# SFG2345 V2

# **REPUBLIC OF IRAQ**

# Ministry of Construction, Housing, Municipalities and Public Works

## **ROADS AND BRIDGES DIRECTORATE**

Emergency Operation Development Projects (EODP) (P155732)

Environmental and Social management Checklist for Rehabilitation of Naft Khana -Mindili Road (42.5 km) in Diyala Governorate

August 1st, 2016

# **IRAQ:** Emergency Operation for Development Project

## PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAI	& ADMINISTRATIVE					
Country	IRAQ					
Project title	Rehabilitation of Naft Khana – Mindili Road in Diyala Governorate (42.5km) – EODP/MOCHPM/W2/2					
Institutional arrangements						
Contact: diyala_di.scrb@yahoo.comResident Engineer Name: Mohammad Mahdi Salman Contact: PMT Supervision: Name: Dr. Hussein Ali Title: Environmental and Social Safeguards Consultant Contact: civilengineer.water@yahoo.comImplementation 						

PROJECT LOCA	Contractor: Hamorabi Co. Safeguard Supervision Name: Abdul Samad J.Hassan. Title: Deputy chief engineer. Contact: <u>hamorabi_bridges@yahoo.com</u> ATION & SITE DESCRIPTION				
Project Location					
Project Description	<ul> <li>Although the road is classified as a secondary road with two lanes single carriageway, it is considered vital since it connects the northern parts of Diyala governorate to its central and southern parts.</li> <li>The length of the road that needs maintenance is about 42.5 Km with a 7.5 meters wide with an average of 2 meter shoulders for opposite road sides stabilized with granular material. This road complements the road the road from Khanaqin – Naft Khana (Other EODP project that has 20Km in length) to be connected with Mindili City.</li> <li>The road passes through a rolling area and valleys near Iraq-Iran borders. The alternative road is paved and passes through a semi-arid area therefore no land acquisition or involuntary resettlement of residents or businesses is anticipated.</li> </ul>				

Site Google Map	ALE STOL STOL CONCELLENCE			
Current Road Condition	Most of the road is totally distressed, damaged and suffers from rutting and cracks. Rutting occurs to the depth of 2-10 cm on outer lane under truck wheels. The depth of the rutting exceeds 10 cm in some parts of the road and sometimes reaches18-20 cm especially at the location of army check points. Also, there are longitudinal and transverse cracks measuring 0.5-5 cm wide. In addition, there are evidence of shoving and depressions at different parts of carriageway in particular on pavement areas traversing drainage structures. Moreover, most of the culverts are blocked either by sedimentation or debris.			
Alternative Route	During the rehabilitation stage, road traffic will utilize the Imam Ways - Khanaqin road as an alternative route. The alternative road is paved and passes through a semi- arid area without any requirements for land acquisition or involuntary resettlement of residents or businesses.			
Project Duration	According to the contract agreement, the expected project duration is about 365 days.			
Proposed Project Activities	<ul> <li>The project rehabilitation activities will include:</li> <li>(i) Cold milling and demolishing of damaged asphalt layers to the entire length of the road;</li> <li>(ii) Construction of a compacted subbase layer 30 cm thick;</li> <li>(iii) Overlay by new layers, base course 10 cm and then binder course of 7 cm;</li> <li>(iv) Construct subbase for shoulders 15cm thick and leveling the</li> </ul>			

	<ul> <li>existing shoulder and filling with suitable fill material over the subgrade and beneath the shoulder subbase;</li> <li>(v) Remove debris and unsuitable materials and reshape the side slope by trimming &amp;leveling in addition to the culverts cleaning.</li> <li>For the purpose of treatment the areas which are closer to the security check points (200m long) in station (7+400), it is required to replace the existing asphalt pavement by a rigid pavement.</li> </ul>
Land Acquisition	The road was built on state owned land in 1980. The rehabilitation and maintenance activities will take place over 42.5 km (out of 62.5 km of the entire road). No temporary or permanent land acquisition is required at any stage of the project.
Contactor's Camp	The contractor will establish his camp along the road section for the workers, equipment and storage of material. The camp will mainly include offices with possibility of accommodation (if needed). The contractor is likely to hire most of the unskilled labors from the nearby village where is the project required between 30-40 workers (skilled and unskilled). The contractor shall setup the camp on state owned land. The camp will be established far from residential area in order to avoid direct communication with the village people.
PROJECT BASE	LIN CONDITIONS
Description of Geographic Conditions	<u>Geography:</u> The project area is located within a predominantly rural area with landscape features like mountains, cliffs, and valleys.
Description of Physical Conditions	<ul> <li><u>Physical environment:</u></li> <li>Except for the normal road traffic, no sources for air pollution exist near the project site. The values of air parameters are considered within natural levels compared to Iraqi standards.</li> <li>Similarly, noise levels near the project site are considered below the maximum allowable limits due to the absence of any noise sources except for regular traffic.</li> <li>The nearest human settlement to the project site is 2.5 km. Air quality and noise near these settlements will not be negatively affected by the project.</li> </ul>
Description of	Geology:

