

REPUBLIC OF IRAQ

MINISTRY OF PLANNING

**Iraq “Social Fund for Development” Project
(SFDP)**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
(ESMP)**

**FOR THE
CONSTRUCTION
OF**

**WATER DISTRIBUTION NETWORK IN AL KHANOKAH
VILLAGE**

**IN
SALAH AL-DIN GOVERNORATE**

2nd December 2019

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LIST OF ABBREVIATIONS

CDGs	Community Development Groups
ESMP	Environmental and Social Management Plan
EHS	Environmental, Health, and Safety
ESMF	Environmental and Social Management Framework
GIIP	Good International Industry Practice
GOI	Government of Iraq
GRM	Grievance Redress Mechanism
MOE	Ministry of Environment
MOP	Ministry of Planning
MSDS	Material Safety Data Sheets
NO	Nitrogen Oxides
OP	Operational Policy
PAPs:	Project Affected Peoples
PMO	Project Manager Office
PPE	Personal Protective Equipment
RE	Resident Engineer
SFD	Social Fund Development
SO₂	Sulfur Dioxide
TOR	Terms of Reference
WB	World Bank
WHO	World Health Organization

EXECUTIVE SUMMARY

With the recent liberation of Mosul from ISIS, Iraq faces a historic opportunity for national reconciliation through the effective delivery of critical social services, economic growth and recovery programs. The reinstatement of trust between the State and its citizens is highly dependent on the Government of Iraq (GOI) demonstrating its capacity to deliver security, jobs and economic growth to all Iraqis, with a focus on the poor, the vulnerable and the millions of Internally Displaced People (IDP). The GOI has embarked on a comprehensive reform of social protection programs. Two major achievements were the shift from categorical to poverty targeting in social assistance that improved outreach to the poor; and the issuance of the new integrated Social Insurance Law that is likely to have a positive impact on labor mobility and fiscal rationalization of the pension's fund.

Complementing this work, the GOI, represented by the Ministry of Planning (MOP), requested the World Bank's support in the design and financing of a Social Fund for Development (SFD) project to support locally driven initiatives to improve the living conditions and opportunities of the poor and most vulnerable in Iraq.

The GOI has demonstrated its commitment and support to the design of this operation and established a high-level national team to guide and coordinate the development and institutionalization of the SFD, as well as five technical teams to work on the different aspects of the fund. These teams developed the design of the SFD, and the draft SFD law. The SFD would thus be established by law, as an autonomous institution that does not operate under civil service regulations. While SFD law is being formulated and issued, the Ministry of Planning (MOP), at the central and local levels, specifically by the Directorate General of Poverty Reduction Strategy, will initiate SFD activities in three governorates in the first year, then expand to another four in the second year, and ultimately scale-up to the rest of the country starting in year three of project implementation.

The Project Development Objectives (PDOs) are to: (1) Improve access to basic services and; (2) Increase short-term employment opportunities, in targeted communities.

This executive summary reflects the main issues (subproject description and activities, baseline conditions, impact analyses, mitigation measures and monitoring arrangements) of the Environmental and Social Management Plan (ESMP) conducted for the Construction of water distribution network in Al Khanokah village in Salah Al-Din governorate. This ESMP is prepared in accordance to the EMF requirements of the SFD project. The main objective of the ESMP is to examine the environmental and socio-economic impacts of the subproject (at both construction and operation phases), and to propose mitigation measures. The subproject is expected to result in significant socio-economic benefits for the local community and surrounding areas as it will provide a good sanitary environmental condition of village protecting public health. Also, to

supply water equitably to the consumers with sufficient pressure so as to pump the water to the desired area.

PROJECT DESCRIPTION

The subproject is located in the Governorate of Salah Al-din northeast of Baghdad. Tikrit is the administrative center of Salah Al-Din Governorate and its located 140 kilometers (87 mi) northwest of Baghdad and 220 kilometers (140 mi) southeast of Mosul on the Tigris River. Al Khanokah village is within Salah Al-Din governorate which is located about 119km from Tikrit. The village suffers from a significant deterioration in the infrastructure due to the liberation battle activities from ISIS as shown in Annex (5). The location of this subproject is close to AlShirqat City as shown in the figure below:



Google Earth Image showing the working area under study

The objective of this subproject is to construct water distribution network for Al Khanokah village. The subproject aims to:

- To provide a good sanitary environmental condition of village protecting public health.
- Ensure the incoming water quality that was produced in water treatment plant to the consumers.
- Supply water equitably to the consumers with sufficient pressure so as to pump the water to the desired area.
- Mitigating the effects of war and ensure a safe return for the displaced people when return to their land.

The construction works will imply the setup of a camp in the area near the subproject. The setup of the camp will be established near the subproject on vacant state-owned lands for storage of equipment and construction materials. Accordingly, no temporary land acquisition is needed. The construction will need about 15-20 local workers per day. If there are non-local workers, these workers will need to have their accommodation facilities in the camp, during the construction phase.

The anticipated duration of construction works is about 180 days for the subproject.

The total length of the pipes within the village's network is about 7.75 Km including different diameters. The network will be connected to the main pipe of potable water in the Al-Shirqat water treatment plant. Construction works of the water distribution network in Al Khanokah village in Salah Al-Din Governorate which is connecting to the residential homes will include the following activities:

1. Providing the necessary materials and equipment for excavating trenches at a depth of 120 cm and a width of 90 cm including cracking the sidewalks and streets, if any.
2. Laying down and connecting plastic pipes and then wrapping the pipe with clean soil
3. Backfilling of the trenches by used excavated soil at a height of (0.55 m), rehabilitation and restoration of sidewalks and streets (if any) that were demolished and returned as it was with the removal of excess construction wastes.

The suggested path for the construction of the water distribution network will be on state land where no land or property expropriation will be necessary. It is not expected that these pipes will pass through agricultural/private lands and/or cause any restriction of access and livelihood impacts.

ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS

The environmental and social baseline data were collected from published research papers and documents. Salah Al-Din governorate is located in the northern mid-East part of Iraq, which has a semi-desertic climate. The major rain, is about 177 mm yearly, falls during the period November thru February, with a spread showering in March. The average annual temperature is 29.7 °C.

The ambient air quality is within normal range. Although no baseline measurements were conducted due to security constraints, it can be assumed

that the concentration of pollutants is well below allowable standards since there are no sources for air pollution except for the few vehicles which use the roads near the water distribution network location. Similarly, noise levels are expected to be below the national standards.

Land in the vicinity of the subproject is an open area; Land that will be used for pipes laydown is all State-owned land as shown in Annex (5). There are no close multi-story buildings located to the subproject site (more than 200m) and therefore it is unlikely to be adversely affected by either the construction activities or the operation of the subproject when they are in use.

There are no protected areas or endangered species (there is no critical or high biodiversity values that might be affected) in the vicinity of the sites (more than 1 Km). The sites adjacent areas do not include any historical or cultural sites.

No additional land for the work is needed to proceed with the subproject. The photo below and in Annex (5) illustrate the environmental situation for some sections within the subproject. Currently the village is temporary depending on individual above-ground water pipes to connect individually different buildings. Notably the removal of the current temporary above ground pipes is not part of this project



Photo of the current water distribution network

POLICY, LEGAL AND ADMINISTRATIONAL FRAMEWORK

A desk study was carried out to identify and assess the legal and administrative regulations to be applied to project activities. The assessment considered both Iraqi laws and the policies and procedures of the World Bank in addition to the ESMF that was prepared already for this project. A collection of relevant laws and regulations is presented in this section. The objective of this task would be to ensure the project complies with relevant environmental laws and regulations throughout the construction and operation phases of the subproject. The table below presents the relevant and applicable laws and regulations.

LAW	
Applicable Iraqi laws	
Law no. 37 of 2008	Describes institutional arrangements of the Ministry of Environment and Outlines policies and roles and responsibilities toward protecting the environment.
Law no. 27 of 2009	Protection and Improvement of Environment
Regulations no. 2 of 2001	Preserving water resources
Law No.3 issued in 1997	Environment protection
Law No. (55) Issued in 2002	Heritage and antiques
Law No. 37 of 2015.	Labor Law No. 37 of 2015.
Applicable WB Policies	
OP 4.01	Environmental Assessment
OP 4.12	Involuntary Resettlement
OP 4.11	Physical and Cultural Resources
Guidelines and Best practices	
EHS	WB General Environmental, Health, and Safety guideline
GRM	Grievance Redress Service

ENVIRONMENTAL AND SOCIAL IMPACT ANALYSIS

Generally, based on the previous visits and surveys, the construction of this network may have impacts on the surrounding environment but they are temporary, reversible and not severe impacts. They are expected to occur during the construction and operational phases. It is also anticipated to have important positive social impacts on the local communities. While a number of minor impacts on the environment may occur during the two phases, these minor impacts will have no significant effect on the environmental parameters and conditions. The main environmental impacts of the subproject will be mainly associated with activities during the construction period. These include air emissions, noise, dust, generation and handling of construction and other waste, in addition to health and safety concerns associated with construction workers. Mitigation measures will be implemented to minimize the environmental impacts by reducing the identified adverse environmental impacts.

The expected negative environmental impacts include:

- (a) Deterioration of air quality and increase of Noise level resulting from the construction activities.
- (b) Contamination of soil by construction materials and municipal waste generated and stored within the working area.

From the socio-economic perspective, both the construction and operational activities are expected to have positive impacts on the communities living in the area. Providing water distribution network will be significantly enhanced their life activities and consequently will improve livelihood opportunities.

The construction contractor will be responsible for compliance with the ESMP provisions during the construction phase of the subproject. The contractor will be also in charge of undertaking work in a manner which complies with all relevant environmental procedures, adheres to all legislative requirements, and ensures that all environmental objectives associated with the contract are achieved. The overall assessment of the key environmental and social impacts is summarized in the table below. It is useful to mention that the staff at the Water Authority (Engineers and technicians) will operate the network and they should be responsible for the ESMP in the operation phase

	Environmental Receptor	Impact Significance
1	Air Quality	Medium
2	Noise	Medium
3	Water Resources	Low
4	Soil	Low
5	Solid and hazardous wastes	Low
6	Flora & Fauna	Not significant
7	Topography and landforms	Not significant
8	Impacts on local traffic	Not significant
9	Health and Safety	High
10	Socio-Economic impacts	Low
11	Child Labor	Medium

MITIGATION MEASURES

The required mitigation measures for each of the minor environmental impacts and any adverse socio-economic impacts that may arise have been considered. Furthermore, a complete monitoring and auditing system were suggested for each environmental parameter in order to sustain the environmental situation in the area of the project. These measures should significantly reduce the identified potential minor impacts. The mitigation measures address the environmental and social impacts of the project. They include:

1. Minimize noisy operations to day time, and no constructional activities at night
2. Modern and well-maintained machines will be used to minimize noise generated from machines.
3. Maintain vehicles and machinery in good condition in order to minimize exhaust emissions.
4. Apply water spraying (as needed) using a daily water tanker during the construction works.
5. Ensure that construction preparations are located in a suitable distance from populated areas.
6. Avoid discharging or leakages of any chemicals in the site or in open spaces. Plans for preventing leakages will be prepared on site. No discharge of chemicals into the environment will be allowed.
7. Temporary store construction and municipal solid waste in locations agreed with the local municipality authority and community according to the type of waste generated (e.g. solid, household, hazardous). Collect any hazardous waste (if present) and store it in sealed containers prior to disposal in a designated area approved by the authorities.

In terms of hazardous waste the following mitigation should be followed:

- Provide adequate sanitation facilities serving all workers (mentioned in HSE).
- Paints with toxic ingredients or solvents or lead-based paints will not be used
- As there is no ability to return empty containers of hazardous materials to suppliers All waste should be deposited through licensed haulers/transporters to licensed and regulated landfill sites appropriate to the type of waste generated (e.g. solid, household, hazardous).

The following tables summarize the mitigation measures and the monitoring activities which are required to be undertaken to avoid any negative impacts on the environment. Responsibilities and estimated costs are also presented.

Mitigation Measures during Construction Phase.

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
1	Air quality	<ul style="list-style-type: none"> • Unpaved roads, e.g. which may be utilized for construction vehicles movement or transportation of construction materials should be prepared in a way to avoid dust emissions. Watering to suppress dust should take place regularly. • Watering or increase of the moisture level of the open materials storage piles to reduce dust levels. • Enclosure or covering of inactive piles to reduce wind erosion. • Loads in all trucks transporting dust-generating materials have to be sprayed with water to suppress dust, as well as wheels of means moving inside and outside of the construction-site. • Limiting Speed for vehicles approaching the site to less than 40 km/hr. On site, speed limit should not exceed 20 km/hr. 	Contractor	Resident engineer	1000
		<ul style="list-style-type: none"> • Engines of vehicles and other machinery are kept turned on only if necessary, avoiding any unnecessary emission. • Machines and equipment are periodically checked and maintained to ensure their good working condition. • All equipment and machines must be maintained and tested for compliance with standards and technical regulations for the protection of the environment and have appropriate certifications. • Activities are carried out using the minimum required number of means at the same time. • Electric small-scale mechanization and technical tools are used when available and feasible. 	Contractor	Resident engineer	Included in contractor cost

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
2	Noise	Construction activities are to take place within reasonable hours during the day and early evening.	Contractor	Resident engineer	Included in contractor cost
		<ul style="list-style-type: none"> Equipment must be kept in good working order and where appropriate fitted with silencers which are kept in good working order. Equipment to run only when necessary Positioning of the noise sources in a concealed area with respect to acoustic receptors, consistent with the needs of the construction site. 	Contractor	Resident engineer	Included in contractor cost
		Use of personal protection equipment for workers especially those who use jack hammers or near noisy engines or compressors.	Contractor	Resident engineer	1000
3	Water resources	Wastewater from the worker rest areas or construction offices should be contained in sealed containers and should be removed regularly from site by means of authorized contractors.	Contractor	Resident engineer	1000
		In case of the need to change engine oils or refuel some construction equipment, a proper maintenance workshop or shelter should be installed to ensure containment of any fuel or oil spills via provision of secondary containment, drip trays or other overflow and drip containment measures, for hazardous materials containers at connection points or other possible overflow points	Contractor	Resident engineer	1000
		<ul style="list-style-type: none"> In case of using septic tanks on site, the engineering drawings of these tanks should be presented to the Resident Engineer for approval. The wastewater in these tanks should be collected and then transported periodically to the nearest authorized wastewater treatment plant. 	Contractor	Resident engineer	Included in contractor cost

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
4	Soil	<ul style="list-style-type: none"> To prevent soil contamination by oil/grease spills, leakages or releases, all manipulations of oil derivatives in the process of construction and provision of the fuel to the machines should be performed with maximum care; leak proof containers should be used for storage and transportation of oil/grease and wash off from the oil/grease handling area shall be drained through drains and collected and disposed properly Construction waste and debris shall be collected on a regular basis and disposed of at designated landfills; Only authorized quarries shall be used for purchasing soil to be used for embankment, padding, bedding, backfilling during construction; and It must be prohibited to operate equipment and vehicles outside the designated work areas and roads. Reuse the excavated soil when it deemed technically appropriate. 	Contractor	Resident engineer	Included in contractor cost
		<ul style="list-style-type: none"> No hazardous waste storage to take place directly on soils. Appropriate and enclosed containers away from direct sunlight, wind and rain. Provide adequate ventilation where volatile wastes are stored. Limiting access to hazardous waste storage areas to employees who have received proper training 	Contractor	Resident engineer	1000
5	Solid and hazardous wastes	<ul style="list-style-type: none"> Minimizing hazardous waste generation by implementing stringent waste segregation to prevent the commingling of non-hazardous and hazardous waste to be managed. Provision of readily available information on chemical compatibility to employees, including labeling each container to identify its contents Limiting access to hazardous waste storage areas to employees who have received proper training Simple waste management plan for specific waste streams must be developed. 	Contractor	Resident engineer in coordination with the local authority and ministry of science and technology regarding hazardous wastes	1000

Receptor	Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
	<ul style="list-style-type: none"> • Non- hazardous or municipal waste must be collected and transported to local council approved disposal sites. • Food wastes must be collected, where practicable, considering health and hygiene issues, for disposal off-site through licensed contractors. • Waste containers must be located at each worksite. • Chemical wastes must be collected in 200 liter drums (or similar sealed container), appropriately labeled, for safe transport to an approved chemical waste depot or collection by a liquid waste treatment service. • Storage, transport and handling of all chemicals must be conducted in accordance with all legislative requirements, through licensed contractors and in coordination with the local authority. • All hazardous wastes must be appropriately stored in bounded areas and should be clearly identified as “hazardous”. • Transportation and disposal of hazardous wastes should be done through licensed contractors and in close coordination with the relevant local authority and in compliance with the legal requirements and instructions of the ministry of science and technology previously. • Hazardous liquids, such as solvents, rust proofing agents and primer must be managed in accordance with the requirements of relevant legislation and industry standards. • Material Safety Data Sheets (MSDS) for hazardous materials must be available on-site during construction and made available and explained to workers. • Hydrocarbon wastes, including lube oils, must be collected for safe transport off-site for reuse, recycling, transport or disposal at approved locations. 			

