

REPUBLIC OF IRAQ

MINISTRY OF PLANNING

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

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

**FOR THE
UPGRADE
OF**

**A TOTAL OF 27.93 KM RURAL ROADS IN SIX VILLAGES
(ABU KANBARA, ABU SARIFAH, AL KARIM, AL
THAWIHER, FINJAN AL THAHER, AND DIBIS)**

**IN
AL-MUTHANNA GOVERNORATE**

19TH JANUARY 2020

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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
GBV	Gender Based Violence
MOE	Ministry of Environment
MOP	Ministry of Planning
MSDS	Material Safety Data Sheets
OP	Operational Policy
PAPs:	Project Affected Peoples
PMO	Project Manager Office
PPE	Personal Protective Equipment
RE	Resident Engineer
SFD	Social Fund Development
TOR	Terms of Reference
WB	World Bank
WHO	World Health Organization

EXECUTIVE SUMMARY

INTRODUCTION	<p>This ESMP is prepared in accordance to the ESMF requirements of the SFD project. The main objective of the ESMP is to assess the environmental and socio-economic impacts of the subprojects (during construction and operation phases) and to propose mitigation measures to mitigate the impacts associated with subproject. This subproject includes the upgrading of rural roads in six villages in Al-Muthanna governorate. The roads are expected to result in significant socio-economic benefits for the local communities and surrounding areas and for the road users as it will improve the transportation infrastructure in the area.</p>			
PROJECT DESCRIPTION	<p>The subproject consists of upgrading of 27.93 Km of existing (3-8m width) dirt roads in 6 villages. The 6 villages are: Abu Kanbara village, Abu Sarifah village, Al Karim village, Al Thawihier village, Finjan Al Thaher village, And Dibis village in Al-Muthanna governorate. The upgrade and reconstruction activities will need about 20-25 worker per day for each site. Workers are expected to be hired locally, however if a construction camp is deemed necessary, it will be installed on vacant state-owned land. Also, equipment and construction materials will be stored on vacant state-owned land. The anticipated duration of all works is around 180 days for all roads including mobilization and demobilization of contractors.</p>			
ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS	Climate	<p>Al-Muthanna governorate is located in the southern part of Iraq, which has an arid climate. The major rain, is about 106 mm yearly, falls during the period December thru March, with a spread showering in April. The average annual temperature is 23.8 °C. The average monthly wind velocity is 2.3m/s.</p>		
	Air quality	<p>The ambient air quality is within normal range.</p>		
	Land	<p>No additional land for the work is needed to proceed with these roads.</p>		
	Biodiversity	<p>No protected areas or endangered species (there is no critical or high biodiversity values that might be affected) in the vicinity of the sites.</p>		
	Culture heritage	<p>The sites adjacent areas do not include any historical or cultural sites.</p>		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Applicable Iraqi laws</td> <td style="width: 50%; text-align: center;">Applicable WB Policies</td> </tr> </table>		Applicable Iraqi laws	Applicable WB Policies
Applicable Iraqi laws	Applicable WB Policies			

POLICY AND LEAGAL FRAMEWORK	<ul style="list-style-type: none"> • Law no. 37 of 2008 MoE roles and responsibilities. • Law no. 27 of 2009 Protection of Environment • Regulation 2 of 2001 Preserving water resources • Law No.3,1997 Environment protection • Law No. 55. 2002 Heritage and antiques 	<ul style="list-style-type: none"> • OP 4.01 Environmental Assessment • OP 4.12 Involuntary Resettlement • OP 4.11 Physical and Cultural Resources • WB General Environmental, Health, and Safety guideline • Grievance Redress Service
ENVIRONMENTAL AND SOCIAL IMPACT ANALYSIS	• Environmental Receptor	Impact Significance
	Air Quality	Medium
	Noise	Low
	Water Resources	Low
	Soil	Low
	Solid and hazardous wastes	Low
	Flora & Fauna	Not significant
	Topography and landforms	Not significant
	Impacts on local traffic	Low
	Health and Safety	High
	Socio-Economic impacts	Low
Child Labor	Medium	
PUBLIC CONSULTATION RESULTS	Two modalities of consultations were carried out for this subproject. Public consultation was conducted in all 6 villages with men only due to the tribes' habit where 64 participants attended. The second approach was one-to-one interviews with both men and women to have their views and concerns of potential impacts during implementation. The number of individuals interviewed was 9 women and 25men.	
GRIEVANCE REDRESS MECHANISM	The SFD is in the process of establishing a free hotline and is expected to be functioning within the next few months. Meanwhile, in order to comply with the WB requirements, SFD has temporary assigned three staffs as focal points with their cell phone numbers to be disseminated at each road site for receiving calls and handling complaints. The contact details will be posted at site signboard and the complaint boxes will be installed in each location.	