Geological ConditionsThe area surrounding the road section represents a joining ar flat areas that start from the middle of Iraq till the mid-s parts of the country and some of mountains, cliffs, and valleys					
Description of Hydrogeology Conditions	<b>Hydrogeology:</b> There are some canals that cross the road and these canals conveys the water from the mountains during the spring season. Flooding of the road has not been reported in the past years. The depth of ground water in the area ranges from 6 to 96 meters. In general, the groundwater near the project area is not used for human consumption or irrigation.				
Description of Ecology ConditionsEcology: The project area is located in an arid and semi-arid ecosyst protected areas are located within the project site. No wild been recorded. The exiting flora and fauna species are abun Iraq and are not classified as rare or endangered.					
Description of Socio-Economic Context	Socio-economy: The nearest human settlement to the project site is Naft Khana settlement about 2.5Km away. The community has a population of (2,000) capita. The settlement may serve the project as a source for temporary unskilled daily labor, food supply and providing basic maintenance for some construction equipment. Along the road section which will be rehabilitated, there are no roadside vendors, either licensed or non-licensed who would need to be displaced as a result of rehabilitation/construction activities.				
Source and Distance of Material Especially Aggregates, Water	The required construction materials are: Aggregates, gravel, asphalt, diesel fuel (for construction equipment) and water. The construction material will be transported by trucks from the quarries which are located in Imam Ways, about 70km away from site. These quarries are already commercially operating enterprises and serve other ongoing projects. The trucks will use the existing road (Naft Khana -Mindili) to reach the site. The fresh water will be provided by trucks from the Village of Naft Khana or from Mindili and will be stored on site in above ground plastic containers.				

	Drinking water will be provided to workers and engineers via bottled
	water which will be provided by a local supplier from Naft Khana or Mindili City or even from Khanaqin City.
LEGISLATION &	
National & Local Legislation and World Bank Policies that Apply to the Project	The main local legislation which will be applicable is Law no. 27 of 2009 for: Protection and Improvement of Environment. Also, 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. Moreover, Regulations no. 2 of 2001 for: Preserving water resources. (See Annex 1 for details on applicable Iraqi laws to this project). Other relevant World Bank Operational laws and Policies such as Environmental Assessment OP/BP 4.01 will also be applied. OP 4.12 does not apply in this specific project because rehabilitation
	will be confined to existing road and no involuntary resettlement is expected.
PUBLIC CONSU	LTATION
Public Consultation	Due to the current security situation of the area and taking into utmost consideration the safety of people as public meetings may be targeted by terrorists, individual interviews with the local people were conducted. It should be mentioned that no women interviews were conducted because they are located far away from the project site. In addition, the road users are mostly transport for commercial purposes and it's rare to find women using taxis or buses on this road. These interviews took place with dwellers of the Villages (Kani Masi and Belqana) and road drivers. Five dwellers and 5 road users were interviewed in the date of 21 <sup>st</sup> of April 2016. This draft Checklist was also posted on the Website of the Roads and Bridges Directorate for
Process	public knowledge and opportunity for comments and feedback.
	A set of questions were prepared to cover the key environmental and social aspects related to the project. Local residents were consulted using face-to-face interviews with randomly selected individuals in the vicinity of the road and in different areas of the community to have their opinions and thoughts.
	The purpose of the consultation was to obtain sound and representative information on the possible socio-economic circumstances of the local community members, and better

	understand any possible adverse socio-economic effects of project activities on PAPs and the local community.
	According to the results revealed from these questioners, the local community individuals agreed that, the rehabilitation activities will have a positive impact on their social daily life. None of the locals expressed any reservations against the project and did not specify any negative impact that might affect him or his family (see Annex 3).
	No environmental or social concerns were raised by the interviewed. However, they required adequate road signs and safety instructions to be in place to avoid road accidents during road repair and later during road operation.
	All interviewed persons expressed their demand to complete the road maintenance and repair as soon as possible to improve their livelihood conditions. "See evidence of consultations in Annex 3"
INSTITUTIONAL	CAPACITY BUILDING
Will there be any capacity building?	[ <mark>X</mark> ] N or [ ]Y

#### PART B: SAFEGUARDS SCREENING AND TRIGGERS

	Activity / Typology	Status	<b>Triggered Actions</b>
	1. Reconstruction of urban, inter-urban or rural roads	[ <b>x</b> ] Yes [ ] No	see Section A below
	2. Reconstruction of private homes, housing estates or public buildings	[ ] Yes [ <b>x</b> ]No	
Will the site	3. Reconstruction of / impacts on surface drainage system	[] Yes [ x]No	
activity	4. Activities in Historic building(s) and districts	[ ] Yes [ <b>x</b> ]No	
include/involve any of the	5. Required acquisition of land <sup>1</sup> or temporary / permanent impacts on livelihoods	[ ] Yes [ <b>x</b> ]No	
following?	6. Handling or presence of hazardous or toxic materials <sup>2</sup>	[x] Yes []No	If "Yes", see Section <b>B</b> below
	7. Impacts on forests and/or protected areas	[ ] Yes [ <u>x</u> ]No	
	8. Risk of unexploded ordinance (UXO)	[ ] Yes [ x ] No	
	9. Traffic and Pedestrian Safety	[x]Yes []No	If "Yes", see Section C below

<sup>&</sup>lt;sup>1</sup> Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

<sup>&</sup>lt;sup>2</sup> Toxic / hazardous material includes, but is not limited to, asbestos, toxic paints, noxious solvents, removal of lead paint, etc.