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
6	Flora & Fauna	Not Applicable	Not Applicable	Not Applicable	Not Applicable
7	Topography and landforms	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	Traffic	<ul style="list-style-type: none"> Where practicable, truck deliveries must be restricted to daytime working hours. Clear traffic signs and signs signals must be installed on-site to provide for safe traffic. 	Contractor in coordination with the Local Traffic Department for some sections	Resident Engineer	500
9	Health and Safety	<ul style="list-style-type: none"> Limit speed of construction vehicles and provide road signage for drivers and local community. 	Contractor	Local traffic department in coordination with the Resident engineer for some sections	500
		<ul style="list-style-type: none"> Having a clear set of OHS Plan and Procedures. Having a detailed emergency plan including the nearest medical center and the location of the first aid kits. Qualified personnel must be employed for the construction equipment, and personnel must be trained for health and safety issues. Personal protection equipment such as eyeglasses, gloves, hard heads and safety belts must be supplied and continuously used by all workers, technicians, engineers and site visitors. 	Contractor	Resident engineer	1000

Receptor	Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
	<ul style="list-style-type: none"> • Testing structures for integrity prior to undertaking work; • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; • An approved tool bag should be used for raising or lowering tools or materials to workers on structures; • Use of helmets and other protective devices will mitigate against scratches, bruises, punctures, lacerations and head injuries due to dropping objects. • Adherence to local and international guidance and codes of practice on EHS management during construction; • management, supervision, monitoring and record-keeping; • implementation of EHS procedures as a condition of contract with contractors and their sub-contractors; • clear definition of the EHS roles and responsibilities of the companies involved in construction and to individual staff (including the nomination of EHS supervisors during construction and an EHS coordinator during operation); • pre-construction assessment of the EHS risks and hazards associated with construction and operation, including consideration of local cultural attitudes, education level of workforce and local work practices; • provision of appropriate training on EHS issues for all construction and operation workers, including initial induction and regular refresher training, taking into account local cultural issues; • provision of health and safety information; • regular inspection, review and recording of EHS performance; • protective systems to be put in place to protect workers from cave-in in trenches. 	Contractor	Resident engineer	Included in contractor cost

Receptor	Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
	<ul style="list-style-type: none"> • Any accidents to be reported and treated within site as a first aid procedure. • Safety training for the workers. • Fuel and oil changing shelters should be equipped with necessary firefighting and safety equipment • First aid boxes should be available all times onsite and trained staff on emergency aids should be identified. 	Contractor	Resident engineer in coordination with health and safety officials.	1000
	<ul style="list-style-type: none"> • Provide surveillance and active screening, and immunization • Provide treatment on-site or in community health care facilities • Eliminate unusable impounded water, and apply vector control programs • Erect suitable and adequate warning signage along culvert cleaning and excavation sites • Collaborate with local communities and responsible authorities to improve signage and visibility • Avoid uncovered piles of aggregates and other construction materials • Avoid burning waste in worksites • Avoid or minimize driving through community areas and dangerous routes during daytime • Alert drivers on local speed limits, and monitor implementation • Minimize traffic by purchasing from the local markets to the extent possible • Closing of trenches on the same day, • If a trench will be left open for the day after, barriers to prevent community members and unauthorized personnel will be put in place. • Assign local security personnel to prevent unauthorized entry to the site. 	Contractor	Resident engineer in coordination with health and safety officials.	1000

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> • Signs and awareness should be installed close to the excavation area to protect road users and community. • Contractor prepares and implements Traffic Management Plan and Pedestrian Safety Plan 			
10	Handling Complaints	<ul style="list-style-type: none"> • A complaints register will be kept on site and this will feed into the GRM. Details of complaints received will be incorporated into the audits as part of the monitoring process. 	Resident Engineer	PMT	Included in contractor cost
11	Cultural Heritage	<ul style="list-style-type: none"> ▪ In case of accidental discovery stop all works and contact the responsible authority within 24 hours; ▪ Provide training to the construction crew on the mode of conduct in case of accidental findings <p>Chance find procedures will be used as follows: Stop the construction activities in the area of the chance find;</p> <ul style="list-style-type: none"> • Delineate the discovered site or area; • Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Culture take over; • Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Culture immediately (within 24 hours or less); • Responsible local authorities and the Ministry of Culture would be in charge of 	Contractor	Resident engineer in coordination with Heritage Authority.	Included in contractor cost

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<p>protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists from the Department of Antiquities and the Ministry of Culture (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;</p> <ul style="list-style-type: none"> • Decisions on how to handle the finding shall be taken by the responsible authorities from DA and the Ministry of Culture. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage; • Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and • Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Culture concerning safeguard of the heritage 			
12	Child labor and Gender Based Violence	<ul style="list-style-type: none"> • Rigid obligations and penalties will be added to the contractor contracts in order to warrantee no child labor exist in the subproject • The PMT will oblige the contractor to keep a copy of IDs of laborers in order to monitor the hired staff (Chapter 11 of the 2015 Labor Law of Iraq sets the age for hazardous works 18 years old). • Labor influx should also be managed by contractor and ensure Code of Conduct is introduced and applied to avoid impact on local community and provide mitigation measure for GBV risks • The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance ▪ The code of conduct for workers/contractors should be introduced to prevent misconducts, including prevention of sexual harassment and gender based violence and also training and awareness rising for workers should be continued, through daily toolbox talks and other training opportunities. 	Contractor	Resident engineer	Included in contractor cost
Total cost US\$ (Construction phase)					9,000

Mitigation Measures during Operation Phase.

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
1	Air quality	<ul style="list-style-type: none"> The net impact of the Project on air quality is not applicable, and will be limited to Construction Period. 	Not Applicable	Not Applicable	Not Applicable
2	Noise	<ul style="list-style-type: none"> Not applicable 	Not Applicable	Not Applicable	Not Applicable
3	Water resources	<ul style="list-style-type: none"> Not applicable 	Not applicable	Not applicable	Not applicable
4	Soil	<ul style="list-style-type: none"> Not applicable 	Not applicable	Not applicable	Not applicable
5	Solid and hazardous wastes	<ul style="list-style-type: none"> Not applicable 	Not applicable	Not applicable	Not applicable
6	Flora & Fauna	<ul style="list-style-type: none"> Not applicable 	Not Applicable	Not Applicable	Not Applicable
7	Topography and landforms	<ul style="list-style-type: none"> Not Applicable 	Not Applicable	Not Applicable	Not Applicable
8	Handling Complain	The continued operation of a GRM for one year following operating of the network for use will ensure that local community members have an accessible, fair and transparent means of reporting any emerging adverse impacts, and a means of obtaining mitigation.	Local authorities	Local authorities	No cost
9	Health and Safety	<ul style="list-style-type: none"> - Having a clear set of OHS Plan and Procedures. - Provision of health and safety information; - Regular inspection, review and recording of EHS performance; 	Contractor	Resident engineer	Included in contractor cost
Total cost US\$ (Operation phase)					No Cost

Monitoring Activities during Construction Phase

Receptor		Monitoring Activities	Monitoring Indicators	Frequency	Responsibility	Supervision	Total estimated Cost in US\$
1	Air quality	<ul style="list-style-type: none"> Investigate dust complaints from workers and residents Visual inspection of vehicles and equipment operating or entering the site and Measurements of exhaust emissions (CO, SO_x, NO_x, PM10, PM2.5) 	<ul style="list-style-type: none"> Recorded and documented complaints Record the status of equipment and vehicles on site (excessive black or white smoke) 	<ul style="list-style-type: none"> Daily visual inspection Once every six month 	Resident Engineer	PMT	1,500
2	Noise	Investigate noise complaints from workers and neighboring communities in the affected locations	<ul style="list-style-type: none"> Recorded and documented complaints Recorded tests results 	<ul style="list-style-type: none"> Weekly inspection of complaints Only in case of complains 	Resident Engineer	PMT	1,000
3	Water resources	<ul style="list-style-type: none"> Investigate implementation of mitigation measures and observe any oil or fuel spills. Investigate wastewater disposal measures 	Site Investigation report	Daily Investigation	Resident Engineer	PMT	No cost
4	Soil	<ul style="list-style-type: none"> Observe any soil contamination with oil or fuel Observe any accumulation of wastes 	Site Investigation report	Monthly	Resident Engineer	PMT	No cost

Receptor		Monitoring Activities	Monitoring Indicators	Frequency	Responsibility	Supervision	Total estimated Cost in US\$
5	Solid and hazardous wastes	<ul style="list-style-type: none"> • Maintain records on waste types and quantities • Observe any waste accumulation in un approved locations 	<ul style="list-style-type: none"> • Waste management contracts with authorized contractors • Waste delivery receipts from local authorities. 	<ul style="list-style-type: none"> • Weekly • Weekly 	Resident Engineer	PMT	No cost
6	Health and safety	<ul style="list-style-type: none"> • Ensure compliance of workers to Health and Safety requirements • Maintain log on incidents and accidents 	Observation report Accidents report	Weekly	Resident Engineer	PMT	No cost
7	Flora & Fauna	Record any observation about wild animals or plants on site or nearby and report to the Environmental Authority	Observation report	Upon occurrence	Resident Engineer	PMT	No cost
8	Topography and landforms	No monitoring required	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
9	Traffic	Ensure speed limits and warning signs are installed	Road signs are installed.	Monthly	Resident Engineer	PMT	No cost
10	Handling Complaints	Ensure that the GRM is effective and well communicated	Number of complaints received, analyzed and responded to.	Weekly	Resident Engineer	PMT	No cost
11	Child labor and Gender Based Violence	<ul style="list-style-type: none"> • Ensuring that children and minors are not employed directly or indirectly on the project. • Ensure to prevent misconducts, including prevention of sexual harassment and gender based violence. 	<ul style="list-style-type: none"> • A copy of IDs of laborers and labor registry. • Percentage of workers that have attended the code of conduct training and number of GBV training delivered. 	<ul style="list-style-type: none"> • Daily • Weekly 	Resident Engineer	PMT	No cost
Total cost US\$ (Operation/Maintenance phase)							2,500

PUBLIC CONSULTATION RESULTS

According to the WB policies, it is required that broad and open public consultations be held with PAPs on the project. These consultations are to ensure that the PAPs are provided with the opportunity to engage in the construction planning process, to raise questions and receive input and responses to their concerns.

In order to fulfill the WB requirements, public consultation and also one on one interview were adopted to obtain sound information on the possible impacts on the local communities. Accordingly, a questionnaire was formatted to cover the key environmental and social aspects related to the subproject. It was difficult to conduct the public consultation with the women due to the tribe's habits that exist in the area of the project. However, individual interview with women was conducted to take the women's opinions freely. The questionnaire was then addressed to 5 women and 9 men of the local individuals in the surrounding community randomly to have their opinions and thoughts regarding the construction activities in addition to 17 men at the public consultation.

According to the results revealed from public and individual consultation, the local community agreed that, the construction activities will have a positive impact on their social daily life. The following are the main findings of the consultation process which took place on 1st October 2019.

1. All interviewed locals agreed that the construction activities will have a positive impact from the social perspectives on the locals.
2. No claims from any locals were recorded or alleged regarding the ownership of the land; all agreed that it is governmental land property.
3. No vegetation covers, crops, plants, trees...etc. will be removed in order to execute the construction activities of this subproject.
4. The interests of the locals will not be affected in any way by the construction activities.
5. No infrastructure within the project area will be affected negatively due the construction activities.
6. No deportation, dislocation of any of the local community will be needed due to these activities.
7. The construction of the project will enhance the social relationship among the locals; improve their achievements and performance.
8. Most locals agreed that the project needs more instructional signs near the working area.

For more details and all the above conclusions are obtained from annex (2&3).

During public consultation, information about GRM was introduced to local people and they were informed that they can submit their complaint to either site engineer, or to social representative or to PMT during construction. The community leaders' information and PMT contact information will be available before implementation starts.

Grievance Redress Mechanism

The proposed GRM for the SFDP aims to resolve issues that could come across implementation promptly, more efficiently, and accurately. The design of the GRM system should provide means for collecting supportive documents and evidences, investigating the problem, and supporting the final decision. An effective GRM is characterized by: diversity, clear procedures, swift responses, and allowing for two-way communication.

Complainants would commonly approach this GRM for many reasons, including those related to incomplete or no service, vague procedures, inappropriate/ unfair treatment by the staff, and harm (environmental and/or social) to individuals or groups as a result of carrying out the Project’s interventions. It is important to mention that the complaints can be raised and addressed even from anonymous person(s).

The complaint/ grievance, once received, should be promptly resolved or undergone further investigation. Complaints are sorted out according to complexity. Direct responses should be given to simple inquiries by concerned staff members in 3-6 working days as a maximum, and should be documented and archived as per the relevant procedure. While, more comprehensive measures should be applied to complex issues, including field investigation and communicating with higher management for final decisions within a timeframe of 20 working days as a maximum. After the completion of the proceedings, the complaint is closed, and information is included in the system, including the action(s) taken and the result(s) required. The complainant shall be notified of the result and the action immediately and informed of the possibility of objecting to the procedure. See detailed procedures in the main ESMF report.