Main Report

1. INTRODUCTION

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 all the subproject's components.

This ESMP was developed to identify, assess and mitigate the environmental and social risks and impacts with the upgrade of rural roads of about 27.93km long in 6 villages. These roads are located in the following villages: Abu Kanbara, Abu Sarifah, Al Karim, Al Thawiher, Finjan Al Thaher, And Dibis within Al-Muthanna governorate.

The ESMP was prepared by an independent consultant according to requirements of the World Bank (OP 4.01), and Iraqi regulations. The ESMP should be implemented by all relevant parties.

The objectives of this ESMP are to:

- Provide practical and achievable actions to ensure that the subprojects adverse environmental and social impacts are properly avoided or mitigated.
- Illustrate the institutional arrangements for implementing and monitoring the mitigation actions
- Integrate community views and input on the environmental and social impacts of these subprojects
- Comply with WB and national requirements
- Provide information to the local community on the subprojects activities, the associated risks and impacts, mitigation measures and Grievance Redress Mechanism (GRM) system.

2. PROJECT DESCRIPTION

This subproject involves the upgrade of rural roads for a total length of 27.93 km located in the Governorate of Al-Muthanna Southeast of Iraq. These roads serve **Abu Kanbara, Abu Sarifah, Al Karim, Al Thawiher, Finjan Al Thaher, And Dibis** villages. Most of these villages have no paved roads. The locations of these roads are shown in the figure below:

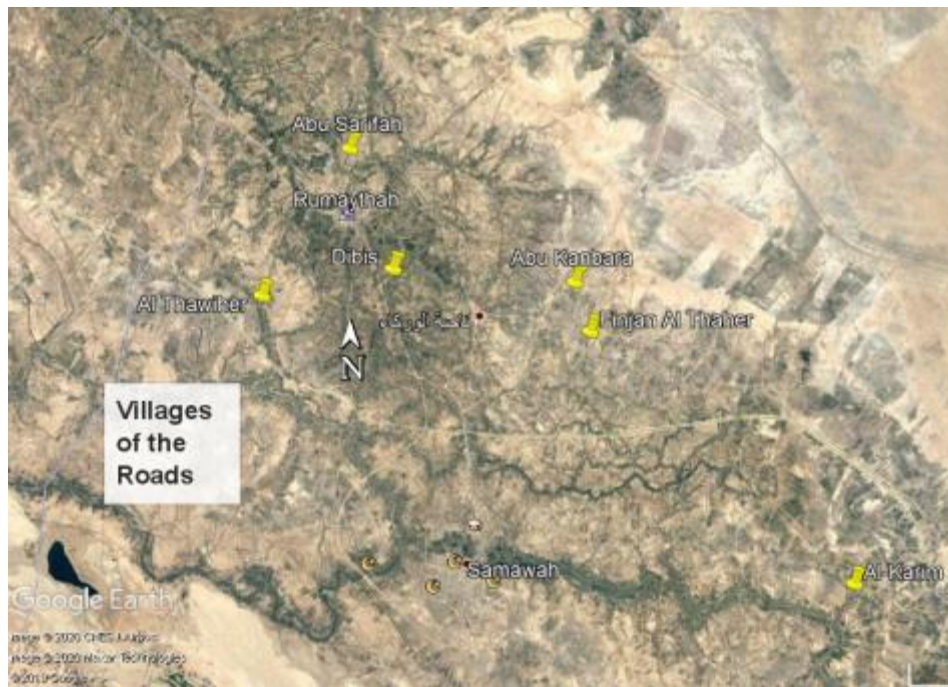


Figure 1: location of the six villages (google earth)

2.1 Objective of the Works

The objective of the subproject is to upgrade rural roads in six villages. The subproject will improve the transportation infrastructure in these villages by providing asphalt surface or providing subbase layer to facilitate transport for local communities and road users.

