REPUBLIC OF LEBANON

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

Consultancy Services For
Roads Routine Maintenance
And Rehabilitation of Remaining Roads
For Lot3 (Nabatieh, Marjayoun, West Bekaa, Rachaya, Hasbaya, Jezzine & Saida Cazas)

CDR Contract No. 20836

Additional Roads Rehabilitation in Bekaa West Caza

Environmental & Social Management Plan (ESMP)
Addendum
For The Rehabilitation of Remaining Roads in West Bekaa Caza

"Saghbine - Machghara" Road

October 2023

(آيـــس) المكتب الـهـنـدسـي الاسـتشـاري
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AASHTO	American Association of State Highway and Transportation Officials
ACE	Associate Consulting Engineers
CBD	Convention on Biological Diversity
CDR	Council of Development and Reconstruction
CO	Carbon Monoxide
CoM	Council of Ministers
EHS	Environmental, Health and Safety
ESMP	Environmental and Social Management Plans
GBV	Gender Based Violence
GM	Grievance Mechanism
IBA	Important Bird Area
ILO	International Labor Organization
LARI	Lebanese Agriculture Research Institute
MoE	Ministry of Environment
MoPWT	Ministry of Public Works and Transportation
NGOs	Nongovernmental Organizations
PIU	Project Implementation Unit
REP	Road and Employment Project
SEA	Sexual Exploitation and Abuse
UNFCCC	United Nations Framework Convention on Climate Change
VAC	Violence Against Children
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization

EXECUTIVE SUMMARY – NON-TECHNICAL SUMMARY

ES1. Introduction

An additional road in West Bekaa Caza was selected to be rehabilitated under the Lebanon Roads and Employment Project (REP).

- "Saghbine - Machghara" Road

Considering that the anticipated civil works will result in environmental and social impacts, ACE, the consultant, developed in this report a specific Environmental and Social Management Plan (ESMP) for this road. The aim is to reduce the footprint of REP's operations in concerned villages of West Bekaa.

This ESMP report is an addendum to the existing Bank-cleared ESMP report for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

ES2. Existing Policies, Legal and Administrative Framework

It should be noted that information on existing legislations, as well as other policy sections are documented in the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

ES3. Description of the Proposed Project

The rehabilitation works of this project will be undertaken to one road only located in West Bekaa Caza of the Bekaa Governorate with an estimated total length of 8 kilometers.

Determining the condition of the asphalt is important to assign the proper pavement rehabilitation activities. The pavement rehabilitation activities consist of either pavement maintenance or overlay on existing pavement or complete removal of deteriorated pavement and constructing a new one.

The proposed project also consists of other activities beside the pavement rehabilitation works. These activities consist of:

- Construction or improvement of drainage systems
- Construction or improvement of retaining walls
- Installing concrete safety barriers
- Marking lanes and stoppage line
- Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs
- Rehabilitating sidewalks

ES4. Baseline Environmental and Social Conditions

Topography, Geology, and Water Bodies

As per the topographical surveys results, the topographic characteristics of the proposed road that is located within West Bekaa Caza are as follows:

- Saghbine: 1,000 m above sea level (at start station)
- Machghara: 1,021 m above sea level (at end station)

The main geological formation within the selected road belongs to the Cretaceous and Jurassic periods. The road crosses the formations: C4-Sannine Limestone (Cenemonain age); C2b-Hammana Formation (Upper Aptian age) and J6-Bikfaya Formation (Oxfordian - Portlandian age).

The Caza of West Bekaa hosts the Qaraoun Reservoir, Ammiq Wetland and the Litani River No rivers or springs have been identified along or near the road. Local spring sources are discharging into the watercourse crossing the road: Ain El Jaouze, Ain El Dik, Ain El Aaqrabe, Ain Aazmine, Ain El Maghsel, Ain El Sammeq, Ain Aarbajye, Ain El Ghazel, Ain Iskandar and Ain Bou Channe.

Climate and Meteorology

The results of Saghbine and Machghara weather data conditions are used to describe the climate along this road.

- The lowest average temperature, which was 3°C was registered in January and February, while July and August has registered the highest average temperature of 28°C.
- Most rain events fall in the winter during the months of December and February (101 mm of precipitations). However, the driest months are July and August, with 0 mm of rain.
- The wind direction with the highest frequency within the village is from the west to east with a speed of greater than 5 km/h occurring most of the times (799 h/year). In addition, strong winds occur during winter mainly from November-October to January while periods of calm winds usually occur from February till October-September, for Saghbine and Machghara respectively.

Air Quality and Noise

The results of the long term monitoring for Lebanon simulation for NO_2 and PM10 showed that NO_2 annual concentration at West Bekaa Caza is around 4 $\mu g/m^3$ (below the WHO recommended value of 40 µg/m3 limit) whereas the annual PM10is around 33 $\mu g/m^3$ (above the WHO recommended value of 20 $\mu g/m^3$ limit).

Land Use/Land Cover

Major part of “Saghbine - Machghara” Road passes though agriculture areas and natural terrain (non-productive) while the other part passes through an urban area.

Biological Environment and Ecologically Sensitive Areas

Flora: During the site visits, no wild species were identified along “Saghbine - Machghara” Road.

Fauna: During the site visits, no wild animals including mammals and birds along the proposed road were observed. Moreover, the presence of grazing livestock was not noticed along the project road.

The Caza of West Bekaa hosts abundant water resources including the country’s largest dam and wetland: The Litani River, Qaraoun Lake and Ammiq wetland. However, Qaraoun Lake is located at around 5 and 7 Kilometers from Saghbine and Machghara respectively.

Demographic Profile

According to the Head of the Union of Municipalities of Al Bouhaira, the total number of Syrian and Palestinian refugees in the villages along the road does not exceed 50 people. No informal tented settlements were identified along the selected road.

Economic Activities and Infrastructure

Only two shops were identified along "Saghbine - Machghara" Road. Only two gas stations were identified near this Road. In addition: 1 hotel, 5 restaurants, 1 lounge and 1 bakery were identified along this road.

The main source of drinking water in West Bekaa is the non-piped water supply with 47.2% connectivity. As for the public electricity network, it was common in the Caza with 99.9% connectivity. Furthermore, 55.3% of dwellings rely on a private electricity source or owning a private generator.

Education

The Caza of West Bekaa has two universities, one public university and one private university. These universities are the Lebanese International University (LIU) in Khiara and the American University of Science and Technology (AUST). Moreover, the Bekaa Governorate also host several schools, including both public and private schools. No schools or universities were identified along this road.

Health Services

The Caza of West Bekaa includes Hamed Farhat Hospital, Al Manara Doctors Hospital and the West Bekaa Hospital. No hospitals or healthcare facilities were observed along this road.

Cultural Heritage

The Caza not only hosts historical sites, natural heritage and religious sites, but it also has vineyards, wineries, and famous cities such as Zahle and Ammiq which attract visitors across the country and even international tourists. The dam of the Qaraoun Lake is also a major tourist attraction. The beautiful valley and the landscape in the area have transformed the Caza's villages into touristic hubs. In addition, the Caza hosts Roman ruins in Dakoueh, Roman Shrine Qasr, Al Wali in Al Manara, Roman Palaces Remains and Caves in Bab Maraa, Mausoleum of Sheikh Mousafir and old Cave in Khirbit Kanafar. However, none of the above sites were identified along the road. Only two religious sites were identified along this road.

Summary of Baseline

Categories considered as sensitive receptors during road rehabilitation are schools, churches, hospitals, mosques, closest residential buildings and commercial shops, and other archeological features.

The sensitive receptors along the selected road in West Bekaa are Blue Lake Hotel and Restaurant Saghbine West Bekaa, scattered residential buildings, Bab Maraa Catholic Church, urban areas, Aitanit Municipality, St Georges Greek Melkite Church, Abou Ayman Clothes, BHC Hardware store and Afran Al Amir (Bakery).

ES5. Summary of Potential Environmental and Social Impacts during Rehabilitation Phase

Summary of Impacts during Rehabilitation Phase

Receptor	Impact Description	Rating	Mitigation Measure
Environmental			
Air, nearby communities and workers	Presence of explosive remnants of war (ERW) and/or unexploded ordinance (UXOs)	N	To seek official clearance letter from CDR before commencement of civil works
Air, nearby communities and workers	Air pollution from emissions of machinery, trucks or open burning activities Potential impact on: Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery)	N	Prepare and abide by **Pollution Prevention Plan** that includes: **Atmospheric Emissions and Dust Management Provisions (Annex 11)** Water the ground when extremely windy Mix material in an enclosed space Cover material when transporting Prepare and abide by Emergency Preparedness and Response Plan (Annex 11) Specific Measures Near Sensitive Receptors (Refer to Annex 10) Speed limit for project vehicles and machinery within working areas shall not exceed 20 Km/h Ensure optimal traffic routes as per the Traffic Management Plan (TMP) during construction. Use wet suppression in the dry season, where unpaved roads, the working strip, raw material stockpiles are located <200 m from settlements
Air, nearby communities	Dust pollution from rehabilitation and excavation activities Potential impact on: Same sensitive receptors as above	N	
Nearby communities and workers	Noise pollution a result of transportation or delivery of raw materials, trucks movement, concrete mixing, drilling, construction and operation of heavy vehicle movement such as excavators Potential impact on: Same sensitive receptors as above	N	Maintenance of vehicles and machinery Excavation and any other noisy activity only to be conducted during working hours In the case where it is absolutely necessary to conduct some activities outside the normal working hours (i.e. at night), prior approval of the concerned municipality and CDR will be obtained Set traffic speed limits in addition to speed reduction measures as per the approved TMP during construction Specific Measures Near Sensitive Receptors (Refer to Annex 10) Verify drivers' behavior during construction with respect to
Biodiversity and sensitive habitats	Disturbance of nearby areas and animal escape through noise and vibrations	N	

Receptor	Impact Description	Rating	Mitigation Measure
			driving speed indicated in the TMP in presence of flagmen and safety officers Plan vehicle routes to avoid complaints where possible
Water resources, soil, nearby communities	Contamination of groundwater from improper disposal of wastewater from workers and of wash water coming from cleaning of machines and equipment	N	Prepare and abide by **Pollution Prevention Plan** that includes: **Effluent Management Provisions** **Rainwater run-off Management Provisions (Annex 11)** Prepare and abide by Emergency Preparedness and Response Plan (Annex 11) On-site concrete pouring shall be done in a way to avoid leaching to nearby water bodies. Onsite mixing of concrete shall be performed at least 40 meters away from nearby water bodies Prohibit the disposal of excess concrete mix into the environment or near water bodies
Water resources, soil, nearby communities	Water pollution due to accidental spill of oils and chemicals from trucks and from transportation of chemicals and oils	N	Prepare and abide by a **Spill Prevention and Management Plan** under **Pollution Prevention Plan (Annex 11)** Minimize soil exposure time Minimize the use of chemicals Regular maintenance of vehicles Prepare and abide by **Waste Management Plan** and **Hazardous Materials Management Plan (Annex 11)** Prepare and abide by **Emergency Preparedness and Response Plan (Annex 11)** Fuel, oil or hazardous materials required to be temporarily stored onsite shall be stored within secondary containment located further than 100m from a watercourse or water body Fuel and hazardous chemical storage areas shall not be allowed within 30m of a minor watercourse, within 100m of a major watercourse, or where there is the potential for spilled fuel to enter groundwater Keep the area free of litter and garbage and prevent random disposal of waste Specific locations shall be
Water resources	Improper disposal of cut volume may cause contamination of water bodies in rainy weather	N	

Receptor	Impact Description	Rating	Mitigation Measure
			designated for consuming food and snacks away from sensitive receptors.
Water resources, soil, subsoil and land	Contamination of soil and groundwater bodies from the improper disposal of solid waste generated from workers and the used materials, construction waste from excavation and drilling activities	N	Prepare and abide by **Waste Management Plan (Annex 11)** Reuse or recycle the generated waste whenever possible • Reuse of excavation materials generated during cutting and filling activities whenever possible and disposal of remaining material in controlled disposal site to be identified by the contractor in coordination with the relevant municipalityPrepare and abide by Emergency Preparedness and Response Plan (Annex 11) Waste bins shall be located at a distance of over 100 m from any natural sensitive area or water bodies and over 500 m from any socioeconomic sensitive area
Energy resources	High consumption rates of electricity, fossil fuel, etc. contributing to overconsumption and depletion of fuel	N	Maintenance of the generators and trucks Light in the site offices shut down during the night Construction workers must be trained and provided with awareness sheets on efficient energy use Machinery and equipment must be turned off when not in use
Water resources	High consumption rates of water for construction related activities	N	Use water in the most efficient way and reduce wastage Regular site inspection to detect water leakages Whenever possible, use dry-cleaning instead wet cleaning Training and awareness should be raised to workers concerning water usage best practices and water conservation Proper disposal of construction waste
Water resources, soil, nearby communities	Reduction in overall ground and surface water quality due to improper disposal of construction waste	N	
Water resources, soil, subsoil and land	Depletion of natural resources due to the unsustainable extraction of borrowing material (sand, aggregates, …)	N	Ensure that the borrow material are extracted from legal sites Avoid agricultural lands, natural landscapes or forests to extract borrowing material
Biodiversity and sensitive habitats	Potential damage of existing flora Potential impact on:	N	Prepare and abide by **Pollution Prevention Plan (Annex 11)** In