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

In any case, the PMT must maintain records of grievances and complaints, including minutes of discussions, recommendations and resolutions made. Participants were informed that they can submit their complaint to either site engineer, or to community leader or to PMT during construction. The PMT contact information (office and mobile phone numbers) will be available before implementation starts and will be posted at the entrance of the project site

Contact Information for GRM

#	Name	Job Title	Phone Number	E-mail
1	Ahmed Ibrahim	clerk	07701830500	Basmamohammed337@yahoo.com
2	Hussam Shaael	Translator	07827793093	hussamshail@yahoo.com
3	Ibtisam Jasim	Deputy head	07724674469	Sfd.iraq.2018@gmail.com

Main Report

1. INTRODUCTION

With the recent liberation of Mosul from ISIS, Iraq faces a historic opportunity for national reconciliation through the effective delivery of critical social services, economic growth and recovery programs. The reinstatement of trust between the State and its citizens is highly dependent on the Government of Iraq (GOI) demonstrating its capacity to deliver security, jobs and economic growth to all Iraqis, with a focus on the poor, the vulnerable and the millions of Internally Displaced People (IDP). The GOI has embarked on a comprehensive reform of social protection programs. Two major achievements were the shift from categorical to poverty targeting in social assistance that improved outreach to the poor; and the issuance of the new integrated Social Insurance Law that is likely to have a positive impact on labor mobility and fiscal rationalization of the pension's fund.

Complementing this work, the GOI, represented by the Ministry of Planning (MOP), requested the World Bank's support in the design and financing of a Social Fund for Development (SFD) project to support locally driven initiatives to improve the living conditions and opportunities of the poor and most vulnerable in Iraq.

The GOI has demonstrated its commitment and support to the design of this operation and established a high-level national team to guide and coordinate the development and institutionalization of the SFD, as well as five technical teams to work on the different aspects of the fund. These teams developed the design of the SFD, and the draft SFD law. The SFD would thus be established by law, as an autonomous institution that does not operate under civil service regulations. While SFD law is being formulated and issued, the Ministry of Planning (MOP), at the central and local levels, specifically by the Directorate General of Poverty Reduction Strategy, will initiate SFD activities in three governorates in the first year, then expand to another four in the second year, and ultimately scale-up to the rest of the country starting in year three of project implementation.

The Project Development Objectives (PDOs) are to: (1) Improve access to basic services and; (2) Increase short-term employment opportunities, in targeted communities.

According to the Environmental and Social Management Framework (ESMF) which was prepared for the Social Fund for Development project (SFDP) and disclosed locally and on the WB website, an Environmental and Social Management Plan (ESMP) should be prepared, cleared and publically consulted upon and disclosed prior to the commencement of any construction activities for the water distribution network component.

This ESMP was developed to cover the activities associated with the Construction of water distribution network at Al Khanokah village in Shlah Al-Din governorate. The ESMP identifies key environmental and social impacts of the project activities during both the construction and the operational phases, and defines the necessary mitigation measures addressing potential negative impacts, as well as monitoring procedures during construction and operation. The ESMP was carried out by an independent consultant according to requirements of the current environmental regulations of the World Bank (OP 4.01), and Iraqi regulations. In this report the WB, and Iraqi environmental and social standards and regulations were followed to ensure the national and international acceptance and compliances of the ESMP. The ESMP should be followed and implemented by all relevant parties.

The objectives of this ESMP are to provide:

- Practical and achievable actions to ensure that the subproject adverse environmental and social impacts are properly mitigated.
- Support to Local and State authorities to enable setting approval conditions for the subproject based on relevant standards and procedures.
- An integrated plan for monitoring, assessing and controlling potential impacts.
- An opportunity for holding consultation with the communities to get their input on the subproject's activities.
- Focus on positive aspects and benefits, mitigate negative impacts and avoid serious and irreversible damage to the environment and people.
- Information to the local community about the revised subproject's activities and the environmental measures, socio-economic measures, information on residents' rights who might be negatively affected by some subproject's activities and operations.
- Information to the local community of the existence of a Grievance Redress Mechanism (GRM) system through which they might lodge complaints and expect prompt and fair consideration.

The ESMP establishes a framework for the identification of environmental protection, mitigation, monitoring measures to be taken during construction and operational phases of the subproject. The ESMP includes description of the subproject, mitigation measures, monitoring plan, management plan, institutional arrangements, and public consultation. The ESMP will aim to achieve a good environmental and social performance during construction and

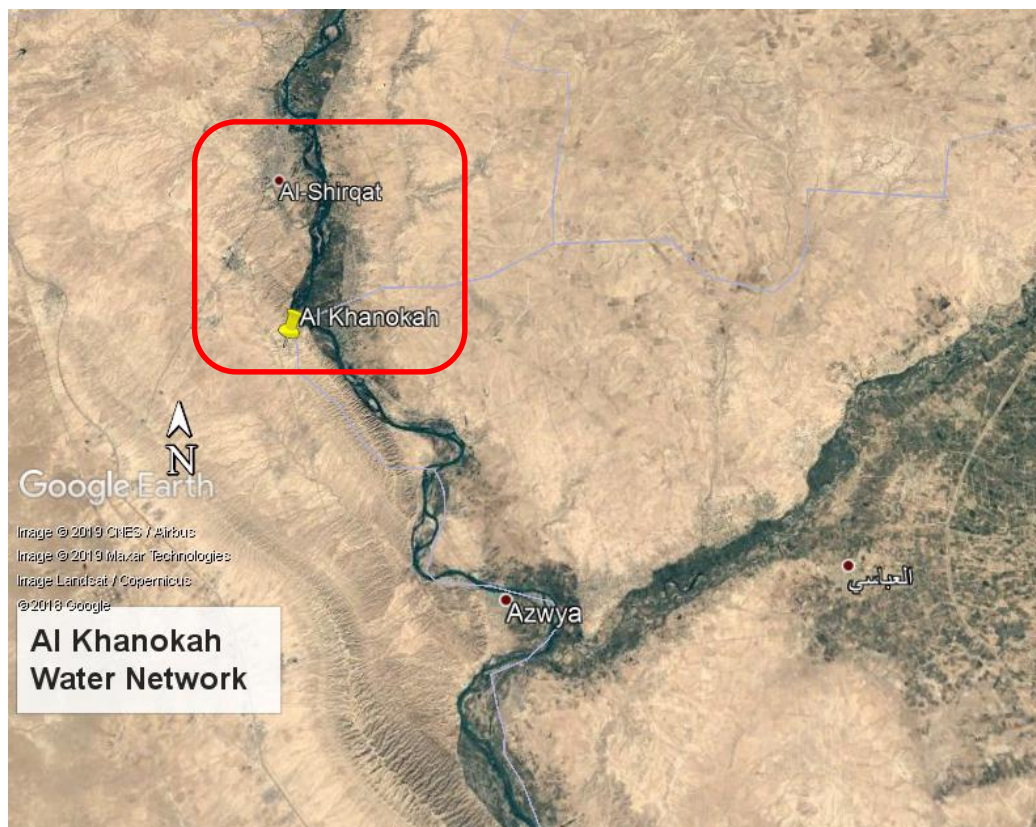
operation. To meet this goal, the following activities, measures and programs must be followed:

- Environmental regulations
- Application of all environmental and social mitigation and management measures.
- Application of Environmental and social monitoring plan.
- Preparation of emergency and contingency plan.
- Application of Institutional plan.
- Application of Environmental and safety measures.
- Effective and open consultations with local communities.

Environmental and social monitoring plan is an important component of this ESMP. It provides the information for periodic review and refinement modification of the ESMP as necessary, ensuring that environmental and social protection is optimized in both subproject's phases through monitoring and early detection and effective remediation of unwanted environmental and social impacts. Finally, it will also demonstrate compliance with national and international regulatory requirements.

2. PROJECT DESCRIPTION

The subproject is located in the Governorate of Salah Al-din northeast of Baghdad. Tikrit is the administrative center of Salah Al-Din Governorate and its located 140 kilometers (87 mi) northwest of Baghdad and 220 kilometers (140 mi) southeast of Mosul on the Tigris River. Al Khanokah village within Salah Al-Din governorate which is located about 119km from Tikrit. The village has no water distribution network as shown in Annex (5). The location of this subproject is close to AlShirqat City as shown in the figure below:



Al Khanokah village in Salah Al-Din governorate

2.1 Objective of the Construction Works

The objective of this subproject is to construct water distribution network for Al Khanokah village. The subproject aim to:

- To provide a good sanitary environmental condition of village protecting public health.
- Ensure the incoming water quality that was produced in water treatment plant to the consumers.
- Supply water equitably to the consumers with sufficient pressure so as to pump the water to the desired area

- Mitigating the effects of war and ensure a safe return for the displaced people when return to their land.

The construction works will imply the setup of camp in the area near the subproject. The setup of camp will be established near or within the subproject on vacant state owned lands for storage of equipment and construction materials. Accordingly, no temporary land acquisition is needed. The construction will need about 15-20 local workers per day. If there are non-local workers, these workers will need to have their accommodation facilities in the camp, during the construction phase.

2.2 Scope of Work

The total length of the pipes within the village’s network is about 7.75 Km including different diameters ranging from 110-255mm as shown in the table below:

Pipe	Diameter (mm)	Length (m)
1	110	6000
2	160	1250
3	255	500
	Total	7750

The network will be connected to the main pipe of potable water in the Al-Shirqat water treatment plant. Works for construction of the water distribution network in Al Khanokah village in Salah Al-Din Governorate which is connecting to the residential homes will include the following activities:

1. Providing the necessary materials and equipment for excavating trenches at a depth of 120 cm and a width of 90 cm including cracking the sidewalks and streets, if any.
2. Laying down and connecting plastic pipes and then wrapping the pipe with clean soil.
3. Backfilling of the trenches by used excavated soil at a height of (0.55 m), rehabilitation and restoration of sidewalks and streets (if any) that were demolished and returned as it was with the removal of excess construction wastes.

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

The anticipated duration of construction works is about 180 days with about 15-20 workers per day with more than 95% of them are local workers and the rest are engineers and technicians that may be from the closest area. The work will also comprise of some civil works such as excavation, lifting the soils and other waste produced during the excavation (removing the current water distribution network is not part of the project), and also casting in some cases and as follows:

- Providing workers and all the surveying equipment required for the execution works.
- Conduct excavation work according to the dimensions and methodologies mentioned in the drawings with other considering the possibility of groundwater.
- Prepare all materials for the implementation of the work (pipes and joints) then wrapping them with soil.

Although most of the workers are local workers (more than 95%), however, a camp will be erected close to the working area and therefore, the water, wastewater, and the solid waste that will be generated from this camp will be treated properly and transferred to the authorized treatment plants or landfills.

3. BASELINE CONDITIONS

3.1 The Project Area

Tikrit city and its suburban area have a long historic background of several years as part of the Mesopotamia civilization. The principle agricultural activity in the area is different crops. Farming, some industrial activities are the major economic activity in Tikrit. The project is located in the governorate of Salah Al-Din that is sited in mid-north of Iraq, sharing internal boundaries with the governorates of Baghdad, Dyala, Kirkuk, Musel, Erbil, sulaymaniyah and Ramadi.

The Tigris River crosses the governorate. Irrigated farmland stretches along these rivers. Agriculture has traditionally been one of the main economic activities in Salah Al-Din, the main productions are corn, wheat, and barley.

The population in the village is about 3000 persons in Al Khanokah. The location of this subproject is in an open area; there is no river, main roads, and agricultural area close to this project (more than 500m).

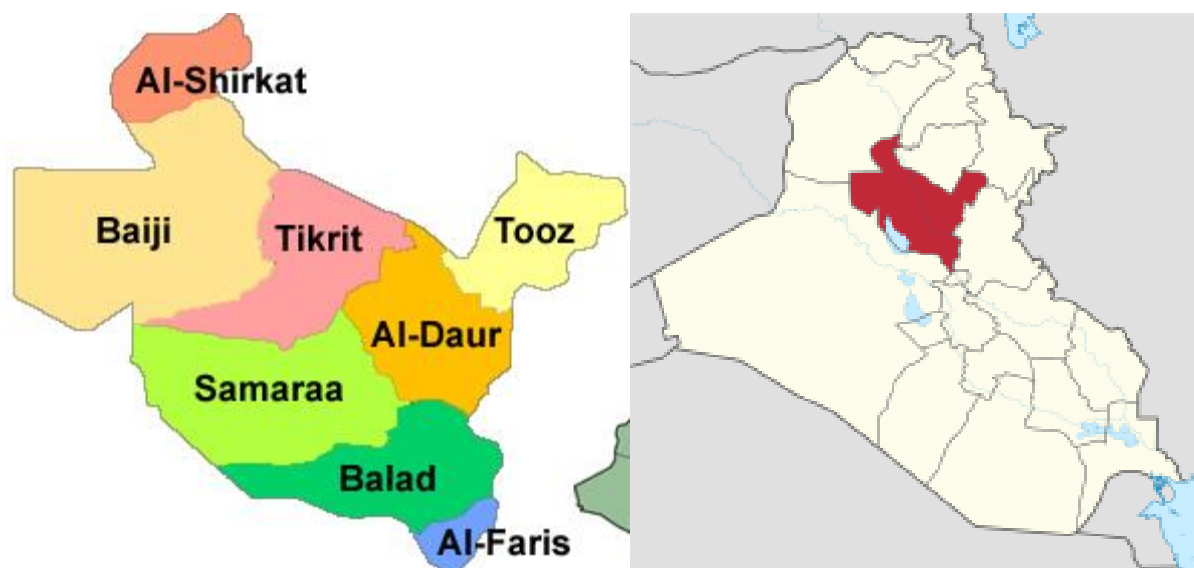


Figure 1: Image showing the Working area under study

3.2 Environmental and Social Baseline Conditions

The environmental baseline section is presented to give clear overview of the environmental and social conditions in the vicinity of the subproject location prior to commencement of works. The elements of the environment include: climate and meteorology, air quality, topography, noise levels, traffic, rivers and waterways, biodiversity including flora, fauna, rare or endangered species, and sensitive habitats. It also includes consideration of socio-economic characteristics. The following sections present such information.

3.2.1 Climate

Salah Al-Din governorate is located in the northern mid part of Iraq, and has a semi- desertic climate. The climate in the subproject’s area is called a semi desert climate. The major rain falls during the period November thru February, with a spread showering in March. During the year, about 177 mm of precipitation falls annually, while the average annual temperature is 29.7 °C. The driest weather is in June, July & August, September when no rainfall (precipitation) occurs. While, the wettest weather is in February & March when rainfall (precipitation) occurs. Monthly wind velocity record in recent years is shown in the following table.