2.2 Scope of Work

In some villages the scope of work will entail upgrading the subbase layers of the roads, while in the remaining villages upgrading will entail asphaltting as shown in Table 1. Both upgrading activities of these roads involve similar works and will include the following activities:

1. The first step in the asphalt installation process is to remove the existing surface. The surface needs to be completely clean and clear. The total width of the existing roads is ranging from 3-8m.
2. Providing materials (gravel) to create double layer of subbase (each one is 15cm in thickness) and well compacted. The sub base provides a stable surface to support new pavement.
3. Providing materials to install a single concrete pipe culvert with a diameter of 30cm.
4. Binder will be added after the sub-base is laid and any soft areas are identified and repaired.
5. Once the supportive structures of a new asphalt surface are installed, the top layer of fresh asphalt (10 cm in thickness) is added to provide a clean and smooth ride.

The anticipated duration of upgrading works is about 180 days for all the subprojects with about 20-25 workers per day about 95% of them are local workers and the rest are engineers and technicians that may be from the closest areas.

However if a construction camp is deemed necessary, it will be installed on vacant state-owned land

3. BASELINE CONDITIONS

3.1 The Project Area

The subproject is located in the governorate of Al-Muthanna that is situated in southern part of Iraq, Al-Muthanna borders Saudi Arabia and shares internal boundaries with the governorates of Basra, Thi-Qar, Al-Qadisiyah, and Al-Najaf (as shown in figure 2 below). The proposed location of these rural roads will be in an open area. The upgrading of the projects will use the exact footprint of the existing roads and no widening of the roads will occur.

The length of each road and the population in each village are shown in the table below:

Table 1: Information about the villages

No.	Village		Length (Km)	Population
1	Abu Kanbara	Asphalt	2.45	1924
2	Abu Sarifah	Asphalt	2.10	1153
3	Al Karim	Asphalt	3.15	2290
4	Al Thawihir	Asphalt	10.48	1220
		Sub-base	2.4	
5	Finjan Al Thaher	Sub-base	5.50	850
6	Dibis	Asphalt	1.85	1400
	Total		27.93	



Figure 2 Map of Iraq on the right and Al-Muthanna governorate on the left.

These subprojects are located in flat areas. The area adjacent to the subproject sites is characterized as rural residential and semi desertic to agricultural in some area.

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.

3.2.1 Climate

Al-Muthanna governorate is located in the southern part of Iraq. The governorate's landscape is dominated by desert plains, with only a narrow ribbon of irrigated farmland along the Euphrates River in the north. The major rain falls during the period December thru March, with a spread showering in April. During the year, about 106 mm of precipitation falls annually. In summer temperatures easily surpass 40°C, the average annual temperature is 23.8 °C. The driest weather is in June, July & August, September when no rainfall (precipitation) occurs. While, the wettest weather is in December - March when rainfall (precipitation) occurs. The average monthly wind velocity is 2.3m/s.

3.2.2 Air Quality

The subproject sites are located in open areas, so the expected concentration of air pollutants is low. Air pollutants in the villages are caused mainly from movement of vehicles and trucks. Therefore, the ambient air quality is expected to be within the WHO ambient air quality standards.

3.2.3 Site Topography and location

No natural land obstacles are presented in the subproject areas. The subproject areas are free of mountains, cliffs, and valleys. 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 4 Km). There are no close buildings or sensitive receptors located to the subprojects site for more than 100m. The current situation of these roads are shown below:

1.2.1 Land use

The land use in the surrounding areas of the proposed roads is described as flat area and vacant lands. There are few natural trees found close to road sites but not expected to be impacted during implementation. There are few residential houses scattered to be served by these roads.



Figure 3: Current situation of Roads in the six villages

1.2.2 Flooding

There are no records of flooding that occurred previously in the area.

1.2.3 Noise

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

1.2.4 Heritage Environment

There are no sites of historical or cultural importance in the area. There are no cemeteries, historical-cultural monuments, churches, mosques near the project that need to be removed or will be impacted due to the rehabilitation activities.

1.2.5 Traffic Level

No traffic problem or traffic congestion will be expected during the construction phase or in the operation phase. It is important to mention that these roads are within the villages as a network, therefore the other roads can be used as alternative roads. In addition, the contractor will work daily for specific distance and for one lane and leaving the lane for the users.