Receptor	Impact Description	Rating	Mitigation Measure
	Olive, Peach, Apple, Cherry, Walnut, Fig, Vine and Almond trees Pine, Cypress, Oak, Mysa, Cedar, Eucalyptus, Willow trees Refer to Annex 2		case of any tree removal, ensure that the contractor will get a permit from the MoA
Social			
Local workers, socio-economic activities	Creation of job opportunities for local communities	P	Workers are paid their wages in full and on time
Nearby communities, socio-economic activities	Local garages will benefit from the equipment oil maintenance and residents will benefit from the rent fees of the offices and the equipment parking area.	P	
Shop owners/renters	Small snack shops and coffee stations are expected to benefit from workers buying food and drinks	P	
Foreign Workers	Temporary potential Labor Influx	N	Priority hiring to qualified local community GM for local communities (public notice including GM to be posted at relevant municipalities and on project sign boards)
Minimarket owners/renters/agriculture land owners	Economic Activities and its effect on the livelihood of the shop owners in the nearby communities Restrictions on using or accessing the road by local communities and road users	N	Install overpass structures from the road to the shops Maintain a passing corridor within the alignment to grant access to nearby properties Ensure that access to small snack and coffee stations is not blocked by installing wooden boards where necessary Inform the shops' owners ahead of time about maintenance date and coordinate with relevant municipalities Regularly inform road users and local communities in relation to changed traffic conditions or access Proper installation of sign boards in culturally appropriate languages that are clear and understandable to the public Timely completion of the rehabilitation activities Ensure access to external GM (public notice including GM to be posted at relevant municipalities and on project sign boards) Prepare and abide by Traffic Management Plan (Annex 10)

Receptor	Impact Description	Rating	Mitigation Measure
Foreign workers influx	Discrimination from the local community against the potential influx of foreign workers	N	Prevent discrimination at the workplace Conduct awareness campaigns for the local community regarding foreign workers influx Inform the local community that worker will sign code of conduct before starting the work GM for local communities and all relevant stakeholders
Locals and foreign, skilled and unskilled)	Possible unequal wage benefits between local and foreign workers	N	Ensure that all workers (locals and foreign, skilled and unskilled) shall be compensated and are contracted equally as per the scale of market price rates, have equal contractual benefits and working conditions, and have access to internal GM
Children and minors	Possible recruitment of children who are under the legal age as workers on the site, especially in the case of the day laborers as well as forced labor	2N	Daily registrations of workers and verification of their age to prevent child labor Abide by the National Labor Law Ensure the contractor is aware of the penalties that Labor Law imposes in the case of child labor Oblige the contractor to strictly abide by the Labor Law through the CDR tender documents that should include prohibition of child labor Ensure all workers attended awareness sessions and signed the Code of Conduct
Nearby communities, socio-economic activities	Disruption of local community to access services due to rehabilitation activities and temporal road closures	N	Prepare and abide by **Traffic Management Plan (Annex 11)** Traffic shall be secured via alternative routes to reach relevant destinations in case the works imply the temporary closure of this road Inform the local community about the location of detours, road blockages or diversions through public announcements and proper diversion signage Ensure access to external GM (public notice including GM to be posted at relevant municipalities and on project sign boards)
Existing infrastructure and nearby communities	Accidental Damage of existing infrastructure or planned interruption of utilities	N	Regular coordination with relevant municipalities Conducting trial pits

Receptor	Impact Description	Rating	Mitigation Measure
			Ensure proper communication with affected communities to alert them whenever planned/ accidental interruption of services happens Ensure access to external GM (public notice including GM to be posted at relevant municipalities and on project sign boards)
Nearby communities	Potential occurrence of gender-based violence and sexual exploitation and abuse incidents and all forms of GBV incidents	N	Draft Codes of Conduct and the guidelines for a GBV and VAC Action Plan Conduct training sessions for workers on Sexual Exploitation and Abuse and/or Sexual Harassment All workers should understand, and sign codes of conduct written in their native language Respond to the reported incidents of sexual abuse exploitation as a matter of priority Regular training on gender-based aspects, internal and external GM that includes an anonymous channel for protection of complainants' identity and confidentiality Availability of a GM with multiple channels to initiate a GBV complaint, which ensures confidential reporting with safe and ethical documenting of GBV cases, including Sexual Exploitation and Abuse and Sexual Harassment
Nearby communities, Hotel owner and visitors, Restaurants' owners, Shop owners Church visitors, residents near the road	Slight increase in traffic due to the transport of construction materials or due to the material that may fall Traffic congestion in the town due to temporal road closure Material falling from vehicles during transport may cause traffic accidents or congestion Potential traffic impact on: Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas	N	Prepare and abide by **Traffic Management Plan (Annex 11)** Ensure traffic is not blocked during transportation Inform residents and place signs near the working areas in culturally appropriate languages and written in clear and understandable manner Ensure communities have access to GM Cover transported material Abide by traffic regulations Operate well maintained vehicles

Receptor	Impact Description	Rating	Mitigation Measure
	Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery)		
	Same sensitive receptors as above		
	Same sensitive receptors as above		
Health and Safety			
Workers	Accident and injuries to workers and public because of rehabilitation activities	2N	Contractor to develop a site-specific and detailed **Public Health and Safety Plan and Occupational Health and Safety (Annex 11)** to be approved by CDR before commencement of civil works. • Identify all risks related to the site surroundings and planned activities as well as emergency situations. The Plan should include, at minimum: • Job Hazard Analysis • Work Permits • Stop Work Authority • Workers to wear proper safety gear (PPE) • Presence of first aid kits on the construction site • Inform residents and place signs near the working areas • Proper management of trucks and heavy machinery entering and exiting the construction site • Apply Best Applicable Practices on Road Safety
Nearby communities	Dust generation and noise may cause health related problems for workers and disturbance to residents Potential impact on: Same sensitive receptors as above	N	

Note 1: All risks, impacts and mitigation measures should be acknowledged by the awarded contractor. It is the ultimate responsibility of the contractor to identify further site-specific risks and impacts, based on the contractor's site reconnaissance and experience, and implement necessary

preventative and mitigation measures which shall be approved by the Employer or his designated representative onsite prior to proceeding with actual implementation.

Note 2: During the operation phase, all Environmental, Social and Health & Safety Activities impacts and their corresponding mitigation measures shall remain the same as detailed in the existing Bank-cleared ESMP report for West Bekaa Caza of 2020, that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

ES6. Environmental and Social Management and Monitoring Plans

It should be noted that information on the Monitoring Plan are documented in the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

ES7. Consultation, Disclosure and GM

A public hearing was held at the Union of Municipalities of Al Bouhaira on Thursday, April 27, 2023. The purpose of the hearing was to inform the stakeholders including the municipality representatives, local residents, the local NGOs and the public about the proposed project that will rehabilitate one road in West Bekaa Caza and its accompanying infrastructural works and to take into account their concerns and feedback. A total of 19 people participated in the meeting including six (6) women.

The public hearing opened with a word from ACE representative who introduced the overall project and its objectives and relevant organizations including CDR. The Consultant presented a description on the rehabilitation activities, purpose of the hearing, a summary of the ESMP process, and a list of potential environmental and social issues associated with implementation of rehabilitation activities. Participants were also informed that a GRM procedure has been developed for the project and were given contact information of the Project Consultant in order to inquire about it as well as the GM channels. The floor was then opened for discussion and questions. The proceedings which describe in detail the raised concerns and complaints by the participants and how all have been addressed are presented in this Addendum ESMP report.

1. INTRODUCTION

1.1 Project Background

The Lebanon REP is a World Bank (WB) funded project that aims to improve transport connectivity along select paved road sections and create short-term jobs for the Lebanese and Syrians. The REP was approved by the WB Board of Executive Directors in February 2017 and ratified by the Lebanese Parliament in October 2018.

The REP originally had three components. Following its restructuring in March 2021, a fourth component was added to address the impact of the COVID-19 on the agriculture sector.

- Roads Rehabilitation and Maintenance (US$178 million): to finance works and related consultancy services for the rehabilitation and maintenance of about 500 km of primary, secondary, and tertiary roads, including road safety and spot improvements;
- Improvement of the Ministry of Public Works and Transport's (MPWT) Road Emergency Response Capacity (US$4.5 million), especially during climate extremes;
- Capacity Building and Implementation Support (US$7.5 million): to build the capacity of Lebanese agencies in planning and managing the road sector; and
- Support to farmers engaged in crop and livestock production (US$10 million): to support continued agricultural production and vaccination of animals.

Accordingly, the REP ESMF was updated using an Addendum that can be found here https://www.cdr.gov.lb/getmedia/4254c2bd-3c63-4dfc-aeb7-dfb78eaada4f/REP-Component-4-ESMF_Vol-1_for-Disclosure_20210608.pdf.aspx

Under the first component, an additional road "Saghbine - Machghara" Road in West Bekaa Caza was selected to be rehabilitated under the Lebanon Roads and Employment Project (REP) as per COM Decision No. 74, dated 20/05/2022.

Considering that the anticipated civil works will result in environmental and social impacts, ACE, the consultant, developed in this report a specific Environmental and Social Management Plan (ESMP) for this road. The aim is to reduce the footprint of REP's operations in concerned villages of West Bekaa. This ESMP report is an addendum to the existing Bank-cleared ESMP report for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

1.2 Sub-Project Rationale

The objectives of Component 1, which is Roads Rehabilitation and Maintenance are to (1) Carry out a program of activities to rehabilitate, upgrade and maintain selected roads, including road safety and spot improvements ("Sub-projects") and (2) Provide technical assistance for the design, procurement and supervision of said Sub-projects and for preparation of Safeguards Instruments for the Project. This ESMP will only cover the rehabilitation of one additional road in Lot 3 in West Bekaa Caza:
"Saghbine - Machghara" (around 8 km)

1.3 Report Objectives

This Addendum to ESMP covers the envisaged rehabilitation works for one additional new road in West Bekaa Caza to be rehabilitated under REP: "Saghbine - Machghara" Road with an estimated total length of 8 km.

The main aim of this ESMP Addendum is to provide the control measures required to manage and monitor the Environmental, Social, and Occupational Health and Safety (ESOHS) risks in accordance with the Lebanese laws and WB safeguard policies (mainly OP 4.01 - Environmental Assessment).

1.4 Methodology

This ESMP Addendum was prepared by ACE as a fulfillment of the environmental and social requirements stated in component 1 of REP.

This present report will be used as an addendum to the existing Bank-cleared ESMP report for West Bekaa Caza of 2020 that is available on CDR Website via the following link: https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

The methods used for setting the data collection, stakeholders' engagement, and impact assessment in this sub-project follow the same procedure adopted in the existing Bank-cleared parent ESMP report for West Bekaa Caza of 2020. These methods are elaborated in Annex 1.

2. POLICY, LEGAL & ADMINISTRATIVE FRAMEWORK

It should be noted that information on existing legislations, as well as other policy sections are documented in the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link, and no updates have been introduced to the national legal framework since then:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

3. DESCRIPTION OF THE PROPOSED PROJECT

This chapter covers the rehabilitation works for one additional road in Lot 3 in West Bekaa Caza which is:

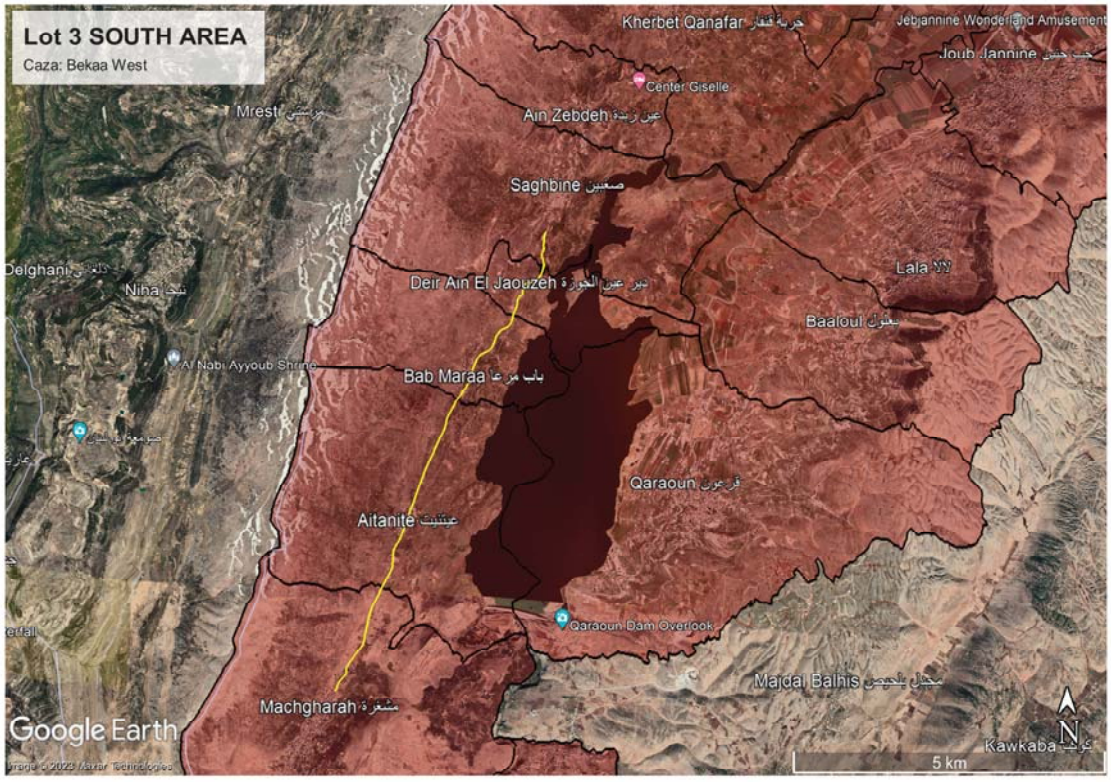
- "Saghbine - Machghara" Road (around 8 km)

3.1 Location

The rehabilitation works of this project will be undertaken to one road only located in West Bekaa of the Bekaa Governorate “Saghbine - Machghara" Road with an estimated total length of 8 km.

This road starts at Saghbine village at Station 0+000, passes through Deir Ain El Jaouzeh, Bab Maraa, Aitanite villages respectively and ends at Machgharah village at station 8+500. Figure 3-1 shows an overview of the road location.

Figure 3-1: Overview of Location of “Saghbine - Machghara” Road in West Bekaa Caza



3.2 Project Activities

3.2.1 Rehabilitation Works

Determining the condition of the asphalt is important to assign the proper pavement rehabilitation activities. The pavement rehabilitation activities consist of three activities depending on the asphalt condition: either (1) pavement maintenance or (2) overlay on existing pavement or (3) complete removal of deteriorated pavement and constructing a new one.