Table 1: Monthly Mean Wind Speed

Observation station: Salah Al-Din station Monthly mean wind velocity (m/sec)

YEAR	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
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YEAR	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
2004	1.8	1.3	2.4	1.7	2.2	3.2	3.2	2.5	3.2	1.9	4.8	2.9
2005	1.6	4.5	2.6	2.2	3.1	3.3	2.9	22	2.1	2.8	2.6	2.9
2006	1.4	2.4	3.7	1.9	2.7	23	2.5	2.6	3.1	2.8	1.9	32.0
2007	2.1	2.1	3.2	2.9	2.9	2.9	2.7	3.0	2.2	1.9	2.3	2.3
2008	2.1	2.0	2.8	2.3	2.9	3.3	2.2	3.2	2.1	1.6	2.8	3.0
2009	2.1	2.1	2.8	3.8	3.6	3.3	3.2	3.2	3.0	1.9	2.2	2.4
2010	1.7	1.7	3.0	3.2	3.1	3.4	3.7	3.2	1.7	2.1	2.3	2.6
2011	1.8	2.1	2.6	3.3	2.9	2.8	4.1	2.0	2.1	2.8	—	—
2012	3.2	1.6	4.2	4.2	4.1	3.2	4.2	3.1	3.3	3.2	—	—

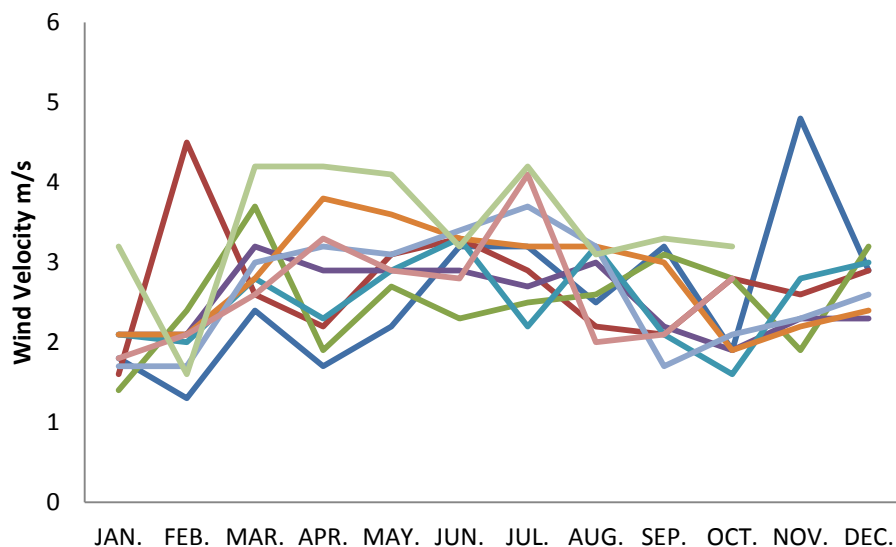


Figure 2 Monthly Wind Velocity (m/s) from 2004-2012

Highest temperatures occur in July and August and reach over 45 degrees centigrade... while the average annual temperature is 29.7 °C

Table 2: Monthly Mean Temperature

Observation station: Salah Al-Din station monthly means Temperature (°C)

YEAR	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
2007	12.9	13.4	20.1	30.1	32.4	40.1	41.7	42.1	40.1	32.3	26.2	19.4
2008	13.2	14.1	22.1	30.0	32.2	40.9	42.1	42.6	41.1	33.1	25.7	20.3
2009	13.8	14.2	23.1	30.1	33.2	40.8	41.2	42.3	41.2	32.3	25.8	17.5
2010	14.1	16.1	22.2	31.1	32.1	41.6	41.0	42.6	40.0	32.1	24.4	15.6
2011	12.7	13.5	22.6	30.1	41.0	40.4	41.0	43.1	40.0	32.1	24.3	20.3
2012	13.3	13.4	23.1	30.0	40.0	41.4	42.1	45.2	41.3	33.0	23.2	19.3

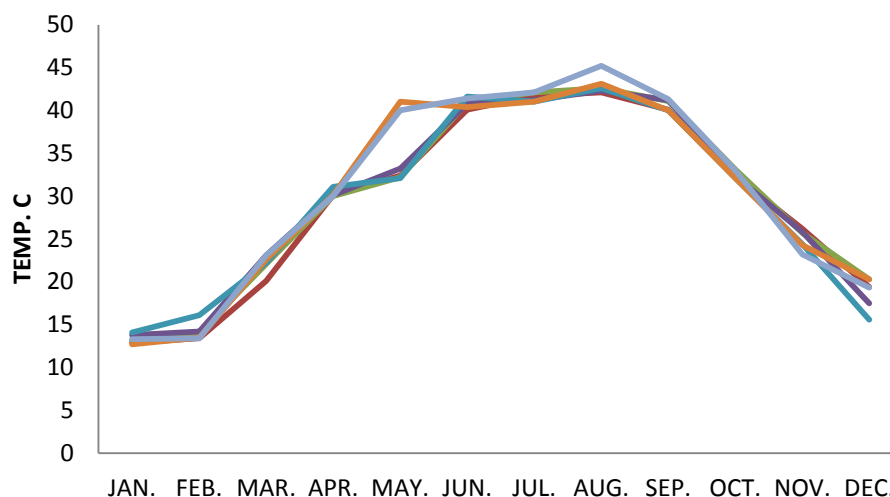


Figure 3: Monthly Mean Temperature C° from 2007-2012

3.2.2 Air Quality

As the suggested sites are located in an open area, so the expected concentration of these pollutants is low. The project area is in open area so good ventilation and dispersion of any air pollutants is expected. therefore, the ambient air quality is expected to be within the normal range, table (1) shows WHO Ambient Air Quality Guidelines.

Table 1: WHO Ambient Air Quality Guidelines (EHS World Bank guidelines)

	Averaging Period	Guideline value in mg/m3
Sulfur dioxide (SO2)	24-hour	125 (Interim target-1) 50 (Interim target-2) 20 (guideline)
	10 minute	500 (guideline)
Nitrogen dioxide (NO2)	1-year	40 (guideline)
	1-hour	200 (guideline)
Particulate Matter PM 10	1-year	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)
	4-hour	150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)
Particulate Matter PM 2.5	1-year	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline) 5 (Interim target-1)
	24-hour	50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)
Ozone	8-hour daily maximum	160 (Interim target-1) 100 (guideline)

3.2.3 Site Topography and Location

The project sites area represents an extension of the flat areas that starting from the middle of Iraq till the mid-southern parts of the country. No natural land obstacles are presented in the project area. The project area is free of mountains, cliffs, and valleys.

It can be seen (from the photo below) that the surrounding area tends to be desert. There are no protected areas or endangered species (there is no critical or high biodiversity values that might be affected) in the vicinity of the sites (more than 1 Km). There are no close buildings or sensitive receptors located to the subproject's site for more than 200 m.



Photo of Al Khanokah Village (By Google Earth)

3.2.4 Land use

The construction activities of the water distribution network will be on state-owned lands. There are no close buildings located to the project's site and therefore it is unlikely to be adversely affected by either the construction activities or the operation as long as it will be under the ground.

3.2.5 Seismic Activities

The territory of Iraq, although not directly located on a dense cluster of recent earthquake epicenters; is subject to some seismic activities especially the east of Iraq. Some of those were recorded in the past as a result of movement of some tectonic plates in neighboring country, Iran. However, their impacts were insignificant to human and infrastructures.

3.2.6 Flooding

Sometimes, during spring season, there are some canals works as a drain channel (with a low water flow). There are no records of flooding that occurred previously in the area.

3.2.7 Noise

Currently, there is no traffic congestion and consequently the existed noise level is within the normal levels.

3.2.8 Heritage Environment

There are no sites of historical or cultural importance in the area. There are no cemeteries, historical-cultural monuments, churches, mosques near the subproject that need to be removed in order to construct the water distribution network.

3.2.9 Traffic Level

No traffic problem or traffic congestion will be expected during the construction phase or in the operation phase.

3.2.10 Land Acquisition

Land in the vicinity of most of the subproject is an open area; the distribution of the water pipe network will be installed on state owned land. There are no close buildings located to the subproject sites and therefore it is unlikely to be adversely affected by either the construction activities or the operation when it is in use.

The construction camp will be established near to the working area on vacant state owned lands for storage of equipment and construction materials. The construction will need about 15-20 local workers per day. Maybe some of those workers will need to have their accommodation facilities (if they are non- local workers) in this camp, during the construction phase.

3.2.11 Social Aspects

The suggested path for the construction of the water distribution network will be on state land, where no land or property expropriation will be necessary. All the areas around the sites remain clear of any settlement or economic use and are ready for construction works, no interference is registered from the local community which is eager for the works to be completed. It is important to mention that during the implementation of the network, it is not expected to cause restriction of access or livelihood impacts as contractor will backfill the trench directly for safety purposes as well.

4. LEGAL ASPECTS

4.1 Iraqi environmental legislations

During construction and operation phases of the project, the work must follow the Iraqi laws and regulations for the environmental standards. These are:

1. Laws of the environment protection No.3 issued in 1997 and its relevant published regulations. No environmental regulations for gaseous emissions, noise and other air pollution standards are in force and legally binding. However, limits for water disposal in any surface waters and main sewers are regulated according to the regulations no. (25)/1967 and their update modifications released from the Ministry of Health (MOH) and the Ministry Of Environment.
2. New environmental framework Law No. 27 of 2009 by the Iraqi National Government was introduced but the executive decrees remain to be prepared. There are as yet no formally adopted requirements for environmental assessment.
3. Regulations governing contact with archaeological sites extend also to encompass developmental activities like road construction and rehabilitation wherever these developmental activities lie within archaeological vicinity.
4. Regulations of the MOE on sanitary waste must be followed, and for the rubbles (construction & demolition waste) the regulations, legislations and instruction of both MOHE and MOCHPM.

Presents Iraqi's laws applicable to such activity.

Table 4: Applicable Laws and Regulations in Iraq

Law	Subject
Law no. 37 of 2008 for Ministry of Environment	Describes institutional arrangements of the Ministry of Environment and Outlines policies and roles and responsibilities toward protecting the environment.
Law no. 27 of 2009	Protection and Improvement of Environment Environmental protection from pollution resulted from petrol and natural gas extraction
Regulations no. 2 of 2001	Preserving water resources.
Law no. (55) Issued in 2002	Law of heritage and antiques
Law No. 37 of 2015	Labor Law

For legal aspects, the work during construction and operation must follow the Iraqi laws and regulations for the Environmental Standards. These are laws of the environment protection No.3 issued in 1997 and the published regulations. No environmental regulations for gaseous emissions, noise and other air pollution standards are in force and legally binding. However, limits for water

disposal in any surface waters and main sewers are regulated according to the regulations no. (25)/1967 and their update modifications released from the ministry of health and the ministry of the environment. Law of heritage and antiques no. (55) Issued in 2002, while for a sanitary waste (municipal) the regulations of the MOE must be followed, and for the rubbles (construction &demolition waste) the regulations, legislations and instruction of both MOHE and MOCHPM must be followed. It is important also to mention that, the contractor will sign employment agreement with all construction workers by following labor law of Iraq.

It should be noted that legislation relating to social safeguards issued in Iraq since 2003 has focused primarily on the ratification of international conventions and protocols on issues such as cultural heritage. As yet there are no formally adopted requirements for social assessments relating to road works. Hence, social safeguards issues remain very largely uncovered except to the extent they are referred to under environmental laws.

4.2 The World Bank Safeguards Policies

In addition to the Iraqi laws and regulation the ESMP follows key policies and procedures of the World Bank; the following section presents the WB operational policies relevant to the reconstruction of this water distribution network.

4.2.1 OP/BP 4.01 - environmental assessment procedure.

The Bank requires environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making. The objectives of the EA are to:

- a. Ensure that projects proposed for Bank financing are environmentally and socially sound and sustainable.
- b. Inform decision makers of the nature of environmental and social risks.
- c. Increase transparency and participation of stakeholders in the decision-making process.

4.2.2 OP/BP4.12 the key Operational Policy

OP/BP 4.12 describes the involuntary resettlement and focuses on the following principles:

- a) Involuntary resettlement is avoided wherever feasible, or minimized, exploring all viable alternative project designs;
- b) Where it is not feasible to avoid involuntary resettlement, activities are conceived and executed as sustainable development programs. Displaced persons are to be meaningfully consulted and have opportunities to participate in the planning and implementing of resettlement programs affecting them; and displaced persons are assisted in their efforts to improve their livelihoods and standards of living, or at least to restore them, in real terms, to pre-displacement levels or to levels

prevailing prior to the beginning of project implementation, whichever is higher. The mechanism of assisting displaced persons is based on full and prior mitigation and compensation for loss of assets or livelihoods.

- c) OP 4.12 applies whenever, in a Bank-financed project, land is acquired involuntarily or access is restricted in legally designated parks or protected areas.

However, in this specific sub-project, OP 4.12 does not apply as all repair and construction activities will be within the existing footprint and no additional land acquisition is needed either permanently or temporarily.

4.2.3 OP/BP 4.11 Physical Cultural Resources

Physical cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Their cultural interest may be at the local, provincial or national level, or within the international community. Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a community's cultural identity and practices. The Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances. The impacts on physical cultural resources resulting from project activities, including mitigating measures, should not contravene either the borrower's national legislation, or its obligations under relevant international environmental treaties and agreements. The borrower addresses impacts on the physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment process.

As Iraq is rich in Physical/ Cultural Resources, and the destruction experienced during the conflict is likely to have affected historical buildings, religious sites such as mosques, and shrines, and monuments, the OP 4.11 is triggered as a precautionary measure and mitigation measures.

4.3 WBG EHS: The Environmental, Health, and Safety (EHS) Guidelines

These are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). When one or more members of the WB Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards.

5. IMPACT ASSESSMENT AND MITIGATION MEASURES

5.1 Construction Phase

This section of the report describes the environmental and social impacts that are likely result from the construction of this water distribution network, and the mitigation

measures addressing them. The Environmental actions, procedures and responsibilities as required during the construction phase must comply with the available specifications, legislation, laws issued by the MOHE.

The construction contractor(s) will be responsible for compliance with the ESMP provisions during the construction phase of the subprojects. The contractor will be also in charge of undertaking construction works in a manner which complies with all relevant environmental procedures, adheres to all legislative requirements, and ensures that all environmental objectives associated with the contract are achieved. The overall assessment of the key environmental and social impacts is summarized below. According to the above environmental baseline and mitigation measures, it can be expected that the significant impact is low for most of the environmental receptors due to the minimum concentrations (as a background) for some parameters while health and safety has a high impact due to the fact this issue is related directly with the health and safety for the workers and staff as shown in the table below:

Table 5: Summary of Impact Assessment during Construction

	Environmental Receptor	Impact Significance
1	Air Quality	Medium
2	Noise	Medium
3	Water Resources	Low
4	Soil	Low
5	Solid and hazardous wastes	Low
6	Flora & Fauna	Not significant
7	Topography and landforms	Not significant
8	Impacts on local traffic	Not significant
9	Health and Safety	High
10	Socio-Economic impacts	Low
11	Child Labor	Medium

5.2 Operational Phase

During the operational period, the subprojects are expected to result a positive socio-economic outcome for the local communities. During operation of the water distribution network, No environmental impact is expected from the water distribution network. Socially harmful consequences of construction this water distribution network is not anticipated. However, the continued operation of a GRM for one year following opening of this project will ensure that local community members have an accessible, fair and transparent means of reporting any emerging adverse impacts, and a means of obtaining mitigation.