1.2.6 Land acquisition

The existing roads are built on state land and hence there are no issues related to land acquisition. If widening of roads is needed, it will be within the existing right of way. The construction activities will not cause relocation of people and any individuals.

1.2.7 Social Aspects

There are no people associated with the road works who will be adversely affected through the need to relocate, or whose livelihoods will be adversely affected by the road works activities.

The main economic benefits generated by the project will be vehicle operating cost savings, reduced travel time, cost savings from reduced accidents. The benefits from a reduction in the number and severity of accidents are an important element of the economic benefits.

The socio-economic impacts of the implementation phase on inhabitants can be minimized by adopting traffic management plans to ensure a safe and efficient movement of traffic during construction as well as by informing the public about the schedule of road works activities.

2. LEGAL ASPECTS

4.1 Iraqi environmental legislations

During rehabilitation 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.

Table 2: 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 No. 37 of 2015.

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 rehabilitation and reconstruction of the Roads.

- ❖ OP/BP 4.01 Environmental Assessment.
- ❖ OP/BP4.12 Involuntary Resettlement
- ❖ OP/BP 4.11 Physical Cultural Resources

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.

3. IMPACT ASSESSMENT AND MITIGATION MEASURES

5.1 Construction Phase

This section of the report describes the environmental and social impacts that are likely to result from the construction and rehabilitation of these roads, 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 3: Summary of Impact Assessment during Construction

	Environmental Receptor	Impact Significance
1	Air Quality	Medium
2	Noise	Low
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 project is expected to result in positive socio-economic outcomes for the local communities. Socially harmful consequences of

road operation are not anticipated. However, the continued operation of a GRM for one year following opening of the road 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.

4. 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 PMO 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 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 4: Mitigation Measures during Construction Phase.

Potential Impact		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. Night-time activities near noise sensitive areas, such as residential buildings, should not be allowed.	Contractor	Resident engineer	Included in contractor cost

Potential Impact		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	<ul style="list-style-type: none"> 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
		<ul style="list-style-type: none"> 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; 	Contractor	Resident engineer	Included in contractor cost

Potential Impact		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> 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. 			
		<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. All hazardous wastes must be appropriately stored in bounded areas and should be clearly identified as “hazardous”. 	Contractor	Resident engineer in coordination with the local authority and ministry of science and technology regarding hazardous wastes	2000

Potential Impact		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> 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	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	1000

Potential Impact	Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
	<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 hats and safety belts must be supplied and continuously used by all workers, technicians, engineers and site visitors. 	Contractor	Resident engineer	1500
	<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; 	Contractor	Resident engineer	Included in contractor cost

Potential Impact		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> provision of health and safety information; regular inspection, review and recording of EHS performance; 			
		<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 prohibit open burning waste in worksites Avoid or minimize driving through community areas and dangerous routes 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
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	PMO	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; 	Contractor	Resident engineer in coordination with health and safety officials.	Included in contractor cost

Potential Impact		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
		<ul style="list-style-type: none"> 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 			
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 PMO 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\$ (rehabilitation phase)					11,000

Table 5: Mitigation Measures during Operation Phase.

Impact		Mitigation Measures	Responsibility	Supervision	Total estimated Cost in US\$
1	• Air quality	• During the license issuance or renewal process of vehicles, traffic authorities to ensure that all vehicle engines are in good conditions.	Traffic Department	Traffic Department	No direct cost
2	• Noise	<ul style="list-style-type: none"> • During the license issuance or renewal process of vehicles, traffic authorities should ensure that all vehicle engines are in good conditions. • Speed limits should be reduced especially near residential buildings. • Limit trucks movement especially at night in coordination with the local traffic authorities. 	Traffic Department	Traffic Department	No direct cost
3	Sanitary Waste	• Not applicable	Not applicable	Not applicable	Not applicable
4	Soil	• Not applicable	Not applicable	Not applicable	Not applicable
5	Solid and hazardous wastes	<ul style="list-style-type: none"> • During the operational period, some littering and waste generation resulting from the repair activities will occur. Littering may occur due to wind action. • All waste should be deposited through licensed haulers/transporters to licensed and regulated landfill sites appropriate to the type of waste generated 	Local Authority (Municipality)	Local Authority (Municipality)	Within municipal budget
6	Flora & Fauna	Not applicable	Not Applicable	Not Applicable	Not Applicable
7	Topography and landforms	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	Handling Complain	The continued operation of a GRM for one year following operating of the Road 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"> • Provision signage to improve visibility and overall safety of roads, particularly along stretches located near Roads or other locations where children may be present. • Having a clear set of emergency 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

5. 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.