An estimated 80% of the works to be executed within this project fall under the following pavement related types of activities:

- A- Patching
- B- Milling and Overlay
- C- Pavement Total Reconstruction.

The phases for the main three activities are detailed below:

A- Phases of Construction for a stretch of road that needs: Pavement Patching

A.1- Saw-cut existing pavement in a rectangular shaped area where pavement distresses are located as per tender drawings and specifications.

A.2- Remove asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor.

A.3- Examine the exposed pavement structure under the removed asphalt using proper testing for base course and sub-base course layers as well as the subgrade level & material.

A.4- Remove and replace or repair under asphalt layers as per technical assessments and recommendations.

A.5- Execute asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface.

B- Phases of Construction for a stretch of road that needs: Milling & Overlay

B.1- Contractor to proceed with the milling activity as described in the tender document with regards to the thicknesses of existing asphalt to be milled.

B.2- New surface of asphalt obtained after milling shall be cleaned from all debris and dust with the use of mechanical road sweepers and water jets.

B.3- Tack coat will be sprayed on the newly prepared clean surface of existing asphalt.

B.4- Asphalting activity will take place using the right thickness of the new asphalt layer as per the design/tender documents. Such activity includes spreading asphalt as well as compaction of the new layer.

C- Phases of Construction for a stretch of road that needs: Pavement Total Reconstruction

C.1- Scrape and remove asphalt layer(s) to reach base course level.

C.2- Excavate and remove the sub-base and base course layers to reach subgrade level.

C.3- Prepare sub-grade surface after making sure by soil tests that reached subgrade level is suitable to receive pavement structure. If not, unsuitable material to be replaced by suitable borrow fill and compacted to reach required compaction percentage.

C.4- Execute sub-base/base course layers as per specifications and thicknesses according to tender documents. Compact sub-base/base-course layers to reach required compaction level/percentage.

C.5- Spray prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s).

C.6- Spread and compact asphalt binder course layer(s) as per the thicknesses and specifications specified in tender documents.

C.7- Spray tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer.

C.8- Spread and compact asphalt wearing course layer as per the required specifications and thicknesses).

The proposed project also consists of other activities beside the pavement rehabilitation works. These activities consist of:

- Installing concrete safety barriers

- Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs
- Marking lanes and stoppage line
- Rehabilitating sidewalks
- Construction or improvement of drainage systems
- Construction or improvement of retaining walls; stones (where existing) shall be reinstated after rehabilitation works are over to preserve the cultural aspect.

The details of the project activities, as well as the phases of construction for each activity of the rehabilitation works are elaborated in Annex 1.

3.3 Staff, Materials & Equipment

The total number of workers for the overall road/project, as well as the required main materials and equipment for the rehabilitation of the proposed road and its associated works, shall be based on the total volume of each activity as per the bill of quantities of the tender documents, as well as the independent assessment of the awarded Contractor subject to the project duration (estimated 7 months) and the planner's effort to produce a relevant program of work to cover all project activities. Therefore, the total number will be deduced accordingly. It is assumed that an estimate total number of workers shall range between 100 and 150, to be mostly hired from the local communities with a potential influx of workers.

The details of this section are elaborated in Annex 1.

3.4 Site Facilities

The Project site will not include any facilities on-site including site offices for Engineers and for the Contractor, laborers camps, lodging on site, containers, power generators and repair garages.
As detailed in the existing Bank-cleared parent ESMP report for West Bekaa Caza of 2020 (published before); that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

During the work implementation, the Contractor will have to rent a flat located in the Project area to serve as a Project Offices. These offices will be used by the Contractor Engineers, technical skilled workers and Supervising Consultants. The flat will be equipped with toilet, kitchen (including drinking water and appliances), lockers and other supplies needed for the daily administrative activities. It might also serve as a meeting point for all Project workers at the start and end of their shifts.

The work implementation will also require unskilled workers (laborers) needed to perform earthworks on-site. The Contractor will be encouraged to hire laborers from the local community living in the Project area in order to prevent labor influx. Yet, if not all required labor skills area is available locally in the project region, then the Contractor will be obliged to hire laborers from other regions. This may generate a potential labor influx. This option should be kept to the minimum to the extent possible by the Contractor. Hence, there will be no labor camps. During working hours, laborers will be entitled with a one-hour break on-site. Usually, every laborer brings from home his own food and drinking water. The on-site rest point will be decided by the Contractor at the time of works.

The Contractor will have to service the site with portable cabin toilet. The porta cabin will be mobile and its placement depends on the length of the work zone. Accordingly, the Contractor will have to move it based on the progress of rehabilitation works. The Contractor should link the porta cabin toilet to the existing wastewater network. In case the network is not available within the work zone, the Contractor will need to link it to a polyethylene storage tank and the Supervising Consultant shall inspect it on a regular basis and ensure the application of proper mitigation measures.

For vehicles and equipment, the Contractor will have to rent a land within the Project area. This land should be fenced and used for parking purpose only. In the event that the residences/ communities surrounding the land (that will be rented for vehicles and equipment) will be affected, then, they will be consulted and the GRM will be communicated with them and the signs installed at the rented sites, clearly visible. All consultations shall be documented and CDR PMU shall be informed. The Contractor shall not perform any repair on site and is obliged to execute vehicles and equipment maintenance in a repair shop preferably located within the Project area.

4. DESCRIPTION OF THE ENVIRONMENT AND SOCIAL CONTEXT

This chapter presents the environmental and social baseline and settings related to the below Road only.

- "Saghbine - Machghara" Road (around 8 km)

4.1 Physical Environment

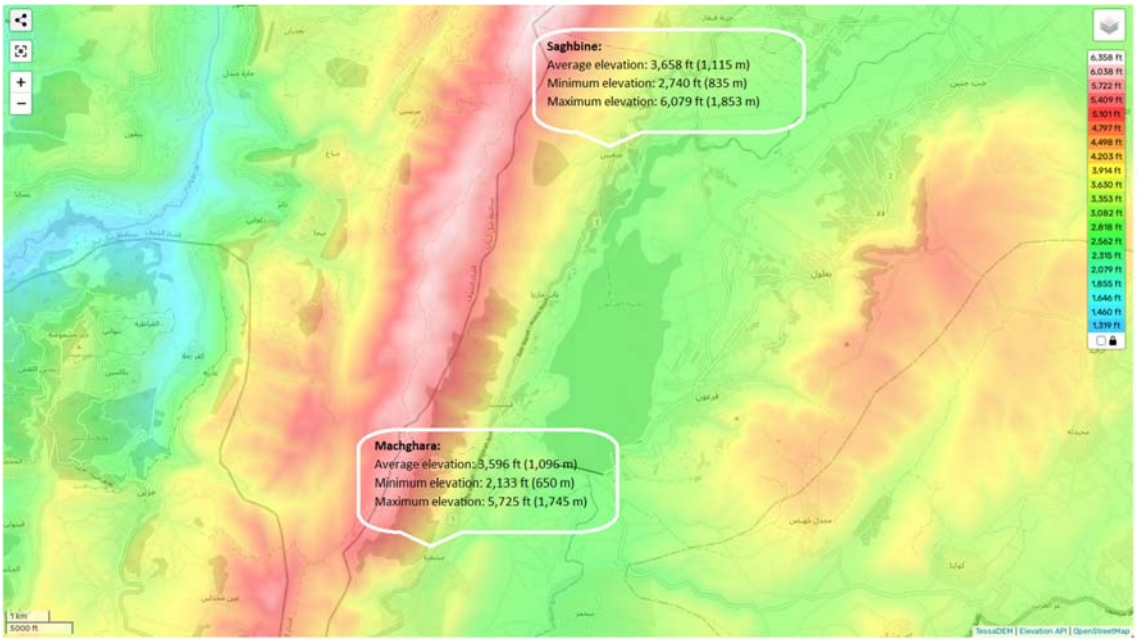
It should be noted that detailed information on the physical environment of West Bekaa Caza are documented in the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx
All relevant information related to the additional road only, which is the subject of this addendum to the ESMP, are elaborated in the sections below.

4.1.1 Topography

As per the topographical surveys results, the topographic characteristics of the proposed road that is located within West Bekaa Caza are as follows:

- Saghbine: 1,000 m above sea level (at start station)
- Machghara: 1,021 m above sea level (at end station)

Figure 4-1: Topography Map for Saghbine and Machghara



Source: Topographic-map, website, 2023

4.1.2 Geology

The geological formations of the proposed road that is located within the Caza of West Bekaa are presented in Annex 4 (Figure 1). Based on the geological map, the main geological formation within the selected road belongs to the Cretaceous and Jurassic periods.
The road crosses the formations:

- Sannine Limestone, of Cenemonain age unit (C4); this unit is divided into three subunits namely:
  - Dolomitic Limestone (C4a): this formation is characterized by geodes of different sizes filled or voided and a thickness of about 300 meter. Within this unit Ammonites and fish fossils were found.
  - Bluish marl and shale (C4b): this formation contains crystals of quartz, chert nodules and bands form. The thickness of this unit is in the range of 80-100 meter
  - Limestone and dolomitic limestone (C4c): The Limestone of this unit is highly karstifie. The color of this formation is white to brown and its thickness is about 300 meter.
- Hammana Formation, of Upper Aptian age unit (C2b): Marl intercalated with marly Limestone with thick layers of Sand on top; layers of ferro-oolitic limestone sometimes overlie the sand. This formation can reach 20 meter in thickness.
- Bikfaya Formation, of Oxfordian - Portlandian age unit (J6): consists of massive limestone (light gray to beige) rocks containing quartzitic veins and siliceous concretious. They are highly porous, permeable, and deeply carstified.

4.1.3 Water Bodies

. No rivers or springs have been identified along or near the road. Local spring sources are discharging into the watercourse crossing the road: Ain El Jaouze, Ain El Dik, Ain El Aaqrabe, Ain Aazmine, Ain El Maghsel, Ain El Sammeq, Ain Aarbajye, Ain El Ghazel, Ain Iskandar and Ain Bou Channe. A hydrology map showing the location of the road is presented in Annex 5.

4.1.4 Climate and Meteorology

The results of Saghbine and Machghara weather data conditions are used to describe the climate along this road.

4.1.4.1 Temperature

The lowest average temperature, which was 3°C was registered in January and February, while July and August has registered the highest average temperature of 28°C. (Figures 1 and 3 of Annex 6 - Meteoblue website, 2023).

4.1.4.2 Precipitation

Most rain events fall in the winter during the months of December and February (101 mm of precipitations). However, the driest months are July and August, with 0 mm of rain (Figures 1 and 3 of Annex 6 - Meteoblue website, 2023).

4.1.4.3 Wind

The wind rose in Saghbine indicates that the wind direction with the highest frequency within the village is from the west to east with a speed of greater than 5 km/h occurring most of the times (799 h/year). In addition, strong winds occur during winter mainly from November to January while

periods of calm winds usually occur from February till October (Figure 2 of Annex 6 - Meteoblue website, 2023).

As for the wind rose in Machghara, it indicates that the wind direction with the highest frequency within the village is from the west to east with a speed of greater than 5 km/h occurring most of the times (799 h/year). In addition, strong winds occur during winter mainly from October to January while periods of calm winds usually occur from February till September (Figure 4 of Annex 6 - Meteoblue website, 2023).

4.1.5 Air Quality

The modelled annual concentration map showed that NO_2 annual concentration at West Bekaa Caza is around 4 µg/m^3 (below the WHO recommended value of 40 µg/m^3 limit) whereas the annual PM_{10} is around 33 µg/m^3 (above the WHO recommended value of 20 µg/m^3 limit) (Abdallah et al., 2018). The results for Lebanon simulation for NO_2 and PM_{10} are shown in Annex 7.

4.1.6 Land Use/Land Cover

Major part of "Saghbine - Machghara" Road passes through agriculture areas and natural terrain (non-productive) mostly coniferous and some broadleaved trees, while the other part passes through an urban area. The Land Use/Land Cover (LU/LC) identified along the road is presented in LU/LC map in Annex 8.

The following land use/land cover were identified along and near Saghbine - Machghara" Road:

- Olive, Peach, Apple, Cherry, Walnut, Fig, Vine and Almond trees
- Urban area with scattered residential buildings
- Pine, Cypress, Oak, Mysa, Cedar, Eucalyptus, Willow trees

4.2 Biological Environment

4.2.1 Flora

During the site visits, no wild species were identified along "Saghbine - Machghara" Road.
As mentioned in Section 4.1.6, Olive, Peach, Apple, Cherry, Walnut, Fig, Vine and Almond trees, as well as Pine, Cypress, Oak, Mysa, Cedar, Eucalyptus, Willow trees were identified along this road.

4.2.2 Fauna

During the site visits, no wild animals including mammals and birds along the proposed road were observed. Moreover, the presence of grazing livestock was not noticed along the project road.

4.2.3 Ecologically Sensitive Areas

The Caza of West Bekaa hosts abundant water resources including the country's largest dam and wetland: The Litani River, Qaraoun Lake and Ammiq wetland. However, Qaraoun Lake is located at around 5 and 7 Kilometers from Saghbine and Machghara respectively.

4.3 Socio Economic Environment

It should be noted that detailed information on the socio-economic environment of West Bekaa Caza are documented in the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx
All relevant information related to the additional road only, which is the subject of this addendum to the ESMP, are elaborated in the sections below.

4.3.1 Demographic Profile

According to the Head of the Union of Municipalities of Al Bouhaira, the total number of Syrian and Palestinian refugees in the villages along the road does not exceed 50 people. No informal tented settlements were identified along the selected road.
The Informal Settlements that are included in West Bekaa Caza are represented in Annex 9.