### **PART C:** MITIGATION MEASURES

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
General Conditions	Notification and Worker Safety (See Annex 2 for detailed measures on Health and Safety)	<ul> <li>a) The local construction and environment inspectorates and communities have been notified of upcoming activities</li> <li>b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)</li> <li>c) All legally required permits have been acquired for rehabilitation</li> <li>d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.</li> <li>e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</li> <li>f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.</li> </ul>
<b>A.</b> General Rehabilitation and /or Construction Activities	Air Quality	<ul> <li>(a) During excavation works dust control measures shall be employed, e.g. by spraying and moistening the ground</li> <li>(b) Demolition debris, excavated soil and aggregates shall be kept in controlled area and sprayed with water mist to reduce debris dust</li> <li>(c) During pneumatic drilling or breaking of pavement dust shall be suppressed by ongoing water spraying</li> <li>(d) The surrounding environment (sidewalks, roads) shall be kept free of soil and debris to minimize dust</li> <li>(e) There will be no open burning of construction / waste material at the site</li> <li>(f) All machinery will comply with Iraq emission regulations, shall be well maintained and serviced and there will be no excessive idling of construction vehicles at sites</li> </ul>
	Noise Water Quality	<ul> <li>(a) Construction noise will be limited to restricted times agreed to in the permit</li> <li>(b) During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible</li> <li>(a) Sewage from construction offices and rest areas will be collected and transferred by trucks to the nearest sewage treatment</li> </ul>
	Waste management	<ul> <li>(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from excavation, demolition and construction activities.</li> <li>(b) Construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</li> <li>(c) Construction waste will be collected and disposed properly by licensed collectors</li> <li>(d) The records of waste disposal will be maintained as proof for proper management as designed.</li> </ul>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
<b>B</b> . Toxic materials	Toxic / hazardous waste management	<ul> <li>(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information</li> <li>(b) The containers of hazardous substances shall be placed in an leak-proof container to prevent spillage</li> <li>(c) The wastes shall be transported by specially licensed carriers and disposed in a licensed facility.</li> <li>(d) Paints with toxic ingredients or solvents or lead-based paints will not be used</li> </ul>
<b>C</b> Traffic and pedestrian safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<ul> <li>(a) In compliance with national regulations the Contractor will ensure that the construction site is properly secured and construction related traffic regulated.</li> <li>(b) The site will be clearly visible and the public warned of all potential hazards by signposting and barriers / fencing</li> <li>(c) Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.</li> <li>(d) Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement</li> <li>(e) If required, active traffic management by trained and visible staff at the site for safe passage for the public</li> <li>(f) Ensuring safe and continuous access to all adjacent office facilities, shops and residences during construction</li> </ul>

	Potential	Mitigation Measures	Monitoring	Responsibility		Additional Cost in USD	
No.	Impacts			Implementation	Monitoring	Mitigation measures	Monitoring
1	Generation, storage, disposal of construction and domestic waste	<ul> <li>Waste minimization</li> <li>Storage of construction waste in locations pre-agreed with the local communities</li> <li>Waste disposal in designated locations</li> <li>Avoid disposal Valleys</li> <li>Waste from cleaning of blocked drainage should be disposed at vacant land agreed with the local populations</li> <li>Coarse and fine waste materials should be used as filling, construction and stabilization material</li> <li>Handling of liquid waste in sealed containers</li> <li>Solid and liquid waste management plan</li> </ul>	• Maintaining a record of type,	Contractor	Resident Engineer	Will be part of the contract. Bidders will be able to cost this item in their bids. Expected additional cost of USD 3,000	Cost of full time environmental and social monitoring specialists, camera and vehicle (50,000 USD for all monitoring activities)
2	Deterioration of air quality	<ul> <li>Usage of well-maintained equipment</li> <li>Using good quality fuel to reduce exhaust emissions.</li> <li>Water spraying for dust control</li> <li>Cleaning of vehicle tires</li> <li>Covering of trucks carrying fine grade construction materials</li> <li>Avoiding earthworks near settlements and dust generation</li> </ul>	<ul> <li>Visual observation and photographic documentation of equipment induced emissions and dust clouds from works and trucks</li> <li>Frequency: Once a week</li> </ul>	Contractors	Resident Engineer	Will be part of the works contract. Expected additional costs:2,000 USD	Cost of full time environmental and social monitoring specialists, camera and vehicle.

 Table (1) Summary of ESMP during Maintenance Phase

	Potential	-		Responsil	oility	Additional Cost in USD	
No.	Impacts	Mitigation Measures	Monitoring	Implementation	Monitoring	Mitigation measures	Monitoring
3	Increased level of noise	<ul> <li>Usage of quiet/well-maintained equipment</li> <li>Limiting noisy activities to normal daylight hours</li> <li>Provision of speed limit signs at critical locations</li> <li>Informing local population about noisy road works</li> </ul>	<ul> <li>Site supervision, inspection and documentation to ensure the implementation of mitigation measures</li> <li>Frequency: Once a week</li> </ul>	Contractor	Resident Engineer in coordination with the Contractor	Will be part of the contract. Bidders will be able to cost this item in their bids. Expected additional cost: 2,000 USD	Cost of full time environmental and social monitoring specialists, camera and vehicle.
4	Disruption of the runoff water and drainage systems	<ul> <li>Proper side sloping of the road to prevent the accumulation of water on the road surface</li> <li>Re-vegetation of disturbed soils</li> <li>Keeping the drainage ditches and culverts unblocked</li> </ul>	<ul> <li>Site inspection and photo documentation of water harvesting activities and re-vegetation activities</li> <li>Checking on culverts particularly following rainfall events</li> <li>Frequency: Twice a month during the rainy season</li> </ul>	Contractor in coordination with Supervision Engineer	Resident Engineer	Will be part of the contract. Bidders will be able to cost this item in their bids. Additional cost (re- vegetation): 1,000 USD	Cost of full time environmental and social monitoring specialists, camera and vehicle.
5	Deterioration of groundwater quality	<ul> <li>Storage of liquid materials (especially hydrocarbons) in sealed containers.</li> <li>Application of liquid fuels and oils in sealed and paved areas with sump.</li> <li>Refueling in sealed locations</li> <li>Development and implementation of Waste management plan.</li> </ul>	<ul> <li>Monitoring water quality of the groundwater wells</li> <li>Monitoring of fuel and oil handling and storage.</li> <li>Frequency: Once</li> </ul>	Contractor in coordination with Supervision Engineer	Resident Engineer	Will be part of the works contract. Bidders will be able to cost this item in their bids. Expected additional costs:	Cost of full time environmental monitoring specialist, camera and vehicle.