7.2 ESMP Institutional Arrangements

In order to ensure full compliance with the environmental and social requirements which are described above, PMO nominated a qualified engineer to act as the focal point for environmental and social affairs at the central level. On the field level, PMO nominated two engineers in Al-Muthanna 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 PMO 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 rehabilitation 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 PMO 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 PMO in Baghdad.

Table 6: Monitoring Activities during Construction Phase.

Indicator		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 months 	Resident Engineer	PMO	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	PMO	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	PMO	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	PMO	No cost
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	PMO	No cost

Indicator		Monitoring Activities	Monitoring Indicators	Frequency	Responsibility	Supervision	Total estimated Cost in US\$
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	PMO	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	PMO	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	PMO	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	PMO	No cost
11	Cultural Heritage	<ul style="list-style-type: none"> • Record any observation about Cultural Heritage. • Ensure compliance of workers to Chance find procedure. 	Observation report in case of chance finds.	In case of chance finds	Resident Engineer	PMO	No cost
12	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.	Weekly	Resident Engineer	PMO	No cost
Total cost US\$ (Operation/Maintenance phase)							2,500

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

On quarterly basis, PMO 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

PMO 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 7: 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 PMO should ensure the allocation of sufficient budget resources to ensure availing the required resources to achieve the required tasks.

6. PUBLIC CONSULTATION

8.1 Consultation Process:

The public consultations were carried out in the six villages for the upgrade of the roads on 12 and 13 of October, 2019. The public consultations included only men and number of participants was 64 in these villages. Accordingly, a questionnaire was formatted to cover the key environmental and social aspects related to the subproject. The consultation started by providing briefs about the subproject activities, potential impacts and future benefits.

In addition to public consultation, one on one interviews were conducted on 12 and 13 of October, 2019. The formatted questionnaire was then addressed to 9 women and 25 men in the surrounding community randomly to have their opinions and thoughts regarding the construction activities.

8.2 Consultation Results:

All participants in these villages expressed that; the upgrade of these roads will have a positive impact on their social daily life. Please refer to Annex 2 and Annex 3 for sample of public consultations in Dibis village and also sample of individual interviews for both men and women. The full list of participants for public consultations and individual interviews are attached in standalone document to reduce the size of the instrument. As per the questionnaire prepared for individual interview, the below are the main findings.

1. All interviewed locals agreed that the reconstruction of the roads will have a positive impact from the social perspectives on the locals. Moreover, one of the tribe's head confirms that the rehabilitation of roads is a priority to the village's people.
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 reconstruction activities of these Roads.
4. The interests of the locals will not be affected in any way by the reconstruction 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. They welcomed that there will be a hot line to express their suggestion or concern that might happen during the rehabilitation phase.
8. The rehabilitation of the project will enhance the economic situation of the people via activation their agricultural activity and providing their products from the farm to the market faster and in good quality.
9. The upgrade of these roads will enhance the social relationship among the locals; improve their achievements and performance.
10. There are no encroachers, no negative impact on economic activities, no social disputes

11. Most locals agreed that the roads need more instructional signs near the construction area.

7. GRIEVANCE REDRESS MECHANISM

The SFD is in the process of establishing a free hotline and is expected to be functioning within the next few months. SFD is planning to set up a digital system with multi-channels for receiving complaints, inquiries, feedbacks or comments like WhatsApp, Facebook, email and complain boxes for each subproject. Additionally, focal points will be assigned at local level and central level to be in charge of handling complaints.