4.3.2 Economic Activities and Infrastructure

Two shops were identified along "Saghbine - Machghara" Road, these are Abou Ayman Clothing at Sta. 7+350 and BHC Hardware store at Sta. 7+600. (Annex 2)
Two gas stations were identified near this Road: Al Ferzli Gas Station at Sta. 4+400 and Mobil Gas Station at Sta.7+550. (Annex 2)
In addition: 1 hotel, 5 restaurants, 1 lounge and 1 bakery were identified along this road as follows:
Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa
Sta. 0+760: S Cape Lounge & Restaurant (restaurant)
Sta. 0+960: Chalet du Lac (restaurant)
Sta. 1+180: Joubran Lebanese (restaurant)
Sta. 1+570: Masay Lounge (restaurant)
Sta. 5+760: Restaurant Loulouat Al Bouhaira
Sta. 7+660: Afran Al Amir (Bakery)
Sta. 7+890: Restaurant Karm Al Hawa

4.3.3 Education Services

The Caza of West Bekaa has two universities, one public university and one private university. Both universities mainly offer business and science majors with 50% of the students graduating in the fields of business or engineering. These universities are the Lebanese International University (LIU) in Khiara and the American University of Science and Technology (AUST) in Joub Jannine. Moreover, the Bekaa Governorate also host several schools, including both public and private schools, but not limited to: Saghbine Secondary Public School, Al Mokhalless Secondary Public School – Saghbine, Saint Coeur School Machghara and Machghara Secondary Public School No schools or universities were identified along this road.
The illiteracy rate in West Bekaa Caza is 8.3% higher than the national level which is 7.4%. Illiteracy is concentrated at high age groups (65+ years) was 31.9 % with 45% mainly among women while the rate for the men is 17.2% (CAS, 2020).

4.3.4 Health Services

The Caza of West Bekaa includes Hamed Farhat Hospital, Al Manara Doctors Hospital and the West Bekaa Hospital. Machghara hosts Taakhi Medical Center, None of these facilities were observed

along the selected road. The residents of West Bekaa Caza who benefit from at least one type of health insurance make 44.8%. Health coverage for woman is 44.8% while it is almost at the same rate at 44.9% for men in this region. These numbers show that health coverage in West Bekaa Caza is lower than the national level for woman and men with respectively 56.2% and 54.9%. The National Social Security Fund are found to be the main source of health coverage in this region (CAS, 2020).
No hospitals or healthcare facilities were observed along this road.

4.3.5 Cultural Heritage

The Caza of West Bekaa is rich in eco-tourism. The Caza not only hosts historical sites, natural heritage and religious sites, but it also has vineyards, wineries, and famous cities such as Zahle and Ammiq which attract visitors across the country and even international tourists. The dam of the Qaraoun Lake is also a major tourist attraction. The beautiful valley and the landscape in the area has transformed the Caza's villages into touristic hubs with several hotels which welcome visitors to spend a few days in the area. In addition, the Caza hosts Roman ruins in Dakoueh, Roman Shrine Qasr, Al Wali in Al Manara, Roman Palaces Remains and Caves in Bab Maraa, Mausoleum of Sheikh Mousafir and old Cave in Khirbit Kanafar (MoT, 2011). However, none of the above sites were identified along the selected road. Only two religious sites were identified along "Saghbine - Machghara" Road, these are: Bab Maraa Catholic Church at Sta. 3+200 and St Georges Greek Melkite Church near Sta. 5+800. (refer to map in Figure 4-2 and photographs in Annex 2).

4.3.6 Road Sensitive Receptors

Categories considered as sensitive receptors during road rehabilitation are schools, churches, hospitals, mosques, closest residential buildings and commercial shops, and other archeological features.

The sensitive receptors along the selected road in West Bekaa are located at the following stations:

- Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa
- Sta. 2+860 to Sta. 3+200: scattered residential buildings
- Sta. 3+200: Bab Maraa Catholic Church
- Sta. 5+500 to Sta. 6+100: urban areas
- Sta. 5+720: Aitanit Municipality
- Near Sta. 5+800: St Georges Greek Melkite Church
- Sta. 7+350: Abou Ayman Clothes
- Sta. 7+600: BHC Hardware store
- Sta. 7+660: Afran Al Amir (Bakery)

Figure 4-2: Map showing the road sensitive receptors along the Road

5. ENVIRONMENTAL AND SOCIAL IMPACT ANALYSIS AND MITIGATION

This section describes the potential anticipated positive and negative environmental and social impacts associated with the rehabilitation of the selected road "Saghbine - Machghara" to be executed in West Bekaa Caza and proposes measures for their mitigation.

5.1 Assessment Methodology

The evaluation of potential environmental and social impacts was based on relevant scientific evidence, literature review and the professional judgment of the Consultant. The impact assessment approach that was applied is as follows:

- Identification of project-related activities (during both phases) and environmental and social aspects;
- Determination of potential impacts on the natural and man-made environment that might arise from these activities;
- Assessment and evaluation of potential impacts based on the criteria set out in the Environmental and Social Management Framework of the project.

As such, impacts will be weighted on the scale of P, 2P, O, N, 2N to signify Positive, strongly Positive, Neutral, Negative, and Strongly Negative impacts respectively.

5.2 Potential Positive Impacts during Rehabilitation

The rehabilitation of roads in West Bekaa Caza is considered as an economic opportunity for the selected contractor and their subcontractors. Local businesses may benefit from rehabilitation activities through selling raw materials, equipment, machinery and goods and the project will create jobs and could hire labors from the local community (Lebanese and Syrian). For example, the two gas stations that are located along “Saghbine - Machghara” Road may potentially benefit from the rehabilitation activities. In addition, local garages will benefit from increased business in vehicle and equipment maintenance. The potential influx of workers will also increase economic activity in the area as they will likely purchase their daily requirements from the surrounding shops. This will have a ripple effect within the communities where the roads will be maintained. This impact is, however, temporary and jobs will be discontinued as soon as maintenance works are complete.

As such this impact on economic activity in the region is considered as a positive impact (P).

5.3 Impacts and Mitigation during Rehabilitation Activities

Table 5-1 presents the general positive and negative impacts that might arise from all rehabilitation activities during the execution of works.

Table 5-1: Environmental and Social Impacts during Rehabilitation Activities

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
Environmental				
Air, nearby communities and workers	Saw-cutting of existing pavement Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Removing and replacing or repair under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course layers to reach required compaction level/percentage. Spraying prime coat over the prepared and leveled surface of base	Presence of explosive remnants of war (ERW) and/or unexploded ordinance (UXOs)	N	To seek official clearance letter from CDR before commencement of civil works

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compact asphalt wearing course layer.			
Air, nearby communities and workers	Same as above	Air pollution from emissions of machinery, trucks or open burning activities Potential impact on: Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery)	N	Prepare and abide by **Pollution Prevention Plan** that includes: **Atmospheric Emissions and Dust Management Provisions (Annex 11)** Water the ground when extremely windy Mix material in an enclosed space Cover material when transporting Prepare and abide by Emergency Preparedness and Response Plan (Annex 11) Speed limit for project vehicles and machinery within working areas shall not exceed 20 Km/h Ensure optimal traffic routes as per the Traffic Management Plan (TMP) during construction. Use wet suppression in the dry season, where unpaved roads, the working strip, raw material stockpiles are located <200 m from settlements

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
Air, nearby communities		Dust pollution from rehabilitation and excavation activities Potential impact on: Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery)	N	
Nearby communities and workers		Noise pollution a result of transportation or delivery of raw materials, trucks movement, concrete mixing, drilling, construction and operation of heavy vehicle movement such as excavators Potential impact on: Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200:	N	Maintenance of vehicles and machinery Excavation and any other noisy activity only to be conducted during working hours In the case where it is absolutely necessary to conduct some activities outside the normal working hours (i.e. at night), prior approval of the concerned municipality and CDR will be obtained Set traffic speed limits in addition to speed reduction measures as per the

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
		scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery)		approved TMP during construction Verify drivers' behavior during construction with respect to driving speed indicated in the TMP in presence of flagmen and safety officers Plan vehicle routes to avoid complaints where possible
Biodiversity and sensitive habitats		Disturbance of nearby areas and animal escape through noise and vibrations	N	
Water resources, soil, nearby communities	Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Executing asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface Cleaning new surface of asphalt	Contamination of groundwater from improper disposal of wastewater from workers and of wash water coming from cleaning of machines and equipment	N	Prepare and abide by **Pollution Prevention Plan** that includes: **Effluent Management Provisions** **Rainwater run-off Management Provisions (Annex 11)** Prepare and abide by Emergency Preparedness and Response Plan (Annex 11) On-site concrete pouring shall be done in a way to avoid leaching to nearby water bodies. Onsite mixing of concrete shall be performed at least 40 meters away from nearby water bodies

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spraying tack coat on the newly prepared clean surface of existing asphalt Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compacting asphalt wearing course layer Installing concrete safety barriers Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs Rehabilitating sidewalks			Prohibit the disposal of excess concrete mix into the environment or near water bodies

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	Construction or improvement of drainage systems Construction or improvement of retaining walls			
Water resources, soil, nearby communities	Saw-cutting of existing pavement Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Removing and replacing or repair under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course layers to reach required compaction level/percentage. Spraying prime coat over the	Water pollution due to accidental spill of oils and chemicals from trucks and from transportation of chemicals and oils	N	Prepare and abide by a **Spill Prevention and Management Plan** under **Pollution Prevention Plan (Annex 11)** Minimize soil exposure time Minimize the use of chemicals Regular maintenance of vehicles Prepare and abide by **Waste Management Plan** and **Hazardous Materials Management Plan (Annex 11)** Prepare and abide by **Emergency Preparedness and Response Plan (Annex 11)** Fuel, oil or hazardous materials required to be temporarily stored onsite shall be stored within secondary containment located further than 100m from a watercourse or water body Fuel and hazardous chemical storage areas shall not be allowed within 30m of a minor watercourse, within 100m of a major watercourse, or where there is the potential for spilled fuel to enter groundwater Keep the area free of litter and garbage and prevent random disposal of waste Specific locations shall be designated for consuming food and snacks away from sensitive receptors.
Water resources		Improper disposal of cut volume may cause contamination of water bodies in rainy weather	N	

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compact asphalt wearing course layer..			
Water resources, soil, subsoil and land	Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Executing asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface Cleaning new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spraying tack coat on the newly prepared clean surface of existing asphalt	Contamination of soil and groundwater bodies from the improper disposal of solid waste generated from workers and the used materials, construction waste from excavation and drilling activities	N	Prepare and abide by **Waste Management Plan (Annex 11)** Reuse or recycle the generated waste whenever possible: Reuse of excavation materials generated during cutting and filling activities whenever possible and disposal of remaining material in controlled disposal site to be identified by the contractor in coordination with the relevant municipality Prepare and abide by Emergency Preparedness and Response Plan (Annex 11) Waste bins shall be located at a distance of over 100 m from any natural sensitive area or water bodies and over 500 m from any socioeconomic sensitive area
Energy resources		High consumption rates of electricity, fossil fuel, etc. contributing to overconsumption	N	Maintenance of the generators and trucks Light in the site offices shut down during the night

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compacting asphalt wearing course layer Installing concrete safety barriers Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs Rehabilitating sidewalks Construction or improvement of drainage systems Construction or improvement of retaining walls	and depletion of fuel		Construction workers must be trained and provided with awareness sheets on efficient energy use Machinery and equipment must be turned off when not in use
Water resources		High consumption rates of water for construction related activities	N	Use water in the most efficient way and reduce wastage Regular site inspection to detect water leakages Whenever possible, use dry-cleaning instead wet cleaning Training and awareness should be raised to workers concerning water usage best practices and water conservation Proper disposal of construction waste
Water resources, soil, nearby communities		Reduction in overall ground and surface water quality due to improper disposal of construction waste	N	
Water resources, soil, subsoil and land		Depletion of natural resources due to the unsustainable extraction of borrowing material (sand, aggregates, …)	N	Ensure that the borrow material are extracted from legal sites Avoid agricultural lands, natural landscapes or forests to extract borrowing material
Biodiversity and sensitive	Saw-cutting of existing pavement	Potential damage of existing flora	N	Prepare and abide by **Pollution Prevention Plan (Annex 11)** In case of any

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
habitats	Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Removing and replacing or repair under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course layers to reach required compaction level/percentage. Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly	Potential impact on: Olive, Peach, Apple, Cherry, Walnut, Fig, Vine and Almond trees Pine, Cypress, Oak, Mysa, Cedar, Eucalyptus, Willow trees Refer to Annex 2		tree removal, ensure that the contractor will get a permit from the MoA

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compact asphalt wearing course layer.			
Social				
Local workers, socio-economic activities	Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Executing asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface Cleaning new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spraying tack coat on the newly prepared clean surface of existing asphalt Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt	Creation of job opportunities for local communities	P	Workers are paid their wages in full and on time
Nearby communities, socio-economic activities		Local garages will benefit from the equipment oil maintenance and residents will benefit from the rent fees of the offices and the equipment parking area.	P	
Shop owners/renters		Small snack shops and coffee stations are expected to benefit from workers buying food and drinks	P	
Foreign Workers		Temporary potential Labor Influx	N	Priority hiring to qualified local community GM for local communities (public notice including GM to be posted at relevant municipalities and on project sign boards)

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compacting asphalt wearing course layer Installing concrete safety barriers Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs Rehabilitating sidewalks Construction or improvement of drainage systems Construction or improvement of retaining walls			
Minimarket owners/renters/agriculture land owners	Saw-cutting of existing pavement Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air	Economic Activities and its effect on the livelihood of the shop owners	N	Install overpass structures from the road to the shops Maintain a passing corridor within the alignment to grant access to nearby properties

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	compressor. Removing and replacing or repair under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course layers to reach required compaction level/percentage. Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer.			Ensure that access to small snack and coffee stations is not blocked by installing wooden boards where necessary Inform the shops' owners ahead of time about maintenance date and coordinate with relevant municipalities Regularly inform road users and local communities in relation to changed traffic conditions or access Proper installation of sign boards in culturally appropriate languages that are clear and understandable to the public Timely completion of the rehabilitation activities Ensure access to external GM (public notice including GM to be posted at relevant municipalities and on project sign boards) Prepare and abide by Traffic Management Plan (Annex 11)