	Potential			Responsil	bility	Additiona	l Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implementation	Monitoring	Mitigation measures	Monitoring
			every month			2,000 USD (incl. water sampling and analysis)	
6	Damage to fauna, flora	<ul> <li>Placing speed limit signs and planting trees at critical locations and known animal crossing pathways</li> <li>Waste and spoil cannot be dumped near valleys</li> <li>Keeping culverts unblocked to facilitate amphibians crossing</li> <li>Restoring affected land along the road alignment to the preconstruction status</li> <li>Preventing leakages of fuel</li> </ul>	<ul> <li>Site inspection and photographic documentation of the condition of culverts</li> <li>Monitoring of re-planting activities</li> <li>Checking records of spillages and animal killings</li> <li>Frequency: Once every two weeks</li> </ul>	Contractor in coordination with Supervision Engineer	Resident Engineer	Will be part of the works contract. Expected additional costs: 1,000 USD	Cost of full time environmental monitoring specialist, camera and vehicle.
7	Disruption of traffic	<ul> <li>Informing the public about schedule of repair and maintenance works</li> <li>Provision of temporary alternative access roads/ by- passes</li> <li>On the spot traffic management</li> <li>Ensure traffic safety</li> </ul>	<ul> <li>Site inspection and photographic documentation</li> <li>Frequency: Weekly (including photo evidence)</li> </ul>	Contractor in coordination with the Local Traffic Department	Resident Engineer	Will be part of the contract. Bidders will be able to cost this item in their bids. Additional costs: 2,000 USD	Cost of full time environmental and social monitoring specialists, camera and vehicle.

	Potential			Responsil	bility	Additiona	l Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implementation	Monitoring	Mitigation measures	Monitoring
8	Deterioration of health & safety conditions	<ul> <li>Provision and use of personal protective equipment to workers</li> <li>Installing construction and warning signs</li> <li>Speed limit bumps in settlements</li> <li>Installing barriers in sharp curves</li> </ul>	<ul> <li>Inspection and photo evidence</li> <li>Maintaining records of injuries and accidents with cause and location</li> <li>Frequency: Weekly for each road under repairs</li> </ul>	Contractor	Resident Engineer	Will be part of the contract. Bidders will be able to cost this item in their bids.	Cost of full time environmental and social monitoring specialists, camera and vehicle.
9	Social Impacts	<ul> <li>Coordinating with the public schedule of maintenance activities in residential areas</li> <li>Employ local workers</li> <li>Provide alternative access roads/by-passes</li> <li>Traffic management</li> <li>Workers' camps have to be located away from settlements</li> <li>Camps must be equipped with sealed septic tanks and waste containers.</li> </ul>	<ul> <li>Site inspection and documentation of community activities along roads.</li> <li>Inspections of worker camps</li> <li>Frequency: Bi- weekly</li> </ul>	Contractor in coordination with Supervision Engineer	Resident Engineer	Will be part of the contract. Bidders will be able to cost this item in their bids. Expected additional cost: 2,000 USD	Cost of full time social monitoring specialist, camera and vehicle.
		Expected additiona	l mitigation costs:			USE	) 15,000
		Expected mon	itoring costs:			USE	0 20,000

#### Annex 1:

#### Iraqi legal and regulatory framework

#### ✤ Iraqi environmental legislations.

The work during rehabilitation 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.

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 (10) represents the applicable Iraqi's laws applicable to such activity.

#### Table C: Applicable Laws and Regulations in Iraq

Appli	cable	e Ira	aqi	laws						
Law	no. S	37	of	2008	for	Ministry	of	Environment:	Describes	institutional
arrang	gemer	nts	of t	he Mi	nistr	y of Envir	onm	ent and Outline	es policies a	and roles and
respon	sibili	ities	s tov	ward p	rotec	ting the er	nviro	onment.		
Regula	ations	s no	. 2 (	of 2001	for:	Preserving	g wa	ter resources.		
Law n	0 27	of $2$	:009	) for P	rotec	tion and I	mpr	ovement of Env	ironment	

For legal aspects, the work during rehabilitation 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 environment. Law of heritage and antiques no. (55) Issued in 2002, while for a sanitary waste (municipal) the regulations of the MOHE must be followed, and for the rubbles (construction &demolition waste) the regulations, legislations and instruction of both MOHE and MOCHPM must be followed.