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

In this section, the identified mitigation measures will be summarized. The responsibility for implementation of the mitigation measures will be mostly upon the contractor. However, the supervision and assurance that the mitigation measures are

implemented will be the responsibility of the Resident Engineer who represents the ministry as the Project Owner.

The Resident Engineer (RE) will be assisted by a team of environmental and social officers who will be responsible for supervising the daily activities of the contractor and will report non-compliances to the Resident Engineer in order to take necessary actions towards the contractor in addition to the OHS aspects. Regular supervision site visits will also be conducted by the PMT environmental/social officer in association with a qualified environmental and social consultant who will provide technical advice in case there is a need to modify or add new mitigation measures as work necessitates.

The costs of mitigation measures are estimated based on the average market rates for similar activities in Iraq and can be used as indicative costs. It is the sole responsibility of the contractor to estimate the costs associated with the recommended mitigation measures based on his work experience.

In terms of hazardous waste the following mitigation should be followed:

- Provide adequate sanitation facilities serving all workers (mentioned in HSE).
- Paints with toxic ingredients or solvents or lead-based paints will not be used
- All waste should be deposited through licensed haulers/transporters to licensed and regulated landfill sites appropriate to the type of waste generated (e.g. solid, household, hazardous).

The following tables and Annex (4) summarize the mitigation measures which are required to be undertaken to avoid any negative impacts on the environment. Responsibilities and estimated costs are also presented.

Table 7: Mitigation Measures during Construction Phase.

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
1	Air quality	<ul style="list-style-type: none"> • Unpaved roads, e.g. which may be utilized for construction vehicles movement or transportation of construction materials should be prepared in a way to avoid dust emissions. Watering to suppress dust should take place regularly. • Watering or increase of the moisture level of the open materials storage piles to reduce dust levels. • Enclosure or covering of inactive piles to reduce wind erosion. • Loads in all trucks transporting dust-generating materials have to be sprayed with water to suppress dust, as well as wheels of means moving inside and outside of the construction-site. • Limiting Speed for vehicles approaching the site to less than 40 km/hr. On site, speed limit should not exceed 20 km/hr. 	Contractor	Resident engineer	1000
		<ul style="list-style-type: none"> • Engines of vehicles and other machinery are kept turned on only if necessary, avoiding any unnecessary emission. • Machines and equipment are periodically checked and maintained to ensure their good working condition. • All equipment and machines must be maintained and tested for compliance with standards and technical regulations for the protection of the environment and have appropriate certifications. • Activities are carried out using the minimum required number of means at the same time. • Electric small-scale mechanization and technical tools are used when available and feasible. 	Contractor	Resident engineer	Included in contractor cost
2	Noise	Construction activities are to take place within reasonable hours during the day and early evening..	Contractor	Resident engineer	Included in contractor cost

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Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> Equipment must be kept in good working order and where appropriate fitted with silencers which are kept in good working order. Equipment to run only when necessary Positioning of the noise sources in a concealed area with respect to acoustic receptors, consistent with the needs of the construction site. 	Contractor	Resident engineer	Included in contractor cost
		Use of personal protection equipment for workers especially those who use jack hammers or near noisy engines or compressors.	Contractor	Resident engineer	1000
3	Water resources	Wastewater from the worker rest areas or construction offices should be contained in sealed containers and should be removed regularly from site by means of authorized contractors.	Contractor	Resident engineer	1000
		In case of the need to change engine oils or refuel some construction equipment, a proper maintenance workshop or shelter should be installed to ensure containment of any fuel or oil spills via provision of secondary containment, drip trays or other overflow and drip containment measures, for hazardous materials containers at connection points or other possible overflow points	Contractor	Resident engineer	1000
		<ul style="list-style-type: none"> In case of using septic tanks on site, the engineering drawings of these tanks should be presented to the Resident Engineer for approval. The wastewater in these tanks should be collected and then transported periodically to the nearest authorized wastewater treatment plant. 	Contractor	Resident engineer	Included in contractor cost
4	Soil	<ul style="list-style-type: none"> To prevent soil contamination by oil/grease spills, leakages or releases, all manipulations of oil derivatives in the process of construction and provision of the fuel to the machines should be performed with maximum care; leak proof containers should be used for storage and transportation of oil/grease and wash off from the oil/grease handling area shall be drained through drains and collected and disposed properly Construction waste and debris shall be collected on a regular basis and disposed of at designated landfills; Only authorized quarries shall be used for purchasing soil to be used for 	Contractor	Resident engineer	Included in contractor cost

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> embankment, padding, bedding, backfilling during construction; and It must be prohibited to operate equipment and vehicles outside the designated work areas and roads. Reuse the excavated soil when it deemed technically appropriate. 			
		<ul style="list-style-type: none"> No hazardous waste storage to take place directly on soils. Appropriate and enclosed containers away from direct sunlight, wind and rain. Provide adequate ventilation where volatile wastes are stored. Limiting access to hazardous waste storage areas to employees who have received proper training 	Contractor	Resident engineer	1000
5	Solid and hazardous wastes	<ul style="list-style-type: none"> Minimizing hazardous waste generation by implementing stringent waste segregation to prevent the commingling of non-hazardous and hazardous waste to be managed. Provision of readily available information on chemical compatibility to employees, including labeling each container to identify its contents Limiting access to hazardous waste storage areas to employees who have received proper training Simple waste management plan for specific waste streams must be developed. Non- hazardous or municipal waste must be collected and transported to local council approved disposal sites. Food wastes must be collected, where practicable, considering health and hygiene issues, for disposal off-site through licensed contractors. Waste containers must be located at each worksite. Chemical wastes must be collected in 200 liter drums (or similar sealed container), appropriately labeled, for safe transport to an approved chemical waste depot or collection by a liquid waste treatment service. Storage, transport and handling of all chemicals must be conducted in accordance with all legislative requirements, through licensed contractors and in coordination with the local authority. 	Contractor	Resident engineer in coordination with the local authority and ministry of science and technology regarding hazardous wastes	1000

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> All hazardous wastes must be appropriately stored in bounded areas and should be clearly identified as “hazardous”. Transportation and disposal of hazardous wastes should be done through licensed contractors and in close coordination with the relevant local authority and in compliance with the legal requirements and instructions of the ministry of science and technology previously. Hazardous liquids, such as solvents, rust proofing agents and primer must be managed in accordance with the requirements of relevant legislation and industry standards. Material Safety Data Sheets (MSDS) for hazardous materials must be available on-site during construction and made available and explained to workers. Hydrocarbon wastes, including lube oils, must be collected for safe transport off-site for reuse, recycling, transport or disposal at approved locations. 			
6	Flora & Fauna	Not Applicable	Not Applicable	Not Applicable	Not Applicable
7	Topography and landforms	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	Traffic	<ul style="list-style-type: none"> Where practicable, truck deliveries must be restricted to daytime working hours. Clear traffic signs and signs signals must be installed on-site to provide for safe traffic. 	Contractor in coordination with the Local Traffic Department for some sections	Resident Engineer	500
9	Health and Safety	<ul style="list-style-type: none"> Limit speed of construction vehicles and provide road signage for drivers and local community. 	Contractor	Local traffic department in coordination with the Resident	500

Receptor	Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
			engineer for some sections	
	<ul style="list-style-type: none"> • Having a clear set of OHS Plan and Procedures. • Having a detailed emergency plan including the nearest medical center and the location of the first aid kits. • Qualified personnel must be employed for the construction equipment, and personnel must be trained for health and safety issues. • Personal protection equipment such as eyeglasses, gloves, hard heads and safety belts must be supplied and continuously used by all workers, technicians, engineers and site visitors. 	Contractor	Resident engineer	1000
	<ul style="list-style-type: none"> • Testing structures for integrity prior to undertaking work; • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; • An approved tool bag should be used for raising or lowering tools or materials to workers on structures; • Use of helmets and other protective devices will mitigate against scratches, bruises, punctures, lacerations and head injuries due to dropping objects. • Adherence to local and international guidance and codes of practice on EHS management during construction; • management, supervision, monitoring and record-keeping; • implementation of EHS procedures as a condition of contract with contractors and their sub-contractors; • clear definition of the EHS roles and responsibilities of the companies involved in construction and to individual staff (including the nomination of EHS supervisors during construction and an EHS coordinator during operation); • pre-construction assessment of the EHS risks and hazards associated with construction and operation, including consideration of local cultural attitudes, education level of workforce and local work practices; 	Contractor	Resident engineer	Included in contractor cost

Receptor	Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
	<ul style="list-style-type: none"> • provision of appropriate training on EHS issues for all construction and operation workers, including initial induction and regular refresher training, taking into account local cultural issues; • provision of health and safety information; • regular inspection, review and recording of EHS performance; • protective systems to be put in place to protect workers from cave-in in trenches. 			
	<ul style="list-style-type: none"> • Any accidents to be reported and treated within site as a first aid procedure. • Safety training for the workers. • Fuel and oil changing shelters should be equipped with necessary firefighting and safety equipment • First aid boxes should be available all times onsite and trained staff on emergency aids should be identified. 	Contractor	Resident engineer in coordination with health and safety officials.	1000
	<ul style="list-style-type: none"> • Provide surveillance and active screening, and immunization • Provide treatment on-site or in community health care facilities • Eliminate unusable impounded water, and apply vector control programs • Erect suitable and adequate warning signage along culvert cleaning and excavation sites • Collaborate with local communities and responsible authorities to improve signage and visibility • Avoid uncovered piles of aggregates and other construction materials • Avoid burning waste in worksites • Avoid or minimize driving through community areas and dangerous routes during daytime • Alert drivers on local speed limits, and monitor implementation • Minimize traffic by purchasing from the local markets to the extent possible 	Contractor	Resident engineer in coordination with health and safety officials.	1000

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Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> • Closing of trenches on the same day, • If a trench will be left open for the day after, barriers to prevent community members and unauthorized personnel will be put in place. • Assign local security personnel to prevent unauthorized entry to the site. • Signs and awareness should be installed close to the excavation area to protect road users and community. • Contractor prepares and implements Traffic Management Plan and Pedestrian Safety Plan 			
10	Handling Complaints	<ul style="list-style-type: none"> • A complaints register will be kept on site and this will feed into the GRM. Details of complaints received will be incorporated into the audits as part of the monitoring process. 	Resident Engineer	PMT	Included in contractor cost
11	Cultural Heritage	<ul style="list-style-type: none"> ▪ In case of accidental discovery stop all works and contact the responsible authority within 24 hours; ▪ Provide training to the construction crew on the mode of conduct in case of accidental findings <p>Chance find procedures will be used as follows: Stop the construction activities in the area of the chance find;</p> <ul style="list-style-type: none"> • Delineate the discovered site or area; • Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Culture take over; • Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Culture immediately (within 24 hours or less); • Responsible local authorities and the Ministry of Culture would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be 	Contractor	Resident engineer in coordination with Heritage Authority.	Included in contractor cost

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Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<p>performed by the archeologists from the Department of Antiquities and the Ministry of Culture (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;</p> <ul style="list-style-type: none"> • Decisions on how to handle the finding shall be taken by the responsible authorities from DA and the Ministry of Culture. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage; • Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and • Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Culture concerning safeguard of the heritage 			
12	Child labor and Gender Based Violence	<ul style="list-style-type: none"> • Rigid obligations and penalties will be added to the contractor contracts in order to warrantee no child labor exist in the subproject • The PMT will oblige the contractor to keep a copy of IDs of laborers in order to monitor the hired staff (Chapter 11 of the 2015 Labor Law of Iraq sets the age for hazardous works 18 years old). • Labor influx should also be managed by contractor and ensure Code of Conduct is introduced and applied to avoid impact on local community and provide mitigation measure for GBV risks • The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance ▪ The code of conduct for workers/contractors should be introduced to prevent misconducts, including prevention of sexual harassment and gender based violence and also training and awareness rising for workers should be continued, through daily toolbox talks and other training opportunities. 	Contractor	Resident engineer	Included in contractor cost
Total cost US\$ (Construction phase)					9,000

Table 8: Mitigation Measures during Operation Phase.

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
1	Air quality	<ul style="list-style-type: none"> The net impact of the Project on air quality is not applicable, and will be limited to Construction Period. 	Not Applicable	Not Applicable	Not Applicable
2	Noise	<ul style="list-style-type: none"> Not applicable 	Not Applicable	Not Applicable	Not Applicable
3	Water resources	<ul style="list-style-type: none"> Not applicable 	Not applicable	Not applicable	Not applicable
4	Soil	<ul style="list-style-type: none"> Not applicable 	Not applicable	Not applicable	Not applicable
5	Solid and hazardous wastes	<ul style="list-style-type: none"> Not applicable 	Not applicable	Not applicable	Not applicable
6	Flora & Fauna	<ul style="list-style-type: none"> Not applicable 	Not Applicable	Not Applicable	Not Applicable
7	Topography and landforms	<ul style="list-style-type: none"> Not Applicable 	Not Applicable	Not Applicable	Not Applicable
8	Handling Complain	The continued operation of a GRM for one year following operating of the network for use will ensure that local community members have an accessible, fair and transparent means of reporting any emerging adverse impacts, and a means of obtaining mitigation.	Local authorities	Local authorities	No cost
9	Health and Safety	<ul style="list-style-type: none"> Having a clear set of OHS Plan and Procedures. Provision of health and safety information; Regular inspection, review and recording of EHS performance; 	Contractor	Resident engineer	Included in contractor cost
Total cost US\$ (Operation phase)					No Cost

7. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

7.1 Environmental and Social Monitoring

In order to ensure full compliance of the performed activities to the environmental and social requirements, regular monitoring should be performed. For this purpose, an environmental and social monitoring program has been established for the construction phase to ensure the proper implementation of the environmental and social mitigation measures.

Table 9: Monitoring Activities during Construction Phase.