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	Spreading and compact asphalt wearing course layer.			
Foreign workers influx	Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Executing asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface Cleaning new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spraying tack coat on the newly prepared clean surface of existing asphalt Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt	Discrimination from the local community against the potential influx of foreign workers	N	Prevent discrimination at the workplace Conduct awareness campaigns for the local community regarding foreign workers influx Inform the local community that worker will sign code of conduct before starting the work GM for local communities and all relevant stakeholders
Locals and foreign, skilled and unskilled)		Possible unequal wage benefits between local and foreign workers	N	Ensure that all workers (locals and foreign, skilled and unskilled) shall be compensated and are contracted equally as per the scale of market price rates, have equal contractual benefits and working conditions, and have access to internal GM
Children and minors		Possible recruitment of children who are under the legal age as workers on the site, especially in the case of the day laborers as well as forced labor	2N	Daily registrations of workers and verification of their age to prevent child labor Abide by the National Labor Law Ensure the contractor is aware of the penalties that Labor Law imposes in the case of child labor Oblige the contractor to strictly abide by the Labor Law through the CDR tender documents that should include prohibition of child labor Ensure all workers attended awareness sessions and signed the Code of Conduct

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compacting asphalt wearing course layer Installing concrete safety barriers Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs Rehabilitating sidewalks Construction or improvement of drainage systems Construction or improvement of retaining walls			
Nearby communities, socio-economic activities	Saw-cutting of existing pavement Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Removing and replacing or repair under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical	Disruption of local community to access services due to rehabilitation activities and temporal road closures	N	Prepare and abide by **Traffic Management Plan (Annex 11)** Traffic shall be secured via alternative routes to reach relevant destinations in case the works imply the temporary closure of this road Inform the local community about the location of detours, road blockages or diversions through public announcements and proper diversion signage Ensure access to external GM (public notice including GM to be posted at

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course layers to reach required compaction level/percentage. Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compact asphalt wearing course layer..			relevant municipalities and on project sign boards)
Existing infrastructure and nearby communities	Same as above	Accidental Damage of existing infrastructure or planned interruption of utilities	N	Regular coordination with relevant municipalities Conducting trial pits Ensure proper communication with

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
				affected communities to alert them whenever planned/accidental interruption of services happens. Ensure access to external GM (public notice including GM to be posted at relevant municipalities and on project sign boards)
Nearby communities	Saw-cutting of existing pavement Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Removing and replacing or repair under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course	Potential occurrence of gender-based violence and sexual exploitation and abuse incidents and all forms of GBV incidents	N	Draft Codes of Conduct and the guidelines for a GBV and VAC Action Plan Conduct training sessions for workers on Sexual Exploitation and Abuse and/or Sexual Harassment All workers should understand, and sign codes of conduct written in their native language Respond to the reported incidents of sexual abuse exploitation as a matter of priority Regular training on gender-based aspects, internal and external GM that includes an anonymous channel for protection of complainants' identity and confidentiality Availability of a GM with multiple channels to initiate a GBV complaint, which ensures confidential reporting with safe and ethical documenting of GBV cases, including Sexual Exploitation and Abuse and Sexual Harassment
Nearby communities, Hotel owner and visitors, Restaurants' owners, Shop		Slight increase in traffic due to the transport of construction materials or due to the material	N	Prepare and abide by **Traffic Management Plan (Annex 11)** Ensure traffic is not blocked during

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
owners Church visitors, residents near the road	layers to reach required compaction level/percentage. Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compact asphalt wearing course layer. Executing asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface Spraying tack coat on the newly prepared clean surface of existing asphalt	that may fall. Traffic congestion in the villages due to temporal road closure Material falling from vehicles during transport may cause traffic accidents or congestion Potential traffic impact on: Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery) Refer to Annex 2		transportation Inform residents and place signs near the working areas in culturally appropriate languages and written in clear and understandable manner Ensure communities have access to GM Cover transported material Abide by traffic regulations Operate well maintained vehicles
	Installing concrete safety barriers			
	Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs			

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	Rehabilitating sidewalks Construction or improvement of drainage systems Construction or improvement of retaining walls Repairing street lighting Marking lanes and stoppage line Repairing street lighting Replacing damaged light poles or brackets, Replacing lighting luminaires or bulbs, Repairing electrical wiring (directly buried or laid in pipes), Adding light poles where needed, Removing light poles obstructing the road and placing them at proper locations in addition to executing of other miscellaneous electrical repairs to the existing street lighting network			
Health and Safety				
Workers	Same as above	Accident and injuries to workers and public because of rehabilitation activities	2N	Contractor to develop a site-specific **Public Health and Safety Plan and Occupational Health and Safety (Annex 11) to be approved by CDR before commencement of civil works** Identify all risks related to the site surroundings and planned activities as well as emergency situations. The Plan should include, at minimum: - Job Hazard Analysis
Nearby communities	Saw-cutting of existing pavement Removing asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor. Removing and replacing or repair	Dust generation and noise may cause health related problems for workers and disturbance to residents Potential impact on: Sta. 0+460: Blue Lake Hotel and	N	

Receptor	Activity Generating Impacts	Impact Description	Rating	Mitigation Measure
	under asphalt layers Milling activity Cleaning of new surface of asphalt obtained after milling from all debris and dust with the use of mechanical road sweepers and water jets Spreading asphalt as well as compaction of the new layer. Scraping and removing asphalt layer(s) to reach base course level Excavating and removing the sub-base and base course layers to reach subgrade level Preparing sub-grade surface Executing sub-base/base course layers Compacting sub-base/base-course layers to reach required compaction level/percentage. Spraying prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s). Spreading and compacting asphalt binder course layer(s) Spraying tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer. Spreading and compact asphalt wearing course layer.	Restaurant Saghbine West Bekaa Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery) Refer to Annex 2		- Work Permits - Stop Work Authority Workers to wear proper safety gear (PPE) Presence of first aid kits on the construction site Inform residents and place signs near the working areas Proper management of trucks and heavy machinery entering and exiting the construction site Apply Best Applicable Practices on Road Safety

Note 1: All risks, impacts and mitigation measures should be acknowledged by the awarded contractor. It is the ultimate responsibility of the contractor to identify further site-specific risks and impacts, based on the contractor's site reconnaissance and experience, and implement necessary preventative and mitigation measures which shall be approved by the Employer or his designated representative onsite prior to proceeding with actual implementation.

Note 2: During the operation phase, all Environmental, Social and Health & Safety Activities impacts and their corresponding mitigation measures shall remain the same as detailed in the existing Bank-cleared ESMP report for West Bekaa Caza of 2020, that is available on CDR Website via the following link: https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

6. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

The Environmental and Social Monitoring Plan shall remain the same as detailed in the existing Bank-cleared parent ESMP report for West Bekaa Caza of 2020, since this ESMP report is an addendum to the parent one.

It should be noted that information on the Monitoring Plan are documented in the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link:
https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

7. CONSULTATION, DISCLOSURE AND GM

7.1 Public Consultation

The purpose of conducting public consultation is to inform the stakeholders and the local NGOs about the proposed project and the rehabilitation activities that will be executed specifically at "Saghbine - Machghara" Road in West Bekaa Caza and to take into account their concerns and feedback. The public consultation session was held on Thursday, April 27, 2023 at the Union of Municipalities of Al Bouhaira. The public consultation meeting was specific for the additional new road in West Bekaa Caza which is "Saghbine – Machghara" Road to be rehabilitated under REP (the subject of this ESMP Addendum). Only one public consultation has been conducted for this sub-project.

An announcement was prepared for this purpose and can be found in Annex 12. It was disseminated to all concerned people, during the session the GRM channels have been shared with all participants.

In addition to the unions and municipalities, local and international NGOs were invited to the public consultation, such as Women Development Association in Bekaa, Artisanal Cooperative of Machghara, Caritas Liban (Bekaa), Sada NGO, Future Lebanon Scouts Association, Our Heritage Society (Jib Janine). Invitations were sent by the Consultant to the concerned municipalities, union of municipalities and NGOs. A sample of the invitation can be found in Annex 12. NGOs may serve as advocates to reduce projects' social and environmental risks and promote good practice.

A total of 19 participants attended the session of which 6 were women (from civil organization, technical engineers as well as public). There was no representation of vulnerable groups.

The public hearing opened with a word from ACE representative who introduced the overall project and its objectives and relevant organizations including CDR. The Consultant presented a description on the rehabilitation activities, purpose of the hearing, a summary of the ESMP process, and a list of potential environmental and social issues associated with implementation of rehabilitation activities. Participants were also informed that a GM procedure has been developed for the project and were given contact information of the Project Consultant in order to inquire about it as well as the GM channels. The floor was then opened for discussion and questions. The presentation made to the public hearing participants, the list of attendees, along with some photos from the meeting can be found in Annex 12.

The proceedings which describe in detail the raised concerns and views by the participants and how all have been addressed are presented in the following paragraphs:

- The Head of the Union of Municipalities of Al Bouhaira welcomed the project and thanked the team and all the responsible entities. He mentioned that there is a necessity to start the rehabilitation activities due to the poor conditions of the road. In addition, he stated that it is important to ensure that the road safety measures are part of the project.
- The Head of Bab Maraa Municipality raised major concerns about the lack of safety at curves mainly after Saghbine entrance as well as the heavy traffic of trucks on this road which is increasing the road damages. She asked the Consultant about measures to prohibit the trucks to use the road. However, the scope of works is limited to the road design and not on-site enforcement which is under the municipality responsibility, however, the Consultant assured that road safety shall be ensured as per design requirements along with a close coordination with the concerned municipalities. Also, she requested to work on this project in fast track in order to encourage the tourism in the region during summer and facilitate the visitors to circulate. She assured that Bab Maraa municipality is ready to help and will be very cooperative with the design and execution team.
- The Head of Aitanit Municipality emphasized on preserving the cultural aspect of Aitanit during the rehabilitation works, mainly for the rehabilitation of retaining walls and the necessity to reinstate the stones

for concrete walls which is also included as part of the project activities[1]. He also asked about the possibility to rehabilitate the potential alternative route if the road closure is to be envisaged for works. However, the Consultant emphasized on the type of activities that will be executed under the rehabilitation scope of works for this road only.

- A Member of Saghbine Municipality asked for an explanation how this project will benefit from the local expertise and create jobs for the local community. The Consultant team detailed the positive socio-economic impact of such project to the region with examples. In addition, the same member requested that the Consultant share the final design and tender documents with all the concerned municipalities for feedback and approval.
- The CDR environmental and social expert, as well as the Consultant, shed the light on the WB regulations that governs this rehabilitation project including the importance of the GM channel and the safeguards.

7.2 Grievance Redress Mechanism (GRM)

The REP GRM has been established and is already in operation. For more information on the GRM, please refer to the parent ESMP for West Bekaa Caza of 2020 that is available on CDR Website via the following link: https://www.cdr.gov.lb/getmedia/4393a300-de4b-421e-8307-f3c2bc448952/West-Bekaa_Final-ESMP.pdf.aspx

In addition, an online form has been designed using the IMPACT platform to allow citizens to share their feedback (https://cdr.impact.gov.lb/worldbankmobile/home/main?lang=en). The link was shared with concerned municipalities and NGOs during the public participation meeting. It was also clarified that for each worksite in "Saghbine - Machghara" Road (the subject of this ESMP Addendum), a link to the form will be shared with the local communities via location-based SMS, email and social media. At each worksite, a QR code will also be added on the project sign board (which already includes the project GRM) to automatically direct participants to the online form. During the implementation of the roads rehabilitation in Bekaa West Caza, only one social complaint was raised and has been closed on the same day.

The GRM levels of the sub-project are the following:

- Level 1: If any person has any complaint or concern regarding the project implementation, he/she can lodge an oral or written grievance to the site engineer. In case an oral complaint is made, it should be written by the Contractor Social expert. The issue must be resolved within a maximum duration of one week.
- Level 2: If the person is not satisfied with the action of the Contractor, he/ she can send the complaint to the PIU social specialist through Phone: 01980096 ext:317, Email: GRM.REP@cdr.gov.lb or official letter registered at the CDR. The issue shall be resolved within a maximum of two weeks
- Level 3: If the person is not satisfied with the decision of the social specialist of PIU, he or she can bring the complaint to the attention of the PIU Director's Office. Once the PIU Director receives the complaint, it needs to be resolved within a maximum of two weeks.

All complaints will be individually followed up on and documented accordingly in a GRM log. The Contractor social expert will report to the Supervising Consultant expert who will report monthly to the PIU (CDR) who will, in turn, submit the consultants' monthly reports to the WB).

In addition, any incident should be recorded using an Incident Record and the details shall be entered into a register (health and safety reporting, accident reporting procedure, case of serious misconduct). All incidents, no matter their nature, should be reported to the CDR PMU and thereafter the Bank team for documentation purposes and the nature of the complaint documented should be clearly indicated. There should be immediate reporting of severe incidents (such as fatal accidents).

[1] See Section 3.2 detailing the rehabilitation project activities that include the activity consisting of "Construction or improvement of retaining walls" stones (where existing) shall be reinstated after rehabilitation works are over to preserve the cultural aspect.

8. CONCLUSION

After evaluating the potential negative and positive impacts that might arise from the proposed project during both phases (rehabilitation and operation), it was concluded that most of the negative impacts will occur during the rehabilitation phase. These impacts are mainly related to the disruption of nearby residents from the rehabilitation activities along with some impacts on the surrounding environment such as deterioration of soil and water quality if the generated liquid waste and solid waste were not managed properly. In addition to the negative impact on the air quality that might arise as a result of rehabilitation activities especially where new pavement is proposed for the road.

On the other hand, job opportunities will be created to the local community during the rehabilitation phase. It is worth to mention that these impacts are short in term and will diminish as soon as the project is completed. As for the operational phase, the assessed socioeconomic impacts were mostly positive in nature in terms of traffic and road safety and livelihood improvement within the project area. However, on the long term the proposed project will contribute to increasing vehicular pollutant levels (CO, NOx, SOx, PM10) in the area as well as traffic related noise causing public health problems and other impacts on the environment.