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.

### The World Bank Safeguards Policies

The World Bank has many operational safeguard policies which apply to various development projects which the Bank is either implementing or funding. The purpose of these policies is to ensure that social and environmental risks are prevented or at least minimized while increasing socio-economic benefits of approved projects in addition to preserving the environment.

These policies have been a means to increase the effectiveness and positive impacts of development projects and programs supported by the Bank.

The Bank's safeguard policies included within the project are listed in table (11):

Table 11: World Bank Operational Policy

<b>Operational Policies (OP)</b>					
•	OP/BP 4.01 Environmental Assessment				
Soci	al Policies				

**1**. **OP/BP 4.01** - the key Operational Policy describing the environmental assessment procedure. The Bank requires environmental assessment of projects proposed for Bank financing. 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.

2. **OP/BP4.12** the key Operational Policy describing the involuntary resettlement which focuses on the following principles:

- 1. Involuntary resettlement is avoided wherever feasible, or minimized, exploring all viable alternative project designs;
- 2. 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
- 3. 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 predisplacement 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.
- 4. 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.
- 5. However, in this specific project, OP 4.12 will not be applied for the repair and rehabilitation of this bridge as all repair and rehabilitation activities will be within the existing footprint and no additional land acquisition is needed either permanently or temporarily.

### Grievance Redress Mechanism

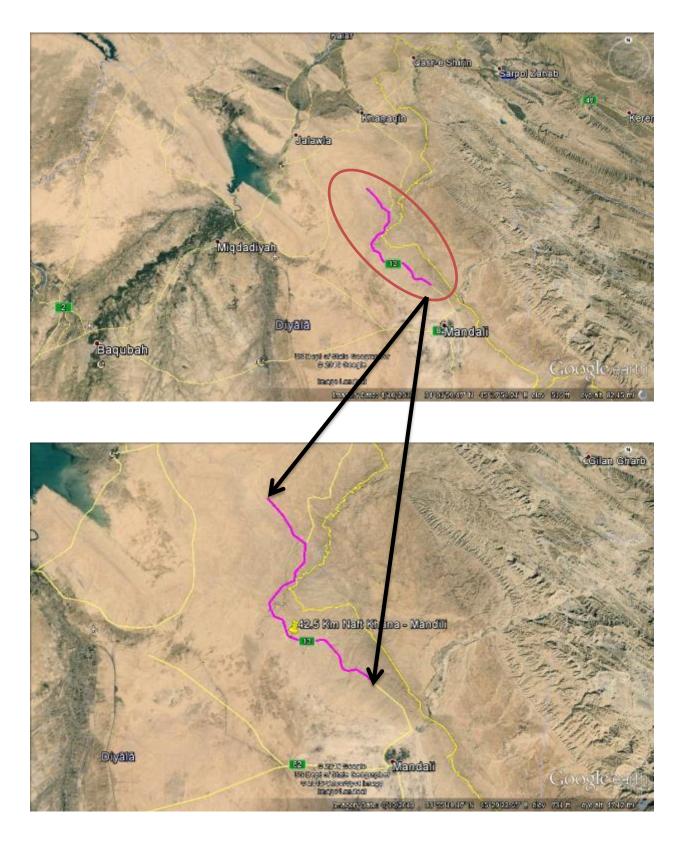
Bank procedures require that Grievance Redress Mechanisms (GRMs) be established and operational prior to commencement of the project, and that they continue to operate for one year following completion of the works for third party settlement of disputes arising from resettlement. This GRM should take into account the availability of judicial recourse as well as traditional and community dispute resolution mechanisms.

Accordingly, a GRM will be established at the project level to ensure any grievance can be addressed in an amicable manner. Resolving complaints at community level is always encouraged to address the problem that a person may during implementation and/or operational phase. 19

The project grievance redressed system should be developed in consultation with communities, which might include the following for written complaints:

- 1. First, the affected person sends his/her grievance in writing to the communities/community leaders. The grievance note should be signed and dated by the aggrieved person. Where the affected person is unable to write, s/he should obtain assistance from the community to write the note and mark the letter with his/her thumbprint. The community should respond within 14 days.
- 2. Second, if the aggrieved person does not receive a response or is not satisfied with the solution provided by the community, s/he lodges her or his grievance to PMT which should respond within 14 days.
- 3. Third, if the aggrieved person does not satisfied with the solution of PMT, s/he can go to the court.

In any case, the PMT must maintain records of grievances and complaints, including minutes of discussions, recommendations and resolutions made.



Location (using Google earth)

#### Annex 2: Occupational Health's' and Safety

The objectives of occupational health and safety (OHS) procedures plan that should be applied for the project are to:

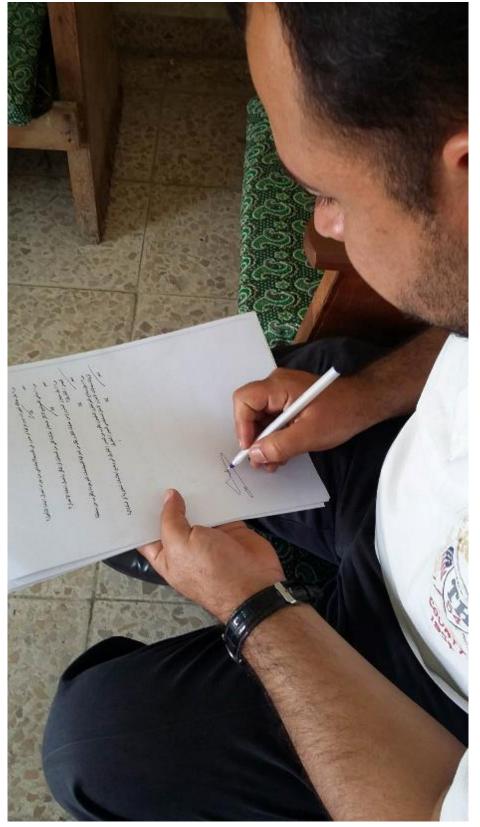
- 1. Develop, in the workplace, a collaborative approach to managing Occupational health and Safety between management and workers.
- 2. Provide and maintain safe working procedures and operations.
- 3. Ensure awareness of all potential work related risks and hazards and to develop preventive strategies against these risks and hazard.
- 4. Provide appropriate training to all concerned to work safely and effectively.
- 5. Maintain a constant and continuing interest in the improvement of occupational health and safety performance and to provide the required resources necessary for the implementation and maintenance of the OHS plan.

For the projects of the Rehabilitation of Civil Works Project, the occupational health and safety primarily focuses on work equipment and protective gear. The following section provides guidelines for work equipment, and safety and health signs.

#### Safety Guidelines for Work Equipment

- It is the Contractor's obligation that every possible measure is taken to ensure the safety of the work equipment made available to workers. During the selection of the work equipment the employer shall pay attention to the specific working conditions, which exist at the workplace, especially in relation to safety and health of workers. A brief list of work equipment safety issues is given below:
- 1. Work equipment control devices which affect safety must be clearly visible and identifiable and appropriately marked where necessary.
- 2. Work equipment presenting hazards due to emissions of gas, vapor, liquid or dust must be fitted with appropriate containment and/or extraction devices near the sources of the hazard.
- 3. Where there is a risk of mechanical contact with moving parts of work equipment, which could lead to accidents, those parts must be provided with guards or devices to prevent access to danger zones or to halt movements of dangerous parts before the danger zones are reached.
- 4. Work equipment may be used only for operations and under conditions for which it is appropriate.
- 5. Work equipment must bear the warnings and markings essential to ensure the safety of workers.
- 6. All work equipment must be appropriate for protecting workers against the risk of the work equipment catching fire or overheating, or of discharges of gas, dust, liquid, vapor or other substances produced, used or stored in the work equipment.
- 7. All work equipment must be appropriate for preventing the risk of explosion of the work equipment or of substances produced, used or stored in the work equipment.
- 8. All work equipment must be appropriate for protecting exposed workers against the risk of direct or indirect contact with electricity.
- 9. Mobile work equipment such as Bulldozer or Road Rollers with ride-on workers must be designed to restrict, under actual conditions of use, the risks arising from work equipment roll-over.
- 10. Fork-lift trucks carrying one or more workers must be adapted or equipped to limit the risk of the fork-lift truck overturning.

- 11. Self-propelled work equipment, such percussion drills, which may, when in motion, engender risks for persons must have facilities for unauthorized start-up.
- 12. Machinery for lifting loads, such as Crane, must be clearly marked to indicate its nominal load, and must where appropriate be fitted with a load plate giving the nominal load for each configuration of the machinery.
- 13. Work equipment must be erected or dismantled under safe conditions, in particular observing any instructions, which may have been furnished by the manufacturer.
- 14. First aid facilities must be available on site at all times.
- 15. All equipment is maintained in a safe operating condition.
- 16. Personal Protective Equipment (PPE) available for all construction staff. Helmets and safety shoes must be worn at all times and other PPE worn were necessary i.e. dust masks, ear plugs etc.
- 17. Adequate warning signs of hazardous working areas.
- 18. Emergency numbers for local police and fire department will be placed in a prominent area.
- 19. Firefighting equipment will be placed in prominent positions across the site where it is easily accessible. This includes fire extinguishers, a fire blanket as well as a water tank.
- 20. No open fires will be allowed on site.