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

Table 8: Contact Information for GRM

#	Name	Job Title	Phone Number	E-mail
1	Kabil Hmood Abas	SFD Team leader	07812542417	Muth_planning@yahoo.com
2	Mohammed Thamer Fitan	GRM officer	07803008372	Muth_planning@yahoo.com
3	Yaser Mohammed Sehood	M&E officer	07812542417	Muth_planning@yahoo.com

The process of managing complaints will be as follows:

- 1- Complaints should be sorted out according to complexity;
- 2- Simple inquiries should be resolved on the spot by concerned staff members in 3-6 working days as a maximum and should be documented and archived as per the relevant procedure;
- 3- Complex issues should be investigated and communicated with higher management for final decisions within a timeframe of 20 working days as a maximum;
- 4- 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; and
- 5- The complainant shall be notified of the result and the action immediately and informed of the possibility of objecting to the procedure.

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

ANNEXES

Annex 1: Public Consultations Photos



Public Consultations at Abu Sarifah Village



Public Consultations at Abu Kanbara Village



Public Consultations at Al Thawiher Village



Public Consultations at Al Karim Village



Public Consultations at Finjan Al Thaher Village



Public Consultations at Dibis Village

Annex (3): Sample individual interviews for both men and women

(استبيان)


اسم المشروع: آسك الطرق الدائرية بالسبيل / قرية ابو كنبارة

الاسم: والى عبد الله جاسم

الجنس: ذكر أنثى

المهنة: كاس

ت	السؤال	نعم	كلا	الملاحظات
1	هل تعتقد ان عملية اصهار المشروع لها اثر ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>		
2	هل هناك ادعاءات او مطالبات من قبل السكان المحليين بمعالجة الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>		
3	بسبب اصهار الاعمار ، هل هناك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائلته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>		
4	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اصهار الاعمار؟	<input checked="" type="checkbox"/>		
5	هل هناك اي بلى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان مستثار بعملية اصهار المشروع؟	<input checked="" type="checkbox"/>		
6	هل ان اصهار اصهار المشروع مستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>		
7	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>		
8	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اصهار المشروع؟	<input checked="" type="checkbox"/>		
9	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاصهار؟	<input checked="" type="checkbox"/>		
10	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>		

التوقيع: 

الاسم: والى عبد الله جاسم

التاريخ: 2019 / 1

(استبيان)

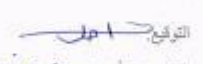
اسم المشروع: اسك وطريق باستخدام الكراب والسبيل

الاسم: اخلاص محمد علي

الجنس: ذكر أنثى

المهنة: ربة بيت

ت	السؤال	نعم	كلا	الملاحظات
1	هل تعتقد ان عملية اصهار المشروع لها اثر ايجابية من الناحية الاجتماعية بالنسبة للسكان القاطنين في المناطق القريبة من المشروع.	<input checked="" type="checkbox"/>		
2	هل هناك ادعاءات او مطالبات من قبل السكان المحليين بمعالجة الارض المقام عليها المشروع؟	<input checked="" type="checkbox"/>		
3	بسبب اصهار الاعمار ، هل هناك عمليات رفع لمحاصيل زراعية او اشجار او اي غطاء نباتي تعود عائلته لمواطنين او السكان المحليين؟	<input checked="" type="checkbox"/>		
4	هل تضررت مصالح المواطنين القاطنين بالقرب من المشروع بسبب اصهار الاعمار؟	<input checked="" type="checkbox"/>		
5	هل هناك اي بلى تحتية دائمية او مؤقتة تلعب دورا اساسيا في النشاطات الحيوية اليومية للسكان مستثار بعملية اصهار المشروع؟	<input checked="" type="checkbox"/>		
6	هل ان اصهار اصهار المشروع مستتسبب باجراءات اعادة توطين لشخص او لاشخاص الى مناطق جديدة؟	<input checked="" type="checkbox"/>		
7	هل تمت عملية استخدام ارض المشروع من قبل السكان المحليين، علما ان الارض تابعة للدولة؟	<input checked="" type="checkbox"/>		
8	هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اصهار المشروع؟	<input checked="" type="checkbox"/>		
9	هل هناك تغيير ديموغرافي او ضرر في النسيج الاجتماعي نتيجة عمليات الاصهار؟	<input checked="" type="checkbox"/>		
10	هل يحتاج المواطنون القريبون من المشروع لوضع علامات تحذيرية او استدالات لزيادة معدلات الامان؟	<input checked="" type="checkbox"/>		

التوقيع: 

الاسم: اخلاص محمد علي

التاريخ: 2019 / 1