However, the negative environmental, social and health & safety impacts that might arise from the rehabilitation of the proposed road in West Bekaa Caza can be minimized and even eliminated through proper management and mitigation practices. The proponents of the proposed project are committed to putting in place several measures to mitigate the negative environmental and social impacts associated with the rehabilitation and operation of the proposed project. It is recommended that in addition to this commitment, the proponents shall focus on implementing the measures stated in the parent ESMP as well as abiding with all relevant national and international policies, standards and regulations.

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ANNEX 1: METHODOLOGY

This ESMP Addendum of the Road Routine Maintenance & Rehabilitation of Remaining Roads Project in West Bekaa Caza (Lot 3) was prepared to cover rehabilitation of remaining roads of Component 1 "Roads Rehabilitation and Maintenance" during rehabilitation and to assess the likely environmental and social consequences of these activities and identify mitigation/enhancement measures. As such, the task was initiated by conducting a site visit to "Saghbine - Machghara" road (around 8 km) in West Bekaa Caza on the 29th of March, 2023 followed by a literature review in order to define the current environmental and social conditions, along with relevant local and WB legislations, guidelines, and standards. In addition, the environmental and social team communicated closely with the technical team in order to obtain the necessary information about the proposed rehabilitation activities, thus describing the proposed project in a thorough manner. In terms of the assessment, negative and positive impacts were identified and mitigation measures were proposed to address the negative ones. As such, an ESMP was developed and included a monitoring plan, which is needed to ensure compliance of the project with environmental and social conditions and regulations.

Based on the current institutional setup of the Roads and Employment Project, the institutional setup and the requirements for capacity development was described to ensure that project implementers have sufficient technical and human resources available to effectively undertake the environmental and social management and monitoring tasks. As for the participation of the public and concerned entities, this was done through conducting public consultation to which stakeholders and local community were invited to participate. Consultation was held on April 27, 2023 at the Union of Municipalities of Al Bouhaira and results are included in this report.

Project Activities

Determining the condition of the asphalt is important to assign the proper pavement rehabilitation activities. The pavement rehabilitation activities consist of three activities: (1) either pavement maintenance or (2) overlay on existing pavement or (3) complete removal of deteriorated pavement and constructing a new one.

An estimated 80% of the works to be executed within this project fall under the following pavement related types of activities:

- A- Patching
- B- Milling and Overlay
- C- Pavement Total Reconstruction.

The phases for the main three activities are as follows:

A- Phases of Construction for a stretch of road that needs: Pavement Patching

- A.1-Saw-cut existing pavement in a rectangular shaped area where pavement distresses are located as per tender drawings and specifications.
- A.2-Remove asphalt layer within the limits of the executed saw-cut using hammer drill breaker operated by air compressor.
- A.3-Examine the exposed pavement structure under the removed asphalt using proper testing for base course and sub-base course layers as well as the subgrade level & material.
- A.4-Remove and replace or repair under asphalt layers as per technical assessments and recommendations.
- A.5-Execute asphalt layer(s) similar to surrounding asphalt thicknesses and parameters by either applying binder course asphalt layer and a wearing course asphalt layer (with prime coat & tack coat where required) or by applying directly the final wearing course after spraying prime coat over the prepared base course surface.

B- Phases of Construction for a stretch of road that needs: Milling & Overlay

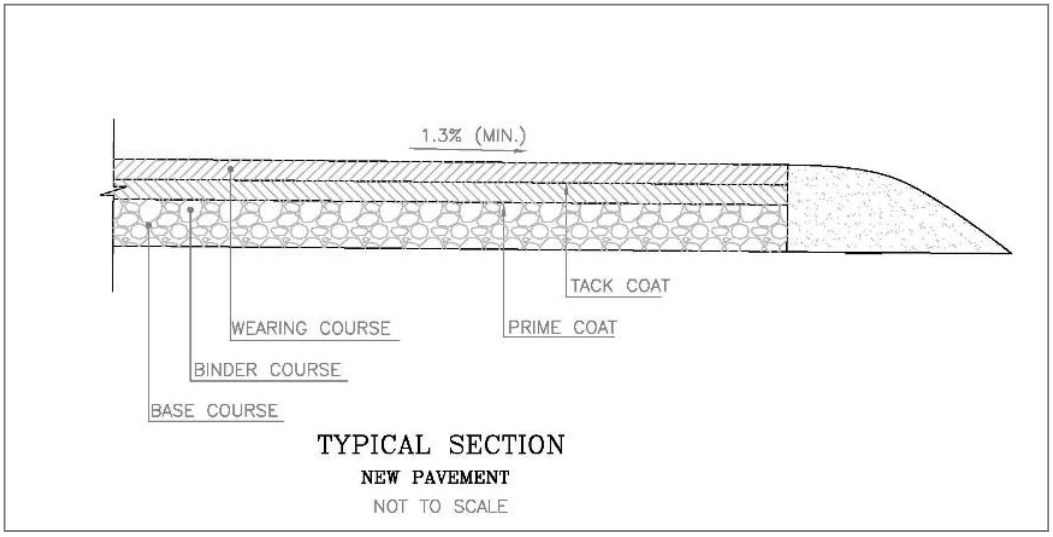
- B.1- Contractor to proceed with the milling activity as described in the tender document with regards to the thicknesses of existing asphalt to be milled.
- B.2- New surface of asphalt obtained after milling shall be cleaned from all debris and dust with the use of mechanical road sweepers and water jets.
- B.3- Tack coat will be sprayed on the newly prepared clean surface of existing asphalt.

- B.4- Asphalting activity will take place using the right thickness of the new asphalt layer as per the design/tender documents. Such activity includes spreading asphalt as well as compaction of the new layer.

C- Phases of Construction for a stretch of road that needs: Pavement Total Reconstruction (**Error! Reference source not found.**1)

- C.1- Scrape and remove asphalt layer(s) to reach base course level.
- C.2- Excavate and remove the sub-base and base course layers to reach subgrade level.
- C.3- Prepare sub-grade surface after making sure by soil tests that reached subgrade level is suitable to receive pavement structure. If not, unsuitable material to be replaced by suitable borrow fill and compacted to reach required compaction percentage.
- C.4- Execute sub-base/base course layers as per specifications and thicknesses according to tender documents. Compact sub-base/base-course layers to reach required compaction level/percentage.
- C.5- Spray prime coat over the prepared and leveled surface of base course in order to receive asphalt binder course layer(s).
- C.6- Spread and compact asphalt binder course layer(s) as per the thicknesses and specifications specified in tender documents.
- C.7- Spray tack coat over the newly executed asphalt binder course in order to receive asphalt wearing course layer.
- C.8- Spread and compact asphalt wearing course layer as per the required specifications and thicknesses).

Figure 1: New Pavement Cross Section Scheme



The proposed project also consists of other activities beside the pavement rehabilitation works. These activities consist of:

- Installing concrete safety barriers
- Adding adequate traffic signs for stoppage give ways as warning signs, mirrors at sharp edges, and other regulatory and warning signs
- Marking lanes and stoppage line
- Rehabilitating sidewalks
- Construction or improvement of drainage systems
- Construction or improvement of retaining walls; stones (where existing) shall be reinstated after rehabilitation works are over to preserve the cultural aspect.

During the execution of rehabilitation activities, activities, roads will not be closed or shutdown. Works will be executed on the road right of way/passageway only and will not use or undermine any existing adjacent facilities. In addition, the rehabilitation activities will maintain a passing corridor within the alignment to grant access to nearby properties.

In case the works imply any temporary closure of the road, traffic will be secured by the project Contractor via alternative routes to reach relevant destinations. Detours and diversions were not included in the design. Therefore, before the execution of rehabilitation works, the Contractor, based on the schedule of works and if needed, will secure the access and traffic movement via other alternative routes and means in coordination with the related Municipality. Accordingly, all detours will be on existing alternative roads (public domain properties) and there is no need to use or rent some land to create the detour.

As this project is a road rehabilitation project, the speed limit will be assigned based on existing road curves. The designer thus defined the best fit center line for each road, in which the existing radius of each curve could be identified and posted the speed limit that complies with the minimum radius of curvature. The applicable speed limit for most of the roads were 60 kph based on road geometry in general cases and was reduced accordingly at stretches where sharp curves were encountered in which it was reduced as much as to reach 30pkh at very sharp curves. The depth of excavations for each proposed road is not more than 15cm in roads sections, and not more than 1.5m for walls and 3 to 4m for new culverts.

Staff, Materials & Equipment

Site Construction Staffing

The total number of workers for the overall road/project shall be based on the total volume of each activity as per the bill of quantities of the tender documents, as well as the independent assessment of the awarded contractor subject to the project duration and the planner's effort to produce a relevant program of work to cover all project activities. Therefore, the total number will be deduced accordingly.

As a result, the total number of labor (including equipment operators and machinery drivers) shall be in correlation with:

- Volume of each type of work (quantities in Bill of Quantities BOQs)
- Division of work as per the program of works to be submitted for approval by the awarded contractor. Such program of works shall be resource loaded to cover all required activities as per the tender documents and shall reflect actual numbers of labor with regards to each activity and the time dedicated for it, as well as for the total of the Project.

Furthermore, some indicative numbers of workers and drivers are provided in Table 1 and Table 2 per task and per day. All rehabilitation activities need the involvement of a certain number of workers ranging from unskilled labors to equipment drivers to foremen/engineers.

As described in Table 1, the activities vary from pavement works to earthworks, piping, structural, and road safety. Each of such activity requires specialized/skilled resources. As shown in tables below Table 1 and Table 2, the number of persons involved from engineers, technicians to workers as well as machinery drivers is variable as per the activity needed on each road. It is assumed that an estimate total number of workers shall range between 100 and 150. In addition, efforts will be made by the contractor minimize labor influx and to equally hire local (from the same region as the project location) and foreign (refugees) workers and drivers with equal contractual benefits and working conditions. Since priority will be given to people living in the region, labor influx is not expected. If labor influx is needed, it will be as minimized as possible. It is worth to mention that the workers will sign code of conduct before starting the work and training sessions will be conducted to inform the workers about their responsibility to act ethically. The duration of the project is 7 months with a one-year liability period.

Table 1: Number of Workers for the Different Project Activities

#	ACTIVITIES	Site Engineer	Safety Officer	Foreman	Surveyor	Assistant Surveyor	Skilled Carpenter	Semi-skilled Carpenter	Bar Bender (Steel Fixer)	Skilled Electrician	Skilled Welder	Skilled Laborer	
1	Pavement Patching	1	1	1	1	1						1	
2	Milling & Overlay	1	1	1	1	1						1	
3	Pavement Total Reconstruction	1	1	1	1	1						2	
4	Concrete Retaining Walls	1	1	1			1	1	1				
5	Concrete Safety Barriers	1	1	1			1	1	1				
7	Culverts & Channels	1	1	1	1		1	1				1	
8	Traffic Marking	1	1		1			1	1		1		
9	Guardrails Fixing	1	1	1	1								
10	Sidewalk & Tiling	1	1	1	1	1						2	
11	Structural Elements	1	1	1			1	4	2				
12	Earthwork (Excavation & Backfill)	1	1	1	1	1						2	
13	Piping or Pipe Repair	1	1	1								1	

Table 2: Numbers of the Machinery Drivers

#	ACTIVITIES	MACHINERY DRIVERS																
		Loader	Excavator	Motor Grader	Steel Roller	Milling Machine	Dump Truck	Water Tank Truck	Asphalt emulsion Sprayer	Asphalt Paver	Pneumatic Asphalt Roller	Mobile Crane	Guardrail Post Driving Machine	Concrete Mixer Truck	Mobile Concrete Pump	Road Marking Machine	Pick-up Truck	Total
1	Pavement Patching	1	1		2		1	1	1	1	1						1	10
2	Milling & Overlay	1			1	1	3	1	1	1	1						1	11
3	Pavement Total Reconstruction	1	2	1	2	1	6	1	1	1	1						1	18
4	Concrete Retaining Walls							1				1		1	1		1	5
5	Concrete Safety Barriers							1						1	1		1	4
6	Electrical Street Lighting Work											1					1	2
7	Culverts & Channels	1						1						1			1	4
8	Traffic Marking							1				1				1	1	4
9	Guardrails Fixing						1						1				1	3
10	Sidewalk & Tiling							1									1	2
11	Structural Elements							1				1		1	1		1	5
12	Earthwork (Excavation & Backfill)		2		1		2	1									1	7
13	Piping or Pipe Repair																1	1

Materials and Equipment

The required main materials and equipment for the rehabilitation of the proposed road and its associated works are presented in the tables below (Tables 3 and 4).