Receptor		Monitoring Activities	Monitoring Indicators	Frequency	Responsibility	Supervision	Total estimated Cost in US\$
1	Air quality	<ul style="list-style-type: none"> Investigate dust complaints from workers and residents Visual inspection of vehicles and equipment operating or entering the site and Measurements of exhaust emissions (CO, SO_x, NO_x, PM10, PM2.5) 	<ul style="list-style-type: none"> Recorded and documented complaints Record the status of equipment and vehicles on site (excessive black or white smoke) 	<ul style="list-style-type: none"> Daily visual inspection Once every six month 	Resident Engineer	PMT	1,500
2	Noise	Investigate noise complaints from workers and neighboring communities in the affected locations	<ul style="list-style-type: none"> Recorded and documented complaints Recorded tests results 	<ul style="list-style-type: none"> Weekly inspection of complaints Only in case of complains 	Resident Engineer	PMT	1,000
3	Water resources	<ul style="list-style-type: none"> Investigate implementation of mitigation measures and observe any oil or fuel spills. Investigate wastewater disposal measures 	Site Investigation report	Daily Investigation	Resident Engineer	PMT	No cost
4	Soil	<ul style="list-style-type: none"> Observe any soil contamination with oil or fuel Observe any accumulation of wastes 	Site Investigation report	Monthly	Resident Engineer	PMT	No cost

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Receptor		Monitoring Activities	Monitoring Indicators	Frequency	Responsibility	Supervision	Total estimated Cost in US\$
5	Solid and hazardous wastes	<ul style="list-style-type: none"> Maintain records on waste types and quantities Observe any waste accumulation in un approved locations 	<ul style="list-style-type: none"> Waste management contracts with authorized contractors Waste delivery receipts from local authorities. 	<ul style="list-style-type: none"> Weekly Weekly 	Resident Engineer	PMT	No cost
6	Health and safety	<ul style="list-style-type: none"> Ensure compliance of workers to Health and Safety requirements Maintain log on incidents and accidents 	Observation report Accidents report	Weekly	Resident Engineer	PMT	No cost
7	Flora & Fauna	Record any observation about wild animals or plants on site or nearby and report to the Environmental Authority	Observation report	Upon occurrence	Resident Engineer	PMT	No cost
8	Topography and landforms	No monitoring required	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
9	Traffic	Ensure speed limits and warning signs are installed	Road signs are installed.	Monthly	Resident Engineer	PMT	No cost
10	Handling Complaints	Ensure that the GRM is effective and well communicated	Number of complaints received, analyzed and responded to.	Weekly	Resident Engineer	PMT	No cost
11	Child labor and Gender Based Violence	<ul style="list-style-type: none"> Ensuring that children and minors are not employed directly or indirectly on the project. Ensure to prevent misconducts, including prevention of sexual harassment and gender based violence. 	<ul style="list-style-type: none"> A copy of IDs of laborers and labor registry. Percentage of workers that have attended the code of conduct training and number of GBV training delivered. 	<ul style="list-style-type: none"> Daily Weekly 	Resident Engineer	PMT	No cost
Total cost US\$ (Operation/Maintenance phase)							2,500

7.2 ESMP Institutional Arrangements

In order to ensure full compliance with the environmental and social requirements which are described above, PMT nominated a qualified engineer to act as the focal point for environmental and social affairs at the central level. On the field level, PMT nominated two engineers in Salah Al-Din to act as environmental and social officers. Those engineers will be trained on monitoring and reporting of environmental and social impacts and how to fill the checklist to be used during field visits before implementation starts.

The Resident Engineer will be the officially responsible staff member for ensuring environmental and social compliance. S/He will be assisted by the designated environmental and social field officers.

In addition, a qualified consultant is recruited by the PMT to provide technical assistance and capacity building to the environmental and social team both at the central level and at the field level.

7.3 Reporting requirements

In order to ensure that the mitigation and monitoring measures are being carried out effectively with the required frequency, a clearly defined and regular reporting and response system must be established. The needed frequency of report generation for inspection is to be monthly, and for auditing twice a year, environmental monitoring is once per year.

The information will be made available to the relevant regulatory authorities as required. In addition to the monitoring and reporting requirements documented in the relevant sections of the ESMP, the following reporting regime will be implemented:

- a) All incidents or accidents during the construction should be reported immediately to relevant authorities.
- b) All corrective measures must be discussed to ensure compliance with laws and regulations.
- c) Reports for personnel training on environmental issues or emergency practices must be produced.
- d) Progress reports, environmental monitoring report and other inspections reports must be produced periodically.

The PMT environmental and social field officers will provide the Resident Engineer with a weekly report briefing their observations and recommendations for action. Whereas the Resident Engineer shall prepare an environmental and social management report on monthly basis to PMT in Baghdad.

The environmental and social consultant will prepare a monthly environmental and social supervision report after conducting site supervision visits.

On quarterly basis, PMT shall prepare an environmental and social progress report which will be submitted to the international financial institution (WB) for review and disclosure.

7.4 Capacity Development and Resources Requirements

PMT dedicated sufficient human resources to undertake the environmental and social management requirements as explained above. The assigned staff at the central and field levels are competent in the field of engineering and have variable practical experience. For the staff who will be responsible for undertaking the environmental and social tasks, they will require some capacity development.

All construction personnel and contractors are required to undertake appropriate environmental training and induction programs including, importantly, on GRM procedures.

All managers and supervisors will be responsible for ensuring that personnel under their control have the requisite competencies, skill and training to carry out their assigned tasks in accordance with the requirements of the ESMP. They will also be responsible for identifying additional training and competency requirements.

All project supervisors and managers will receive additional detailed training on the use and implementation of the ESMP. The following Table presents the proposed institutional strengthening program and capacity development requirements.

Table 10: Capacity Development Requirements

Capacity development topic		Provider(s)	Duration	Estimated Cost (US\$)
1	Environmental Impact Assessment Environmental and social Management in Construction Sites	Consultant	3 Days	1,500
2	Iraqi Environmental Legal Requirements	Ministry of Environment	1 Day	500
3	World Bank Environmental and Social Safeguards	Consultant	2 Days	1,000
Total Estimated Cost				\$3,000

In order to ensure full compliance of the environmental and social requirements, regular site visits should be conducted. Dedicated office spaces, office equipment and supplies in addition to adequate means of transportation should be made available for the environmental and social management team at the central level and most importantly on the field level. MOP PMT should ensure the allocation of sufficient budget resources to ensure availing the required resources to achieve the required tasks.

7. PUBLIC CONSULTATION RESULTS

According to the WB policies, it is required that broad and open public consultations be held with PAPs on the project. These consultations are to ensure that the PAPs are provided with the opportunity to engage in the construction planning process, to raise questions and receive input and responses to their concerns.

In order to fulfill the WB requirements, public consultation and also one on one interview were adopted to obtain sound information on the possible impacts on the local communities. Accordingly, a questionnaire was formatted to cover the key environmental and social aspects related to the subproject. It was difficult to conduct the public consultation with the women due to the tribe's habits that exist in the area of the project. However, individual interview with women was conducted to take the women's opinions freely. The questionnaire was then addressed to 5 women and 9 men of the local individuals in the surrounding community randomly to have their opinions and thoughts regarding the construction activities in addition to 17 men at the public consultation.

According to the results revealed from public and individual consultation, the local community agreed that, the construction activities will have a positive impact on their social daily life. The following are the main findings of the consultation process which took place on 1st October 2019.

1. All interviewed locals agreed that the construction activities will have a positive impact from the social perspectives on the locals.
2. No claims from any locals were recorded or alleged regarding the ownership of the land; all agreed that it is governmental land property.
3. No vegetation covers, crops, plants, trees...etc. will be removed in order to execute the construction activities of this subproject.
4. The interests of the locals will not be affected in any way by the construction activities.
5. No infrastructure within the project area will be affected negatively due the construction activities.
6. No deportation, dislocation of any of the local community will be needed due to these activities.
7. The construction of the project will enhance the social relationship among the locals; improve their achievements and performance.
8. Most locals agreed that the project needs more instructional signs near the working area.

For more details and all the above conclusions are obtained from annex (2&3).

During public consultation, information about GRM was introduced to local people and they were informed that they can submit their complaint to either site engineer, or to social representative or to PMT during construction. The community leaders' information and PMT contact information will be available before implementation starts.

8. GRIEVANCE REDRESS MECHANISM

The proposed GRM for the SFDP aims to resolve issues that could come across implementation promptly, more efficiently, and accurately. The design of the GRM system should provide means for collecting supportive documents and evidences, investigating the problem, and supporting the final decision. An effective GRM is characterized by: diversity, clear procedures, swift responses, and allowing for two-way communication.

Complainants would commonly approach this GRM for many reasons, including those related to incomplete or no service, vague procedures, inappropriate/ unfair treatment by the staff, and harm (environmental and/or social) to individuals or groups as a result of carrying out the Project’s interventions. It is important to mention that the complaints can be raised and addressed even from anonymous person(s).

The complaint/ grievance, once received, should be promptly resolved or undergone further investigation. Complaints are sorted out according to complexity. Direct responses should be given to simple inquiries by concerned staff members in 3-6 working days as a maximum, and should be documented and archived as per the relevant procedure. While, more comprehensive measures should be applied to complex issues, including field investigation and communicating with higher management for final decisions within a timeframe of 20 working days as a maximum. After the completion of the proceedings, the complaint is closed, and information is included in the system, including the action(s) taken and the result(s) required. The complainant shall be notified of the result and the action immediately and informed of the possibility of objecting to the procedure. See detailed procedures in the main ESMF report.

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

In any case, the PMT must maintain records of grievances and complaints, including minutes of discussions, recommendations and resolutions made. Participants were informed that they can submit their complaint to either site engineer, or to community leader or to PMT during construction. The PMT contact information (office and mobile phone numbers) will be available before implementation starts and will be posted at the entrance of the project site

Contact Information for GRM

#	Name	Job Title	Phone Number	E-mail
1	Ahmed Ibrahim	clerk	07701830500	Basmamohammed337@yahoo.com
2	Hussam Shaael	Translator	07827793093	hussamshail@yahoo.com
3	Ibtisam Jasim	Deputy head	07724674469	Sfd.iraq.2018@gmail.com

9. ANNEXES

Annex (1): Grievance Form

Reference No:	
Full Name <i>Note: you can remain anonymous if you prefer or request not to disclose your identity to the third parties without your consent</i>	My first name _____ My last name _____ I wish to raise my grievance anonymously I request not to disclose my identity without my consent
Contact information Please mark how you wish to be contacted (mail, telephone, e-mail).	By Post: Please provide mailing address: _____ _____ By Telephone: _____ By E-mail _____
Description of Incident or Grievance: What happened? Where did it happen? Who did it happen to? What is the result of the problem?	
Date of Incident/Grievance	One-time incident/grievance (date _____) Happened more than once (how many times? ___) On-going (currently experiencing problem)
What would you like to see happen to resolve the problem?	
Signature: _____ Date: _____ Please return this form to: [name], _____[company name] _____ Address _____: Tel.: _____ or E-mail: _____	

Annex 2: Public Consultations

Questionnaire Form in English:

Name of the project:			
Location of the project:			
Name of the respondent:			
Occupation of the respondent:			
Date of visit:			
1	In your opinion, would the construction of the project have positive impact on the residents of the area?	yes	no
2	Are there any claims on private land ownership in the project area?	yes	no
3	Would there be any damages to income generating crops, trees, and vegetation due to the construction activities?	yes	no
4	Would there be any losses of income of local residents due to the construction activities?	yes	no
5	Would there be any damages whether permanent or temporary which would affect the livelihood of the residents due to the construction activities?	yes	no
6	Would the construction activities require relocation of the residents of the area, whether permanent or temporary?	yes	no
7	Is there any usage by local residents of the facilities or land of the facilities by the local residents?	yes	no
8	In your opinion, would there be any negative social impacts due to the construction activities?	yes	no
9	Would there be any changes to the demographics or social structure in the project area induced by the construction activities?	yes	no
10	Is there any need for warning and directional signage during the construction activities?	yes	no
Name and signature of the interviewer:			

Annex (3): Public Consultation at Village Al Khanokah Form

The form includes village name, governorate, village priorities (Water network, roads, electricity and school), brief description of water network activities

اسم القرية :

قرية الخانوكه

موقع القرية

محافظة / صلاح الدين قضاء / الرطاب ناحية / مركز

أولويات القرية :

















١- شبكة ماء
٢- إنشاء مدرسه
٣- مستوصف
٤- تحسين شبكة الكهرباء

أسباب اختيار المشاريع :

١- مجموع سكان القرية ١٢١٠ نسمة (٥٠٠ علم) وهو كثير مستغله بيوت عدد ٣٣ ويوجد شبكة الماء ولا يمكن
يعتقدون اننا نحتاجه في كل الحظ حيث تم حسب اناس الماء للمواطنين عن الايسر والارامل
اهدأ شركات لتجهيز الصرل بالاب
٢- مجموع المدرس : ٢٥ مدرسين (الوسية / تيراليه) و (الخانوكه / ابيديه) هي أن
مدرسة الخانوكه ايله للسقوط ومدرسه (تيرول واعداديه) مستغله

وصف المشاريع :

- تجهيز وخزن ومعد وريفي شبكة مياه بطول ٣٧٧٥ مع كافة الاعمال المطلوبة وتبليط
الستوارح والارضه بعد الحف
- انشاء مدرسة ٦ صفا على مساحه ٢٥٠٠ م^٢ درطابق واحد مع مجاميع صفيه مدرسا
ومساحه انشاء مساحه ٢٥٦٠ م^٢ وبناع ٤٠ داره متضمن غرفه المدرس ، غرفه لمعلمين
وغرفه المدرسين .

