى يسهل عليهم إدارة المشروع وصيانته مستقبلاً، وعند وجود أي ملاحظة على عملية التنفيذ فأن على الطرف الثاني رفعها إلى المهندس المشرف والمعين من قبل مشروع الأشغال العامة أو إلى مدير المنطقة الفرعية.

(4)يلتزم الطرف الثاني باستخدام هذا المشروع في المجال الذي صمم من أجله وهو في هذه الحالة لغرض ايجاد بيئة نظيفة وسهله للصيادين بشكل سليم،وعدم استغلال هذا المشروع لأي غرض خاص او عام أو اي استخدام آخر خلاف ذلك مهما كان.

(5)ان لمشروع الأشغال العامة الحق في إنهاء هذا الاتفاق وتعهداتها إذا توقف أو سار المشروع ببطء ظالما كان الأهالي في المنطقة هم السبب، أو عند مخالفة أحد البنود المذكورة أعلاه.

(6)ان مشروع الأشغال العامة لن يتحمل مسئولية عن أي ضرر جسماني لأي طرف كان نتيجة تشييد هذا المشروع مهما كانت الأسباب.

(7)في حالة إلغاء هذا المشروع لأي سبب كان فإن الطرف الثاني (ممثل الأهالي) يلتزمون بعدم اعتراض المقاول في سحب أدواته ومعداته من الموقع. (8)تعتبر هذه الاتفاقية ملزمة للطرفين بعد التوقيع عليها وتعميدها.

الطرف الأول
مشروع الأشغال العامة

الطرف الثاني:

(1)الهيئةالادارية لمشروع (ممثلوا الأهالي المستفيدون) .....

	الاسم	التوقيع
1-	خالد سعيد بورى	
2-	[illegible]	
3-	[illegible]	
4-	[illegible]	
5-	[illegible]	

(2)المجلس المحلي للمنطقة الفرعية

محافظ المحافظة
رئيس المجلس المحلي

(3) مدير عام الدائرية

1/1

13. Annex 4: Complaints Handling Mechanism Information/Brochures

Figure 16: PWP Complain Handling Mechanism

Figure 17: PWP Complain Handling Mechanism