Table 3: Materials Used during the Rehabilitation Works

Materials	Quantity
Aggregates (fine and coarse)	9000 cu.m
Asphalt mix	3000 cu.m
Liquid Asphalt	15800 liters
Concrete mix	3750 cu.m
Water**	
Fuel**	
Thermoplastic Paint Material	3750 sq.m
Steel Guardrails	0
Stones (for stone pitching)	200 m
Reinforcing Steels	450 tons
Manhole Covers	246
Rubber Bitumen	2000 sq.m
Cat Eyes	3500
Delineators	200
Traffic Signals	400

**These items could not be estimated at this stage

Table 4: Equipment Used during the Rehabilitation Works

Equipment	Quantity
Steel-wheeled Rollers	2
Pneumatic-tyred Rollers	1
Asphalt Distributor	0
Concrete mixing trucks	2
Trucks	5
Excavators	1
Loaders	2
Asphalt Milling Machines	1
Steel Rollers	1
Motor Graders	1
Thermoplastic Road Marking Machines	1
Liquid Asphalt Spraying Tanks	1
Guardrail Post Driving Machines	0
Paver instead of Asphalt Distributors	1
Dumper Trucks instead of Trucks	5
Air Compressors	2
Asphalt Cutters	1

ANNEX 2: ENVIRONMENTAL AND SOCIOECONOMIC COMPONENTS ALONG THE ROAD

Road Code	CAZA	Name	Natural Environment (Trees, land use, surface water …)	Infrastructure (Lighting, Phone/Electricity lines, culverts, water canals, …)	Socio-Economic (Shops, Residential areas, traffic, …)
	West Bekaa	Saghbine - Machghara	- Olive, Peach, Apple, Cherry, Walnut, Fig, Vine and Almond trees - Pine, Cypress, Oak, Mysa, Cedar, Eucalyptus, Willow trees	Box Culvert (Stations 1+820, 2+200, 3+980, 4+965) Sta. 3+610: Pipe Culvert Sta. 6+180: Temporary Pipe Culvert	Sta. 0+460: Blue Lake Hotel and Restaurant Saghbine West Bekaa Sta. 0+760: S Cape Lounge & Restaurant (restaurant) Sta. 0+960: Chalet du Lac (restaurant) Sta. 1+180: Joubran Lebanese (restaurant) Sta. 1+570: Masay Lounge Sta. 2+860 to Sta. 3+200: scattered residential buildings Sta. 3+200: Bab Maraa Catholic Church Sta. 4+400: Al Ferzli Gas Station Sta. 5+500 to Sta. 6+100: urban areas Sta. 5+720: Aitanit Municipality Sta. 5+760: Restaurant Loulouat Al Bouhaira Near Sta. 5+800: St Georges Greek Melkite Church Sta. 7+350: Abou Ayman Clothes Sta. 7+550: Mobil Gas Station Sta. 7+600: BHC Hardware store Sta. 7+660: Afran Al Amir (Bakery) Sta. 7+890: Restaurant Karm Al Hawa

Figure 1: Cypress trees along the Road at Sta. 4+200

Figure 2: Pipe Culvert at Sta. 3+610

Figure 3: Blue Lake Hotel and Restaurant Saghbine West Bekaa at Sta. 0+460

Figure 4: S Cape Lounge & Restaurant at Sta. 0+760

Figure 5: Chalet du Lac (restaurant) at Sta. 0+960

Figure 6: Joubran Lebanese (restaurant) at Sta. 1+180

Figure 7: Bab Maraa Catholic Church at Sta. 3+200

Figure 8: Aitanit Municipality at Sta.5+720

Figure 9: St Georges Greek Melkite Church near Sta. 5+800

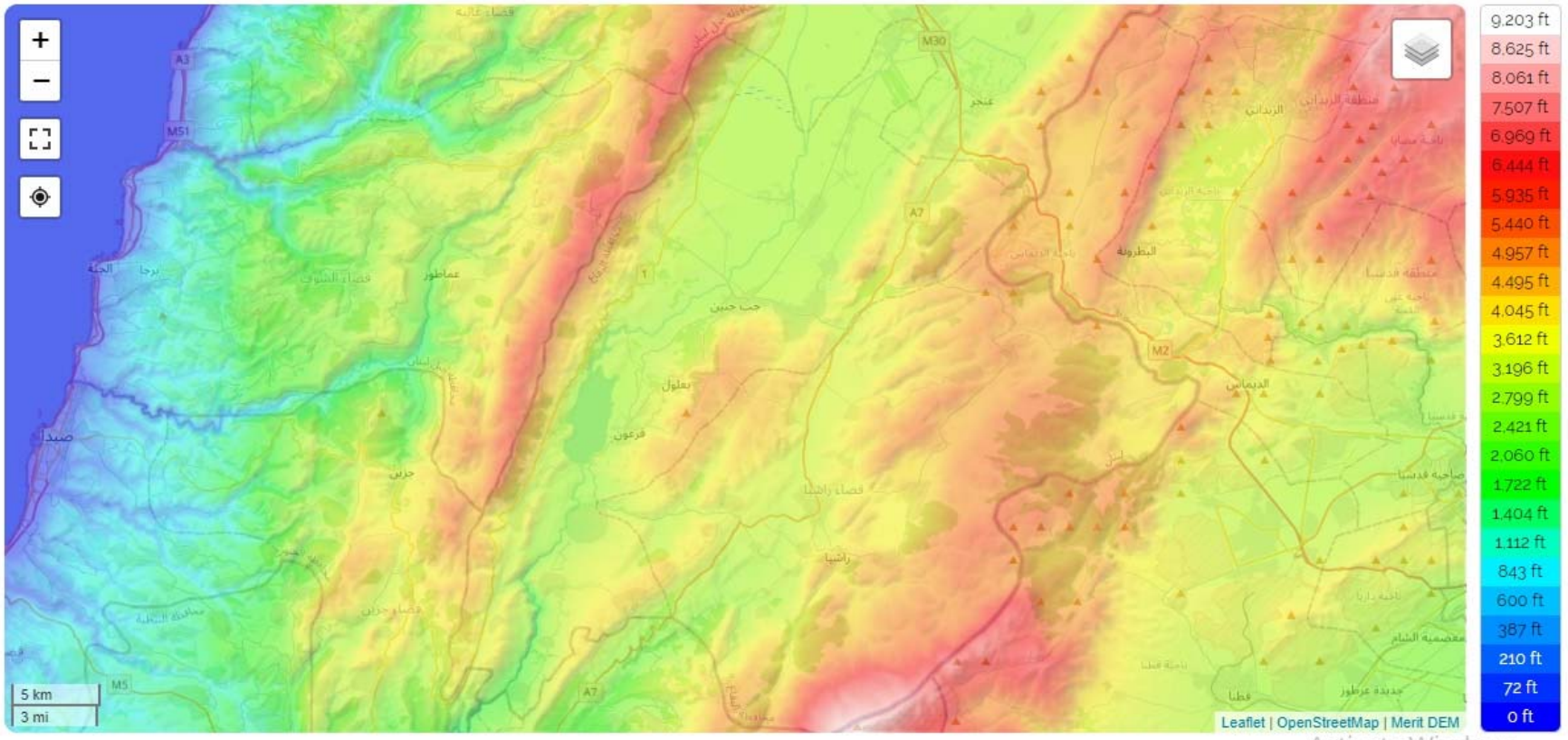
Figure 10: Abou Ayman Clothes at Sta. 7+350

Figure 11: Gas Station at Sta. 7+550

Figure 12: Afran Al Amir (Bakery) at Sta. 7+660

Figure 13: Restaurant Karm Al Hawa at Sta. 7+890

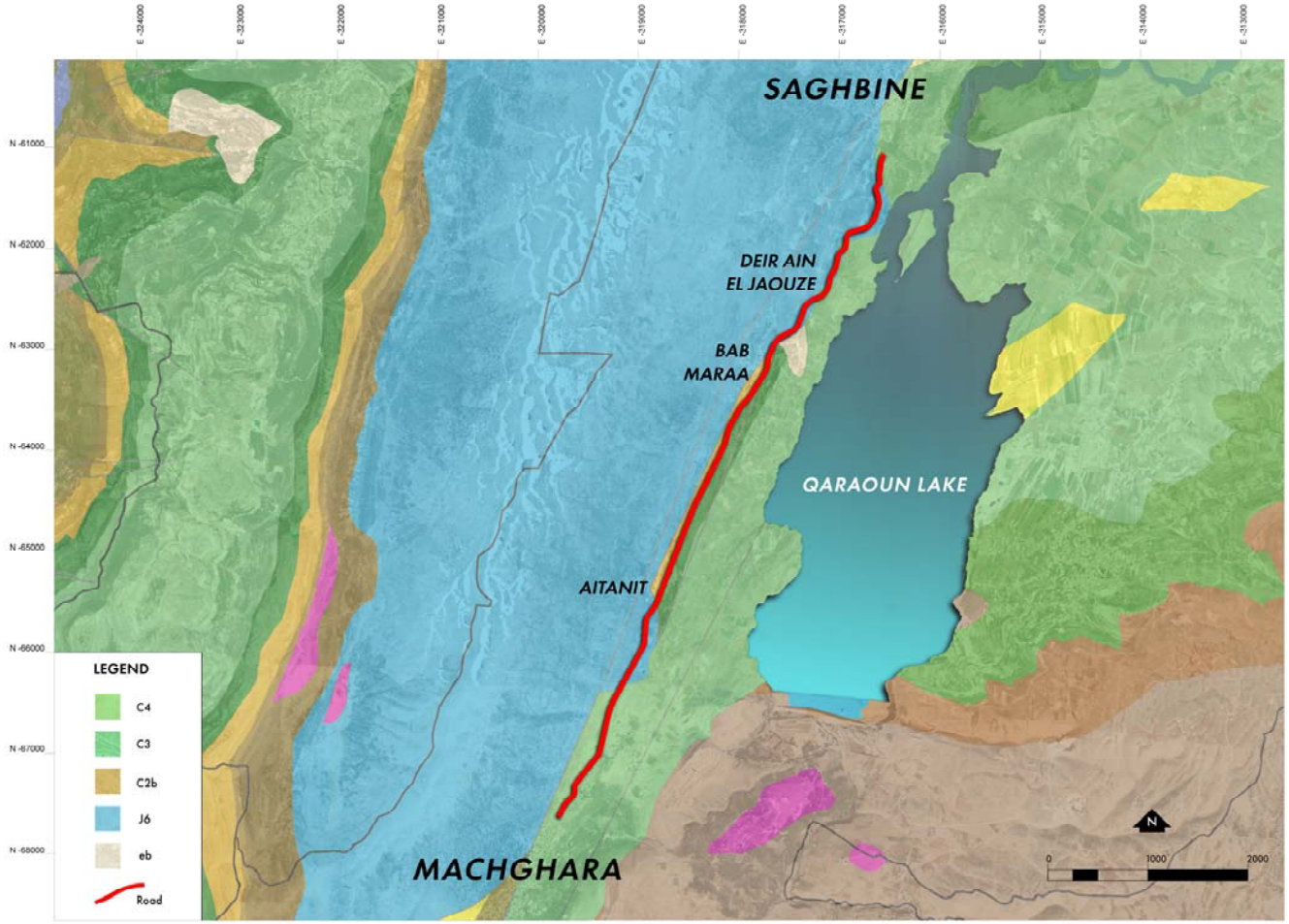
ANNEX 3: TOPOGRAPHIC MAP OF WEST BEKAA CAZA



Source: Topographic-Map Website, 2022

ANNEX 4: GEOLOGY MAP

Figure 1: Geology Map of the Road

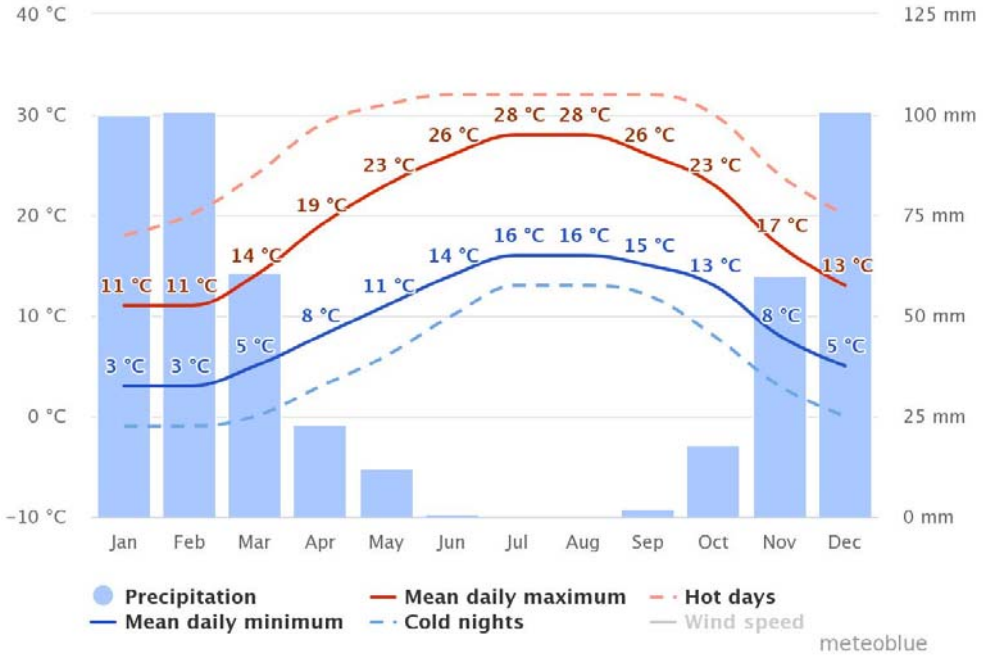


ANNEX 5: HYDROLOGY MAP

Figure 1: Hydrology map of the Road

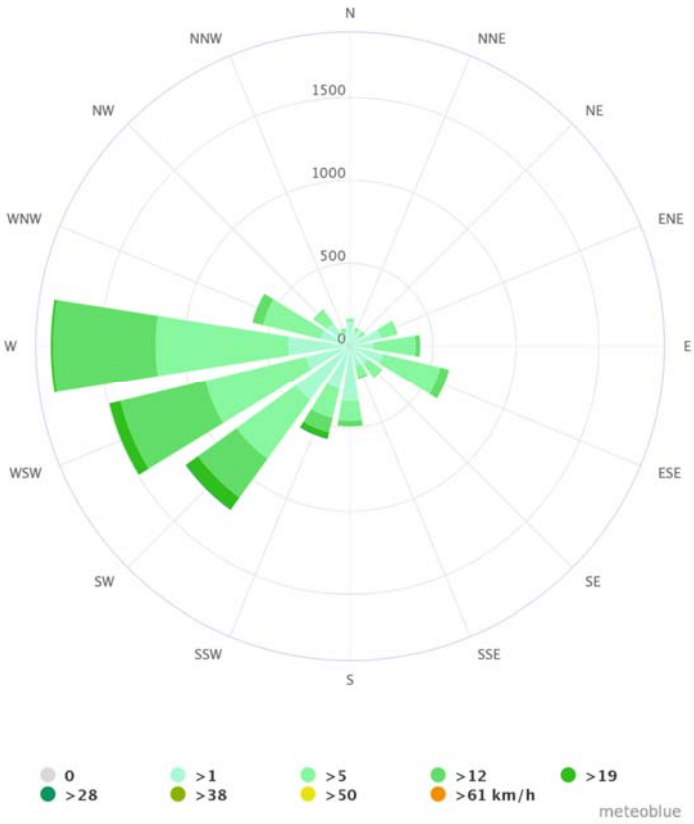
ANNEX 6: CLIMATE DATA

Figure 1: Climograph of Saghbine in West Bekaa Caza (for the last 30 years)