التسلسل	الاسم	التوقيع
١-	صالح عبد القادر	
٢-	عواد كتمان محمد	
٣-	محمد بيبج حوسن	
٤-	حسنة حميري عاي	
٥-	علي كتمان محمد	
٦-	نحاتم حلف طاهر / عضو اللجنة المشيقة	 ١٧٧٠٣٠٤٥١٣٥
٧-	دفعيان رمضان ابراهيم	
٨-	عسرة هيجي محمود	
٩-	هشام عواد عصية / عضو اللجنة المشيقة	 ٧٧٠٣٣٧١٥٠
١٠-	محمد عبد القادر عاي / عضو اللجنة المشيقة	 ٧٧٠٦١٥١٧٣٣٧
١١-	سيفان حسنة عاي	
١٢-	فراج عبد الحمود	
١٣-	احمد حميد حوسن	
١٤-	حلف محمد حوسن	
١٥-	ابراهيم بيبج حوسن	
١٦-	عصيل ابراهيم بيبج	

Public Consultations for the construction of the water distribution network at Al Khanokah village with more than 17 participants




Photos during the public consultations

Arabic Questionnaire with Responses

(أستبيان)

اسم المشروع: **استدانة نقل مياه قرية الخانوقة**
 الاسم: **نجاة ابراهيم بيبي**
 الجنس: ذكر أنثى
 المهنة: **ربة بيت**

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية أعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائديته لمواطنين او السكان المحليين؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

التوقيع: 
 الاسم: **نجاة ابراهيم بيبي**
 التاريخ: **2019 / /**

(أستبيان)

اسم المشروع: انشاء شبكة نقل ماء في قرية الخانوكه

الاسم: عائدة ابراهيم بيبي

الجنس: ذكر أنثى

المهنة: ربة بيت

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	


التوقيع:

الاسم: عائدة ابراهيم

التاريخ: 2019 / /

(استبيان)

اسم المشروع : انشاء سكة نقل ماء في قرية الخانوقه

الاسم: رسل ابراهيم بيبي

الجنس: ذكر انثى

المهنة: ربة بيت

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائديته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بني تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

 التوقيع:


الاسم: رسل ابراهيم

التاريخ: 2019 / /

(أستبيان)

اسم المشروع : تجهيز ومد وربط شبكة ماء / ٢٧٧٥ / الخانوية
 الاسم : فزع عبدحمود
 الجنس : ذكر أنثى
 المهنة : مَقَاعِه


ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>		
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعاندية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>		
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>		
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>		
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>		
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>		
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>		
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>		
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>		
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>		

التوقيع: 
 الاسم : فزع عبدحمود / مقاعه
 التاريخ: ٢٠١٩ / ١٠ / ٢

(أستبيان)

اسم المشروع: **تجهيز وصدر واداء شبكة ماء (2000م) / قرية، الخانونة**
 الاسم: **سعد عبد القادر علي**
 الجنس: ذكر انثى
 المهنة: **مقاضي**

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائديته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توظيف لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

التوقيع: 
 الاسم: **سعد عبد القادر علي**
 التاريخ: **٢٠١٩ / ١٠ / ٢٠**

(أستبيان)

اسم المشروع: **تجديد وهد واربطة شبكة مياه (٧٧٥٠) ص/ صرية، الخانونة**
 الاسم: **حظا به عواد طه**
 الجنس: ذكر أنثى
 المهنة: **موظف**

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>		
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟		<input checked="" type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟		<input checked="" type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟		<input checked="" type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟		<input checked="" type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توظيف لشخص او لاشخاص الى مناطق جديدة؟		<input checked="" type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟		<input checked="" type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟		<input checked="" type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟		<input checked="" type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟		<input checked="" type="checkbox"/>	


التوقيع:


الاسم: **حظا به عواد طه**

التاريخ: **٢٠١٩/١٠/٣**

(أستبيان)

اسم المشروع: تجهيز وصود واربلا سبكه ماء / ٢٧٧٥٠ / قرية الخنازير
 الاسم: سبهان حسين علي
 الجنس: ذكر أنثى
 المهنة: كاسبه

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائديته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطین لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تاثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

التوقيع: 
 الاسم: سبهان حسين علي
 التاريخ: ٢٠١٩ / ١٠ / ٣

(استبيان)

اسم المشروع: تجسير وصدور مياه (٢٠٧٧٠) / صريف، بنما نوك
 الاسم: شعبان رمضان إبراهيم

الجنس: ذكر أنثى

المهنة: كاتب

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعاندية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عانديته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توظيف لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	


التوقيع: 

الاسم: شعبان رمضان إبراهيم
 التاريخ: ٢٠١٩ / ٨ / ٢

(أستبيان)

اسم المشروع: تجهيز وهد ورابط شبكة ماء (٧٧٥٠٠) / قرية: الخاوية
 الاسم: غائم هلف همام
 الجنس: ذكر أنثى
 المهنة: معلم / مدير مدرسة


ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية أعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>		
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائديته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>		
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>		
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>		
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطین لشخص او لاشخاص الي مناطق جديدة؟	<input checked="" type="checkbox"/>		
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>		
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>		
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>		
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>		


 التوقيع:
 الاسم: غائم هلف همام
 التاريخ: ٢٠١٩ / ١ / ٣

(استبيان)

اسم المشروع: **تجوير ومد وربط شبكة ماء (٢٧٥٠) متر مربعاً، الخانوقية**
 الاسم: **محمد مهدي محمود**
 الجنس: ذكر أنثى
 المهنة: **مستاعد**

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعادية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

التوقيع: 
 الاسم: **محمد مهدي محمود**
 التاريخ: **٢ / ١٠ / 2019**

(أستبيان)

اسم المشروع: تجهيز وحدة ورشة اسبوكه ماء (٧٧٥٠) م/عمرية، الشانكون
 الاسم: حسين حميد علي -
 الجنس: ذكر أنثى
 المهنة: مساعدا

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعاندية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستسبب باجراءات اعادة توظيف لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

التوقيع:
 الاسم: حسين حميد علي
 التاريخ: 2019 / ١٠ / ٢

(استبيان)

اسم المشروع: تجيز وود واربلا شوكه عام (١٧٥٠٠/٢٠١٩) / قرية الخانوية
 الاسم: محمد بسيم صوملا
 الجنس: ذكر أنثى
 المهنة: صقفا ر

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الي مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تاثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

التوقيع: محمد بسيم صوملا
 الاسم:
 التاريخ: 2019 / ١٦ / ٢

(أستبيان)

اسم المشروع : انشاء شبكة تمل حارة في قرية الخانوقه

الاسم: سناء صالح عبدلقدار

الجنس: ذكر انثى

المهنة: ربة بيت

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>		
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟		<input checked="" type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائديته لمواطنين او السكان المحليين؟		<input checked="" type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟		<input checked="" type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟		<input checked="" type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟		<input checked="" type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟		<input checked="" type="checkbox"/>	
٨	هل تتوقع وجود تاثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟		<input checked="" type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟		<input checked="" type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟		<input checked="" type="checkbox"/>	



التوقيع:

الاسم : سناء صالح

التاريخ: 2019 / /

(أستبيان)

اسم المشروع: انشاء شبكة نقل ماء في قرية الخانوكه

الاسم: نعيمة عبدالله نعمه

الجنس: ذكر انثى

المهنة: ربة بيت

ت	السؤال	نعم	كلا	الملاحظات
١	هل تعتقد ان عملية اعمار المشروع لها اثار ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٢	هل هنالك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٣	بسبب اعمال الاعمار ، هل هنالك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائدته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٤	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اعمال الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٥	هل هنالك اي بنى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان ستتأثر بعملية اعمار المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٦	هل ان اعمال اعمار المشروع ستتسبب باجراءات اعادة توظيف لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٧	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٨	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال المشروع؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
٩	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاعمار؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
١٠	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدلالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>	<input type="checkbox"/>	


التوقيع:

الاسم: نعيمة عبدالله

التاريخ: 2019 / /

Annex 4: Mitigation Measures during Construction Phase

Air quality:

Vehicle emissions

- Contractor to keep vehicles and machinery properly operated and maintained.
- Contractor to minimize unnecessary vehicle idling.
- Switch off any engine as soon as it is not used.

Dust

- Minimize dust from materials (such as sand, cement) and construction activities by using covers, storage, control equipment, and increasing moisture content.
- Prepare concrete before going to the site to avoid movement of materials (gravel, sand, cement) if possible
- Minimize dust from vehicle movements, using water sprays or appropriate.
- Avoid the burning of materials on site.
- Switch off any engine as soon as it is not used.

Hazardous Emissions

- Avoid storage of hazardous materials in open areas without proper covering;
- Provide adequate ventilation for work areas

Noise and vibration management

- Plan for all loud activities for times that will result in the least disturbance to the local community. Work hours should be clearly established, e.g. 0700 – 2000
- Avoid or minimize transport through community areas.
- Switch off any engine as soon as it is not used.
- Contractor to minimize unnecessary vehicle idling
- Muffling of the equipment;
- Additional health check-ups for personnel handling the vibrating and noisy equipment

Water run-off management (drainage plan)

- In the event that sediment is transported onto the road it should be cleaned using a street sweeper or by physically sweeping the street in cases of small areas to ensure the sediment is not washed into the drainage system with water runoff.
- Raw materials used in construction, which can be carried by water runoff, must be located and stored away from paths for water runoff.
- Where possible or appropriate, schedule works to avoid heavy rainfall periods (i.e. during the dry season) and modify activities during extreme rainfall and high winds.
- Wastewater from temporary construction camp should be adequately handled and should not be discharged to watercourses

Soil

- Disposal of contaminated soil by truck to nearest authorized dumping areas.
- If surface drainage is disturbing the construction process, utilizing ditches, dikes and/or sandbags to divert this drainage from entering excavations.
- Site engineer is to monitor weather on a daily basis. No construction activities to be undertaken in strong winds or rains.

Solid and Hazardous waste:

- Keeping the site clean and tidy:
 - a. Ensure there is no loose materials or debris lying around the site including the perimeter; and
 - b. Vehicles are regularly checked for cleanliness (general aspect and making sure no leaks are occurring)
 - Burning of waste is prohibited
 - Reducing construction waste related to on-site construction and off-site manufacture or fabrication.
 - Reusing the material on site (in situ or for new applications) whenever it is possible
 - Monitoring the amount of site construction waste created to make sure it does not affect the surrounding and the adjacent areas.
 - Waste is not blocking pathways
 - Construction waste will be gathered in a specific zone of the construction site
 - Contractor to evacuate any construction waste to nearest authorized dumping site and on a regular basis to avoid accumulation
 - All staff will avoid littering.
 - Provide the septic tank for the residential effluent from the construction camp to be disposed regularly at the designated areas.

Hazardous materials:

- Provide adequate secondary containment for fuel storage tanks and for the temporary storage of other fluids such as lubricating oils and hydraulic fluids.
- Use impervious surfaces for refuelling areas and other fluid transfer areas.
- Provide portable spill containment and clean-up equipment on site, and train staff in the safe use of it.
- Provide adequate sanitation facilities serving all workers (mentioned in HSE).
- Paints with toxic ingredients or solvents or lead-based paints will not be used
- All waste should be deposited through licensed haulers/transporters to licensed and regulated landfill sites appropriate to the type of waste generated (e.g. solid, household, hazardous)

Biodiversity:

- Provide training to the construction crew on the impact of disturbance and damage to habitats;
- Monitor the construction crew and provide punitive measures for illegal hunting and/or fishing;
- Provide the crew with fuel for cooking to avoid burning of natural materials;
- Apply waste management plan
- Strictly prohibited disposal of any of the construction materials into the river

Topography and surface drainage

- Storage areas for construction materials should be located at sites that do not permit direct runoff into watercourses and are on land sloping at less than 1.5 %.
- Time limitation on works during rainy events;
- Regular maintenance of the equipment and machinery to avoid spillage of hazardous materials;
- Re-vegetation of cleared areas
- Timely and adequate disposal of liquid and solid waste in authorized areas.

Traffic

- Set up warning signs in the workplace:
 - All safe footpaths are marked; construction materials are not blocking pathways
 - Site entrances and exits are clearly marked for visitors and delivery drivers to see; and
 - If present, site reception is clearly signposted OR all visitors are escorted to the reception.
- Designating specific parking areas for workers' and visitors' vehicles outside the construction area.
- Avoid or minimize transport through community areas.
- Traffic management system and staff training, especially for site access and near-site heavy traffic.
- Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement

Health & safety

- Provide adequate signage to prevent accidental falling into open areas
 - Fencing of the work areas
- Health and safety environment (HSE)

- There is posted material indicating the nearest police station and hospital (with accident and emergency facilities).
- The contractor must take reasonable steps to prevent unauthorized people accessing the site.
- Training on handling of UXO/ERW
- Avoid the burning of materials on site.
- Provide a first aid kits in different places of the work site with the appropriate number of materials given the number of workers on site. The locations of the first aid kits will be provided to all workers.
- Providing extinguishers on work site.
- If work involving the use of flammable materials is being carried out, stop people smoking and do not allow other work activities involving potential ignition sources to take place nearby.
- Providing site boundaries by installing suitable physical boundaries (barriers, tape or fence).
- Marking excavation holes with physical boundaries (barriers, tape or fence)
- The contractor should put up barriers or covers in the area of openings and excavations.
- Store building materials (such as pipes, manhole rings, and cement bags) so that they cannot topple or roll over.
- Keep walkways and stairways free of tripping hazards such as trailing cables, building materials, and debris.
- Everyone who works on any site must have access to drinking water, adequate toilet and washing facilities, a place for preparing and consuming refreshments, and an area for storing and drying clothing and personal protective equipment (PPE).
- Contractor to ensure PPE (personal protective equipment) is used by all workers on site. Basic PPE should be protective boots, hard hats, and reflective vests. Other PPE (i.e. gloves, eye and ear protection ... etc.) to be used as appropriate

- Materials and equipment are tidily stacked, protected and covered where necessary. Additionally, there is adequate space for new materials to be stored in secured covered areas to avoid damage, theft, and to protect these items from weather conditions.
- Scaffolding for work in elevated areas such as ceiling painting should comply with the OSHA “General Requirements for Scaffolds §1926.451”

Handling Complaints

- Reducing impacts on the community through community and neighbour engagement.
- In cases of where there are minority communities speaking a different language in the area or working on site, notices are printed in the common local language.
- Provide the proper GRM for handling complaints

Physical, Cultural resources

- In case of accidental discovery stop all works and contact the responsible authority within 24 hours;
- Provide training to the construction crew on the mode of conduct in case of accidental findings

Chance find procedures will be used as follows:

Stop the construction activities in the area of the chance find;

- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Culture take over;
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Culture immediately (within 24 hours or less);
- Responsible local authorities and the Ministry of Culture would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists from the Department of Antiquities and the Ministry of Culture (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities from DA and the Ministry of Culture. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and
- Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Culture concerning safeguard of the heritage.

تدابير الحد من الأخطار اثناء مرحلة البناء

قائمة بإجراءات تخفيف المخاطر خلال أعمال إعادة التأهيل:

الشروط العامة:

- أ. لقد أبلغت الجهات الرقابية المسؤولة عن أعمال التشييد والبيئة بالنشاط المرتقب للمشروع.
- ب. لقد أبلغ الجمهور بالأعمال المرتقبة من خلال الوسائط الإعلامية وكذلك / أو المواقع الإلكترونية ومن ضمنها موقع رب العمل.
- ت. تم استكمال إصدار كافة الرخص القانونية والأصولية لإجازة أعمال البناء و/ أو إعادة التأهيل.
- ث. وافق المقاول رسمياً على أن ينجز الأعمال وفق ضوابط السلامة لتقليل المؤثرات على المقيمين بالجوار وعلى البيئة.
- ج. أن تكون وقاية العاملين تتطابق مع التطبيقات العالمية (دائماً بقبعة صلبة، أقنعة حسب الحاجة، نظارة السلامة، طاقم العمل ، وجزم للسلامة).
- ح. لوحات معلقة لبيان أقرب مركز شرطة وأقرب مستشفى (مع توفير تسهيلات الطوارئ والحوادث).
- خ. على المقاول أن يتخذ الخطوات المعقولة لمنع دخول غير المخولين إلى موقع العمل.
- د. التدريب على التعامل مع المواد الحربية القابلة للانفجار وتلك غير المنفصلة.
- ذ. تجنب حرق المواد داخل موقع العمل.
- ر. تجهيز مناطق مختلفة من موقع العمل بأطقم (الإسعافات الأولية) ومجهزة بعدد ملائم من المحتويات تتناسب مع عدد العاملين. ينبغي إعلام كافة العاملين في الموقع بإمكانة أطقم (الإسعافات الأولية).
- ز. تجهيز موقع العمل بمطافئ الحريق.
- س. في حالة استعمال مواد قابلة للاشتعال يجب منع التدخين وعدم السماح بالاستمرار في الأعمال الموقعية المجاورة الأخرى ذات الصلة بمصادر انبعاث قدحات نارية.
- ش. تحديد حدود الموقع بنصب مواد محددة (حواجز، أشرطة أو أسيجة).
- ص. تأشير مواقع الحفر بنصب مواد محددة (حواجز، أشرطة أو أسيجة).
- ض. على المقاول أن يضع حواجز أو أغطية لمساحات الفتحات والحفريات.
- ط. خزن مواد البناء (كالأنابيب، إطارات أغطية المجاري، وأكياس السمنت) بشكل يمنع انقلابها ودحرجتها).