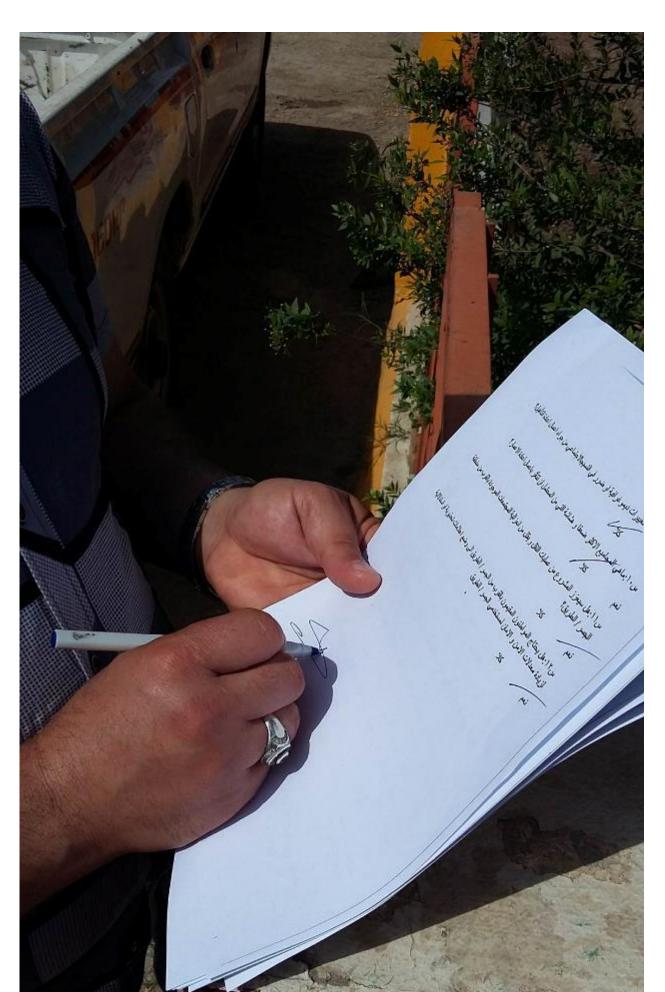


Annex 3: Consultation with the Public

الاسم: خلى عيل لم يدفي المهنة: حمير س 1 : هل تعتقد أن عملية أعادة بناء الجسر / الطريق له اثار ايجابية من الناحية الاجتماعية على السكان القاطنين في المناطق المحيطة بالجس / الطريق؟ C/2i NS س٢: هل هنالك ادعاءات أو مطالبات من قبل السكان المحليين بعائدية الأرض المقام عليها الجسر / الطريق؟ 135 نعم س٣ بسبب اعمال اعادة البناء للجسر / الطريق هل تمت عملية از الة لمحاصيل زراعية أو اشجار أو أي من . غطاء نباتي تعود عانديته لمواطنين أو السكان المحليين؟ 1/35 نعم من ٤: هل تضررت مصالح المواطنين القاطنين بالقرب من الجس / الطريق بسبب اعمال اعادة البناء؟ 135 نعم س٥: هل هنالك اي بني تحتية مؤقنة أو دائمية تلعب دور أ أساسيا في النشاطات الحياتية اليومية للسكان ستتأثر بعملية تاهيل الجسر / الطريق؟ 1 75 نعم س : هل ان اعمال اعادة اعمار الجسر / الطريق ستتسبب باجراءات اعادة لتوطين اشخص (و الو) الشخاص الى مناطق جديدة؟ 1 75 تعم س٢: هل تمت عملية استخدام منطقة بناء الجس / الطريق بطريقة ما من قبل السكان المحليين ، علما ان الارض تابعة الدولة؟ 1/ XS تعم ٥٠٠ هذا تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال اعادة التاهيل؟ماهى؟ 1×5 تعم

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CSS تعم ٣٠ أ: ماهي المجاميع الاكثر ضعفا و هشاشة التي من المحتمل أن تتأثر باعمال أعادة الاعمار؟ 1/25 نعم س١١: هل سيعزز المشروع من عمليات النقل و يقل من انعز الية المجتمعات الموجودة بالقرب من منطقة الجسر / الطريق؟ ( rei 25 س١٢ : هل يحتاج المواطنون المقيمون بالقرب من الجس / الطريق الى وضع اعلامات تحذيرية او استدلالية رلزيادة معدلات الامن و الامان لمستخدمي الجسر / الطريق . ZC 1/ pei eshe



الاسم: خالوعام محسى السينة: خلاج تاريخ الزيارة: ٢٠/ ٢٢٠ ٢ مدا: هل تعتقد أن عملية أعادة بناء الجس / الطريق له اثار أيجابية من الناحية الاجتماعية على السكان القاطنين في المناطق المحيطة بالجس / الطريق؟ نعم 25 1 س٢ : هل هذالك ادعاءات أو مطالبات من قبل السكان المحليين بعائدية الأرض المقام عليها الجس / الطريق؟ 25 نعم س٢: يسبب اعمال اعادة البناء للجسر / الطريق هل تمت عملية از الة لمحاصيل زر اعية أو أشجار أو أي عطاء نباتي تعود عانديته لمواطنين او السكان المحليين؟ . 21 نعم س؟: هل تضررت مصالح المواطنين القاطنين بالقرب من الجس / الطريق بسبب اعمال اعادة البناء؟ ZK نعم س و: هل هذاتك اي بني تحتية مؤقتة او دائمية تلعب دور ا اساسيا في النشاطات الحياتية اليومية للسكان ستتأثر بعملية تاهيل الجسر / الطريق؟ NS نعم س ٢ إهل إن اعمال اعادة اعمار الجس / الطريق منتسبب باجراءات اعادة لتوطين لشخص (و ١١) لاشخاص الى مناطق جديدة؟ 25 نعم س٧: هل تمت عملية استخدام منطقة بناء الجسر / الطريق بطريقة ما من قبل السكان المحليين ، علما ان الإرض تابعة للدولية؟ XS تعم س٨: هل تتوقع رجود تأثير ات اجتماعية سلبية بالمنطقة نتيجة اعمال اعادة التأهيل اماهي؟ Sic تعم

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س٩: هل هُنااللد تغيير ات ديمو غرافية أو ضرر في النسيجالاجتماعي من جراء اعمال اعادة التأهيل؟ XS نعم س ١٠ ماهي المجاميع الاكثر ضعفا و هشاشة التي من المحتمل ان تتأثر باعمال اعادة الاعمار ؟ 25 تعم س١١: هل سيعزز المشروع من عمليات النقل و يقلل من انعز الية المجتمعات الموجودة بالقرب من منطقة الجسر / الطريق؟ نعم / 25 س١٢: هل يحتاج المواطنون المتيمون بالقرب من الجسر / الطريق الى وضع اعلامات تحذيرية او استدلالية لزيادة معدلات الامن و الامان لمستخدمي الجسر / الطريق . تعم ZC



الاسم: إلى و حمير عمّا و المهنة: كا سمي تاريخ الزيارة: ١ -/ ٤/١ - ٢ مر ١ : هل تعتقد أن عملية أعادة بناء الجس / الطريق له أثار الجابية من الناحية الاجتماعية على السكان القاطنين في المناطق المحيطة بالجسر / الطريق؟ نعم / 25 س٢: هل هذاك ادعاءات او مطالبات من قبل السكان المحليين بعائدية الأرض المقام عليها الجسر / الطريق؟ 25 تعم س٣ : بسبب اعمال اعادة البناء للجس / الطريق هل تمت عملية از الة لمحاصيل زر اعية أو اشجار أو أي عطاء نباتي تعود عانديته لمواطنين او السكان المحليين؟ 2K تعم من 2: هل تضريرت مصالح المواطنين القاطنين بالقرب من الجس / الطريق بسبب اعمال اعلاة البناء؟ ZC نعم س و: هل هذالك اي بنى تحتية مؤقتة او دائمية تلعب دور ا اساسيا في النشاطات الحياتية اليومية للسكان سنتأثر بعملية تاهيل الجسر / الطريق؟ 1/35 ثعم س : إهل إن اعمال اعادة اعمار الجسر / الطريق ستنسبب باجراءات اعادة لتوطين لشخص (و الو ) لاشخاص الى مناطق جديدة؟ 1/25 تعم س٧: هل تمت عملية استخدام منطقة بناء الجسر / الطريق بطريقة ما من قبل السكان المحليين ، علما ان الارض تابعة للدولة؟ 1/ 35 تعم س٨: هل تتوقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال اعادة التأهيل؟ماهي؟ NS ( يعم

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س؟: هل هذالك تغييرات ديمو عرافية أو ضرر في النسيجالاجتماعي من جراء اعمال اعادة التأهيل؟ 155 نعم ص ١٠ ما مى المحاميع الاكثر ضعفا و هشاشة التي من المحتمل ان تقادر باعمال اعادة الاعمار ؟ 25 نعم س١١: هل سيعزز المشروع من عمليات النقل و يقل من انعز الية المجتمعات الموجودة بالقرب من منطقة الجر / الطريق؟ نعم 215 س١٢: هل يحتاج المواطنون المقيمون بالقرب من الجسر / الطريق الى وضع اعلامات تحذيرية أو استدلالية لزيادة معدلات الامن و الامان لمستخدمي الجمر / الطريق نعم . 215 1



الاسم: عاصر حاكم عمين المينة: صوطف تاريخ الزيارة: ١ × / ٢ / ٢ . ٢ س 1 : هل تعتقد ان عملية اعادة بناء الجسر / الطريق له اثار ايجابية من الناحية الاجتماعية على السكان القاطنين في المناطق المحيطة بالجسر / الطريق؟ تعم كلام س٢ : هل هذالله إدعاءات أو مطالبات من قبل السكان المطيبين بعاندية الأرض المقام عليها الجمر / الطريق؟ 1/25 تعم س٢ بسبب اعمال اعادة البناء للجسر / الطريق هل تمت عملية از الة لمحاصيل زر اعية أو أشجار أو أي غطاء نباتي تعود عانديته لمواطنين او السكان المطيين؟ 1/35 تعم من ٤: هل تضررت مصالح المواطنين القاطنين بالقرب من الجسر / الطريق بسبب اعمال اعادة البناء؟ CAS نعم س٥: هل هذالك أي بني تحتية مؤقتة أو دائمية تلعب دور ا أساسيا في النشاطات الحياتية اليومية لأسكان ستتأثر بعملية تاهيل الجسر / الطريق؟ 1/ XS ثعم س٢: إلى إن اعمال اعادة اعمار الجسر / الطريق ستتسبب باجراءات اعادة لتوطين لشخص (و الر) لاشخاص الى مناطق جديدة؟ 0 28 نعم س٧: هل تمت عملية استخدام منطقة بناء الجس / الطريق بطريقة ما من قبل السكان المحليين ، علما ان الارض تابعة للدولة؟ 25 نعم س٨: هل تترقع وجود تأثيرات اجتماعية سلبية بالمنطقة نتيجة اعمال اعادة التأهيل؟ماهي؟ 135 زعم

٣٠ : هل هذالك تغيير ات ديمو غرافية أو ضرر في النسيجالاجتماعي من جراء أعمال أعادة التأهيل؟ 55 نعم س ١٠ ماهي المجاميع الاكثر ضعفا و هشاشة التي من المحتمل ان تتأثر باعمال اعادة الاعمار؟ C 35 ثعم س١١: هل سيعزز المشروع من عمليات النقل و يقلل من انعزالية المجتمعات الموجودة بالقرب من منطقة الجر / الطريق؟ 215 نعر ب س١٢: هل يحتاج المواطنون المتيمون بالقرب من الجس / الطريق الى وضع اعلامات تحذيرية أو استدلالية لزيادة معدلات الامن و الامان لمستخدمي الجمر / الطريق Vrei . 25

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