ظ. تصان المماشي والسلام خاوية من العواثر الخطرة كالأسلاك المسحوبة والمواد الإنشائية والأنقاض.

ع. تكون لكافة العاملين وفي أية منطقة عمل سهولة الوصول إلى مرافق قضاء الحاجة والاعتسال، وحيز لتحصير وتناول المرطبات ومساحة لخرن وتجفيف الملابس وعدة الوقاية الشخصية.

غ. على المقاول التأكد باستخدام وعدة الوقاية الشخصية من جميع العاملين في الموقع.

ف. تكدس المواد والمعدات بعناية والحماية من التلف وتغطي أينما كان ضروريا، بالإضافة تحدد أمكنة خزن مغطاة لمواد جديدة لتجنب تلفها، وسرقتها وكذلك لحمايتها من الظروف المناخية.

ق. يجب أن تدعن صلاحية السقالات (السكالات) المستعملة للوصول إلى مناطق العمل المرتفعة كصبغ السقوف لنشرة المتطلبات العامة للسقالات (١٩٢٦,٤٥١).

ك. لوائح ملائمة ومعلقة في مناطق العمل للإبلاغ العاملين بالقواعد الرئيسية والتعليمات الواجب إتباعها.

جودة الهواء:

انبعاثات المركبات

- ✍ على المقاول أن يستخدم الآليات و المعدات بشكل سليم و يتأكد من صيانتها .
- ✍ على المقاول أن يقلل من تشغيل المركبات الغير ضروري .
- ✍ أن يطفى المحركات بعد استخدامها .

الغبار

- ✍ أن يقلل من انبعاث الغبار من المواد (مثل الرمل و الإسمنت) و أنشطة البناء باستخدام أغطية أو تخزين أو معدات تحكم و زيادة محتوى الرطوبة
- ✍ تحضير الإسمنت قبل الذهاب الى الموقع للحد من عملية نقل المواد (حصى، رمل، اسمنت) اذا كان ذلك ممكنا
- ✍ تقليل الغبار الناتج عن حركة المركبات باستخدام رش المياه حسب الحاجة
- ✍ تجنب حرق المواد في الموقع
- ✍ اطفاء المحركات بمجرد الانتهاء من استخدامها

الانبعاثات الخطرة

- ✍ تجنب تخزين المواد الخطرة في الأماكن المفتوحة بدون غطاء لائق
 - ✍ توفير تهوية كافية في مناطق العمل
- ### إدارة الضوضاء و الاهتزازات

- ✍ تجنب أو التقليل من التنقل في المناطق المجتمعية
- ✍ اطفاء المحركات بمجرد الانتهاء من استخدامها

- ✍ على المقاول أن يقلل من تشغيل المركبات الغير ضروري
 - ✍ تقليل ضوضاء المعدات
 - ✍ فحوصات طبية اضافية للموظفين الذين يتعاملون مع معدات اهتزازية أو صاخبة
- إدارة مجاري المياه الموسمية (خطة تصريف المياه)

- ✍ على المواد الأولية المستخدمة في البناء و التي ممكن انجرافها بمجرى المياه الموسمية أن يتم تواجدها و تخزينها في أماكن بعيدة عن مجاري المياه الموسمية
- ✍ ان كان مناسباً أو ممكننا جدولة الأعمال بحيث تتجنب المواسم المطرية (مثلا في المواسم الجافة) و تعديل النشاطات أثناء الأمطار الغزيرة و الرياح العاتية

التربة

- ✍ التخلص من التربة الملوثة بنقلها بالشاحنات الى أقرب مكب مخول
 - ✍ اذا كان الصرف السطحي يعيق عمليات البناء، ممكن استخدام الخنادق و السدود و / أو أكياس الرمل لتحويل مسار المياه عن مواقع الحفر
 - ✍ على مهندس الموقع أن يراقب عن كثب الأحوال الجوية يوميا. لن يكون هناك أي اعمال انشائية في أجواء يسودها المطر الشديد أو الرياح القوية
- النفايات الصلبة و الخطرة

- ✍ الحفاظ على الموقع نظيفاً و منظماً
- أ. التأكد من عدم وجود مواد أو حطام ملقاة بشكل عشوائي في الموقع أو في محيط الموقع
- ب. يجب فحص نظافة المركبات بشكل دوري (فحص شامل و التأكد من عدم التسريب)
- ✍ حرق النفايات ممنوع كلياً
- ✍ التقليل من نفايات البناء ذات الصلة بالبناء داخل الموقع و نفايات التصنيع خارج الموقع
- ✍ اعادة استخدام المواد في الموقع متى أمكن ذلك
- ✍ متابعة كمية النفايات الإنشائية في الموقع للتأكد من عدم تأثيرها على الموقع و المنطقة المحيطة
- أ. المخلفات لا تعيق الطرق
- ب. يتم جمع المخلفات الإنشائية في مكان محدد في الموقع
- ✍ على المقاول ازالة المخلفات الإنشائية بشكل دوري لأقرب مكب مصرح لتفادي تجمع النفايات داخل الموقع
- ✍ على جميع العاملين التقيد بعدم رمي النفايات
- ✍ وجود خزان للصرف الصحي للنفايات السائلة السكنية من معسكر الموقع و التي يجب التخلص منها دورياً الى محطات المعالجة

المواد الخطرة

- ✍ تزويد الموقع بحاويات لحفظ الوقود و المواد الأخرى مثل زيوت التشحيم و الزيوت الهيدروليكية
- ✍ استخدام أرضية منيعة (غير قابلة للتسريب) في مناطق تزويد الوقود و التحويل
- ✍ تزويد أليات لمكافحة التسرب و أعمال التنظيف و تدريب فريق العمل على استخدامها بشكل آمن
- ✍ تزويد مرافق الصرف الصحي المناسبة لخدمة جميع العاملين في الموقع (كما هو مذكور في (HSE

- ✍ لن تستخدم الدهانات التي تحتوي على المواد السامة أو مذوبات أو دهانات ذات قاعدة الرصاص

التنوع البيولوجي

- ✍ تدريب فريق العمل على التأثير الناتج عن خلخلة أو تدمير البيئة
 - ✍ مراقبة فريق العمل و توفير تدابير عقابية ضد الصيد و / أو صيد السمك بشكل غير قانوني
 - ✍ توفير وقود لفريق العمل ليتمكنوا من الطهي و حتى لا يلجؤوا الى حرق مواد طبيعية
 - ✍ تطبيق خطة ادارة النفايات
 - ✍ أعمال التجريف الدورية في مناطق السحب حول السدود المؤقتة لضمان العمق الكافي لمنع الدوامات حول السدود و التي تتسبب بعكر الماء
 - ✍ المنع منعاً باتاً من التخلص من أي من النفايات بإلقائها في النهر
 - ✍ لحماية الطبيعة و الأحياء الهشة في مناطق السحب، على أعمال البناء أن تبدأ في الموسم الجاف حيث منسوب مياه النهر في أدنى مستوياتها و موسم التكاثر قد قضي
 - ✍ يجب على بناء السحب تحت الماء أن يكون على الأقل متر واحد تحت سطح الماء و سرعة التدفق لا تزيد عن ١,٥ متر/الثانية لتجنب سحب الأسماك الصغيرة
- الطبوغرافيا و التدفق السطحي

- ✍ مناطق لتخزين مواد البناء يجب أن تتواجد في الموقع و يجب أن لا تكون في مسار المياه لمنع الانجرافات و يجب أن تكون على أرضيات بميول أقل من ١,٥%
 - ✍ يجب تحديد ساعات العمل في الأجواء الممطرة
 - ✍ يجب صيانة المعدات و الآلات بشكل دوري للتأكد من عدم انسكاب المواد الخطرة
 - ✍ يجب إعادة زراعة المناطق التي انتهى بها العمل
 - ✍ يجب التخلص من النفايات الصلبة و السائلة و بشكل دوري في الأماكن المخصصة لذلك
- حركة المرور

- ✍ وضع اشارات تحذيرية في الموقع
 - أ. تعليم ممرات المشاة الأمانة بحيث لا يعترضها مواد البناء
 - ب. مدخل و مخرج الموقع معلمين بشكل واضح للزوار و لسائقي التوصيل
 - ج. مكتب استعلامات الموقع واضحة و ارشادية و اذا لم توجد فيجب اصطحاب الزوار شخصياً لمكتب الاستعلامات
 - ✍ تحديد أماكن اصطافاف مركبات الزوار و العاملين خارج منطقة العمل
 - ✍ تجنب أو قلل من السياقة عبر المناطق السكنية
 - ✍ نظام ادارة السير و تدريب العمال و خصوصاً عند مداخل الموقع و عند اختناق السير قرب الموقع
 - ✍ تعديل ساعات العمل لتناسب حركة المرور المحلية (مثل تجنب عمليات النقل الثقيلة أثناء ساعات الذروة أو عند تحرك الماشية)
- الصحة و السلامة

- ✍ وضع اشارات تحذيرية كافية لمنع حوادث مثل السقوط الفجائي في المناطق المفتوحة
- ✍ تسييج منطقة العمل (HSE)
- ✍ وضع اشارات واضحة للإدلال على أقرب مركز أمني و مشفى به قسم حوادث و طوارئ
- ✍ على المقاول اتخاذ التدابير اللازمة لمنع الزوار الغير مصرح لهم بالدخول للموقع
- ✍ التدريب على معالجة أسلحة الحرب الغير منفجرة
- ✍ تجنب حرق المواد في الموقع

- ✍ وضع حقائق اسعافات أولية في أماكن مختلفة في الموقع بكميات تتناسب مع عدد العاملين في الموقع . يجب اعلام العاملين في الموقع عن مواقع حقائق الاسعافات الأولية
- ✍ وضع طفايات حريق في الموقع
- ✍ اذا استوجب العمل على استخدام مواد سريعة الاشتعال يجب منع التدخين في المنطقة و العمل على عزل المنطقة من كل ما قد يحدث شرارة
- ✍ تحديد مناطق المشروع بحدود ملموسة (مثل الحواجز أو الشريط اللاصق أو السور)
- ✍ تحديد مناطق الحفر بحدود ملموسة (مثل الحواجز أو الشريط اللاصق أو السور)
- ✍ على المقاول أن يضع علامات تحذيرية أو أغطية على الأماكن المفتوحة و أماكن الحفر
- ✍ تخزين مواد البناء (أنابيب، أغطية مناهل، أكياس أسمنت) بشكل عملي حتى لا تنزلق المواد و تتبعثر
- ✍ ابقاء ممرات المشاة و الدرج خالية من مواد البناء و الحطام
- ✍ كل من يعمل في الموقع له الحق باستخدام حمامات و مغاسل كافية، و مكان للشرب و مكان لتغيير و تجفيف الملابس و لتخزين أدوات الحماية الشخصية (PPE)
- ✍ على المقاول العمل على جعل العمال استخدام أدوات الحماية الشخصية (PPE) في الموقع
- ✍ يجب تخزين المواد و الآليات بشكل منظم و حمايتها و تغطيتها ان لزم الأمر. و كذلك يجب التأكد من وجود أماكن كافية لتخزين المواد الجديدة و حمايتها من التلف و السرقة و عوامل الطقس
- ✍ يجب على السقالات المعلقة و المستخدمة في الأماكن المرتفعة مثل طلاء الأسقف أن تمتثل لشروط OSHA (المتطلبات الأساسية للسقالات 1926,451)

التعامل مع الشكاوي

- ✍ تقليل الضرر على المجتمع المحلي من خلال التفاعل مع المجتمع و الجار.
 - ✍ في حال وجود أقليات في المجتمع المحلي المجاور أو يعملون في المشروع ممن يتكلمون لغة أخرى، يجب مخاطبتهم كتابيا بلغتهم المحلية
- الموارد العينية و الثقافية

- ✍ في حال الاكتشاف العرضي ، أوقف جميع الأعمال في الموقع و تواصل مع الأجهزة المعنية خلال ٢٤ ساعة
- ✍ قم بتدريب الكادر على طريقة التعامل المثلى في حال الاكتشافات العرضية مع الالتزام بالاشتراطات التالية:

الإجراءات الخاصة بالعثور على الاكتشافات الأثرية عن طريق الصدفة

يتم استخدام الإجراءات الخاصة بالعثور على الاكتشافات الأثرية عن طريق الصدفة على النحو التالي:

- أ. وقف أنشطة البناء في منطقة العثور على اكتشافات أثرية عن طريق الصدفة
- ب. تحديد الموقع المكتشف أو المنطقة المكتشفة
- ج. تأمين الموقع لمنع وقوع أية أضرار أو فقدان الأشياء المنقولة. وبالنسبة للآثار القديمة المنقولة أو الآثار الحساسة، سيتم تعيين حارس ليلى لحين قدوم السلطات المحلية المسؤولة ووزارة الثقافة لاستلامها
- د. إخطار المهندس المشرف الذي يقوم بدوره على الفور بإخطار السلطات المحلية المسؤولة ووزارة الثقافة (في خلال ٢٤ ساعة أو أقل)

- هـ. تكون السلطات المحلية المختصة ووزارة الثقافة مسؤولة عن حماية وحفظ الموقع قبل اتخاذ قرار بشأن الإجراءات الملائمة لاحقاً. ويتطلب ذلك إجراء تقييم أولي للمكتشفات من قبل خبراء الآثار بوزارة الثقافة (خلال ٧٢ ساعة). ويجب تقييم أهمية المكتشفات طبقاً للمعايير المختلفة للتراث الحضاري التي تشمل القيمة الجمالية والتاريخية والعلمية والبحثية والاجتماعية والاقتصادية
- و. يتم اتخاذ القرارات المعنية بكيفية التصرف في المكتشفات من قبل السلطات المختصة ووزارة الثقافة. ويمكن أن يتضمن ذلك تغييرات في الشكل والتصميم (مثلما هو الحال عند العثور على آثار ثقافية غير قابلة للنقل أو ذات أهمية أثرية) والحفظ والصيانة والاستعادة والإنقاذ
- ز. تقوم وزارة الثقافة بتقديم بيان كتابي حول تنفيذ القرار المتخذ من قبل السلطة المختصة بشأن إدارة الاكتشافات التي تم العثور عليها
- ح. لا يمكن استئناف أعمال البناء إلا بعد الحصول على تصريح بذلك من السلطات المحلية المختصة ووزارة الثقافة من أجل حماية التراث.

ANNEX (5): Project's Photos



Current Situation of the water distribution network at Al Khanokah Village



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