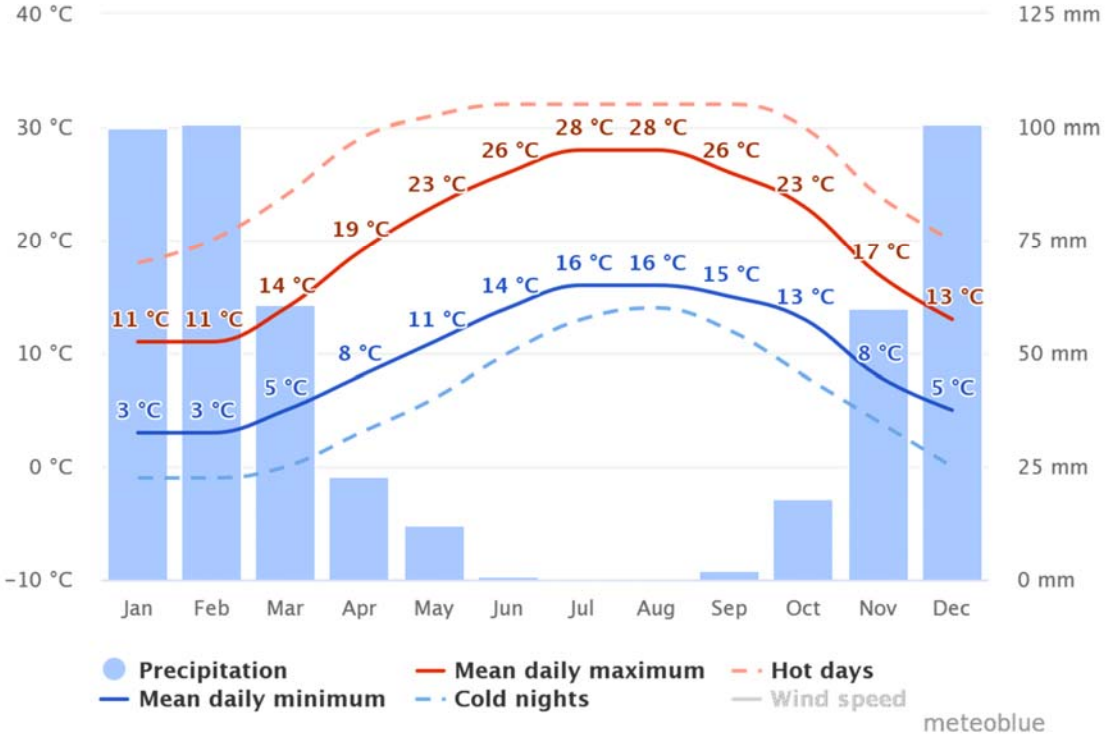
Source :https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/saghb%c3%aene_lebanon_268424

Figure 2: Wind Rose for Saghbine in West Bekaa Caza (for the last 30 years)



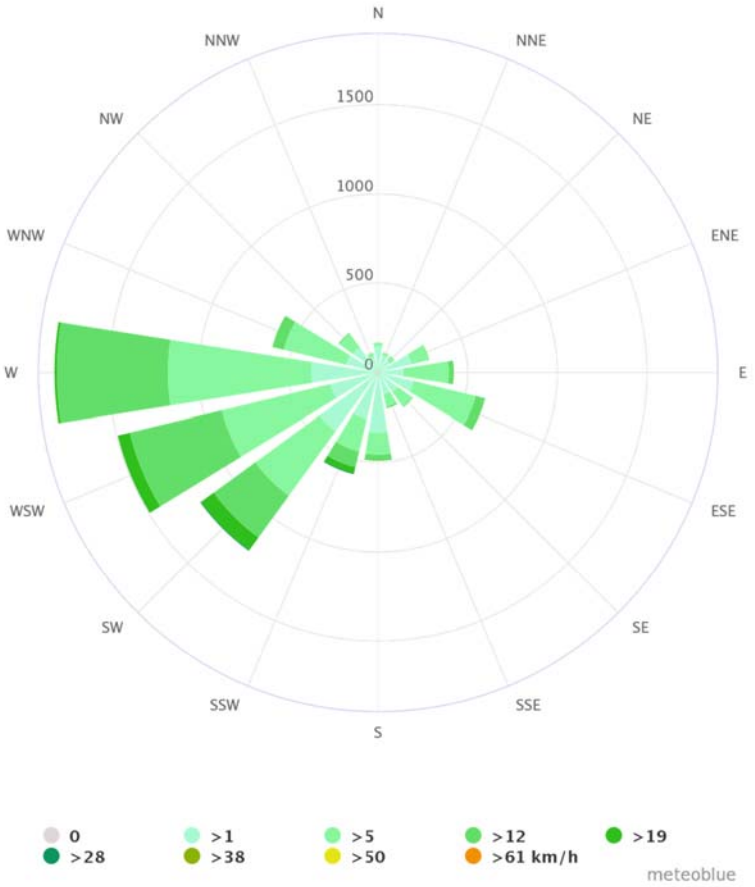
Source:
https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/saghb%c3%aene_lebanon_268424

Figure 3: Climograph of Machghara in West Bekaa Caza (for the last 30 years)



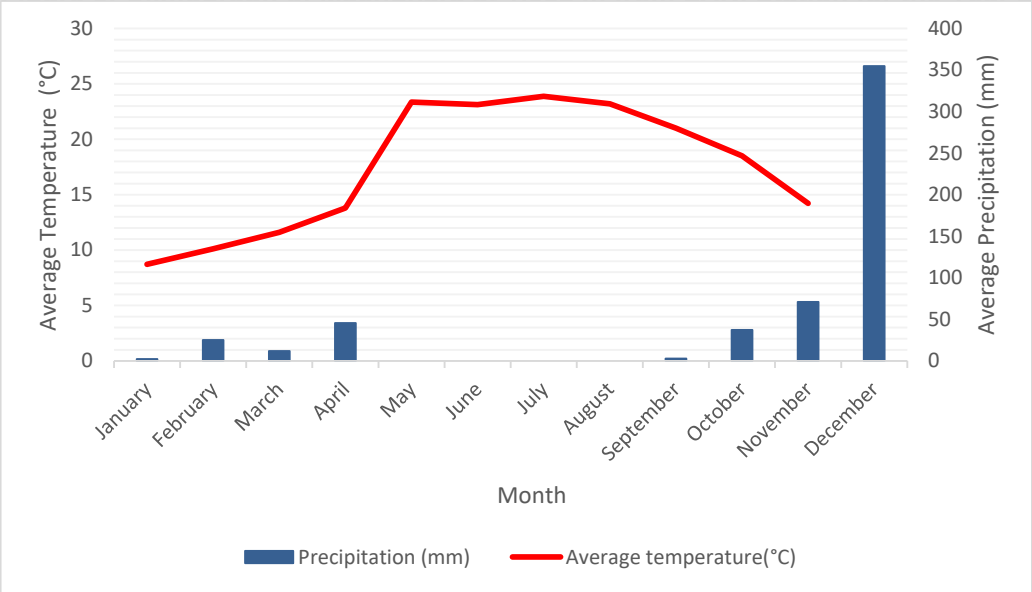
Source: https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/machghara_lebanon_270991

Figure 4: Wind Rose for Machghara in West Bekaa Caza (for the last 30 years)



Source: https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/machghara_lebanon_270991

Figure 5: Climograph of Machghara at 1,032 m from LARI Station for the Year 2019



Source: LARI, 2019

Additional data on climate in the area was obtained from the Lebanese Agriculture Research Institute (LARI) from its station in the village of Machghara located at the altitude 1032 meters a.sl. This data represents the average temperatures and average precipitation of the year 2019 (Annex 6, Figure 5).

Table 1: Monthly and Yearly Averages of Wind Speed (m/s) and Direction (degrees) registered by Hasbaya LARI Station in 2019.

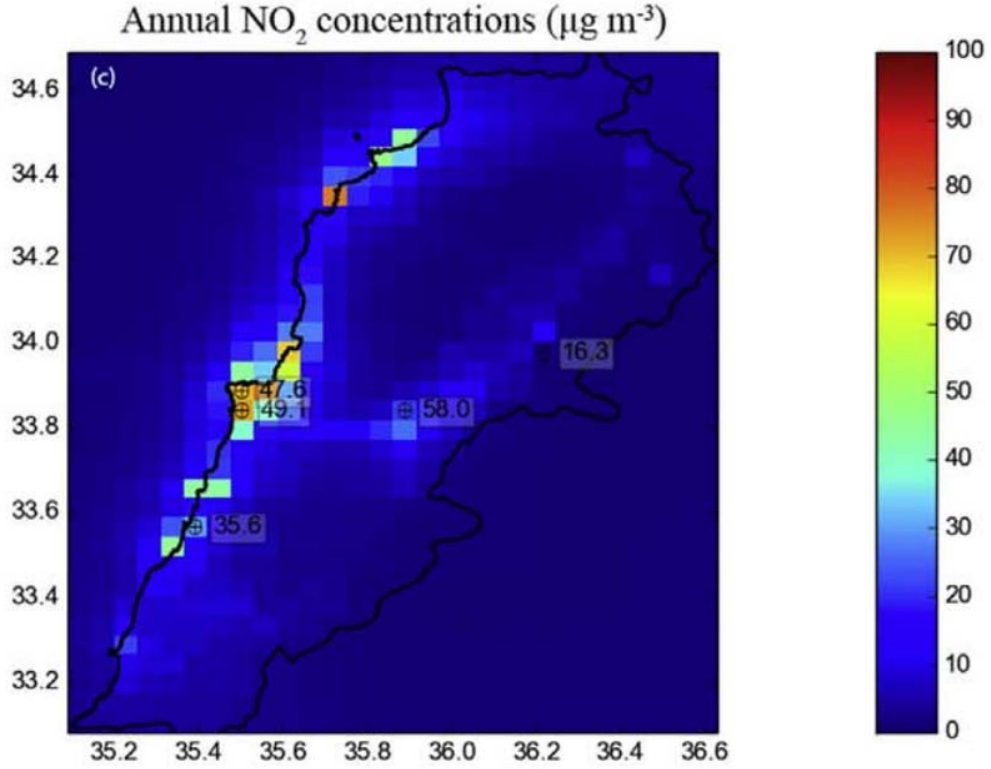
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Average per year 2019
Monthly Average Wind Speed (m/s)	1	1.1	0.7	1	1.3	0.81	0.8	0.75	0.07	0.93	1.19	0.81	0.87
Monthly Average Wind Direction (Degrees)	168.6	157	176	165	164	185	188.5	180	174.7	143.2	116	144.2	163.5

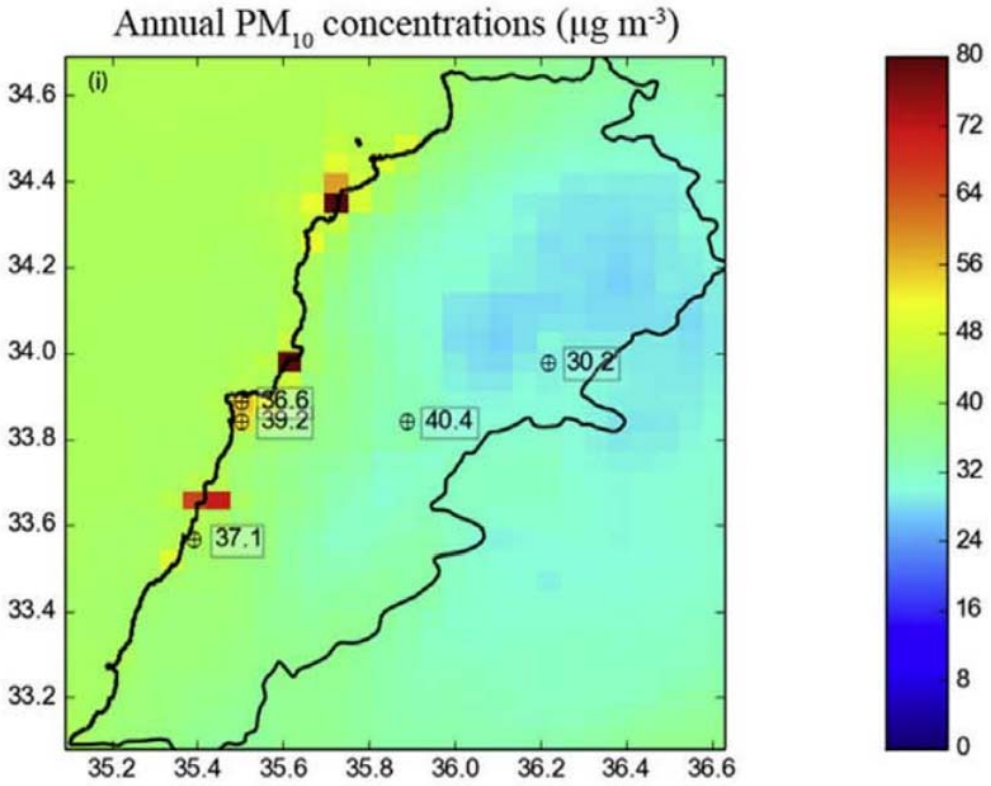
Source: Data provided by LARI on January 21, 2020

As for the wind data, wind speed and direction data were also obtained from LARI from its nearest station in Hasbaya. Annex 6 – Table 1 represents the average monthly and annual wind speed and direction for the year of 2019.

ANNEX 7: AIR QUALITY DATA

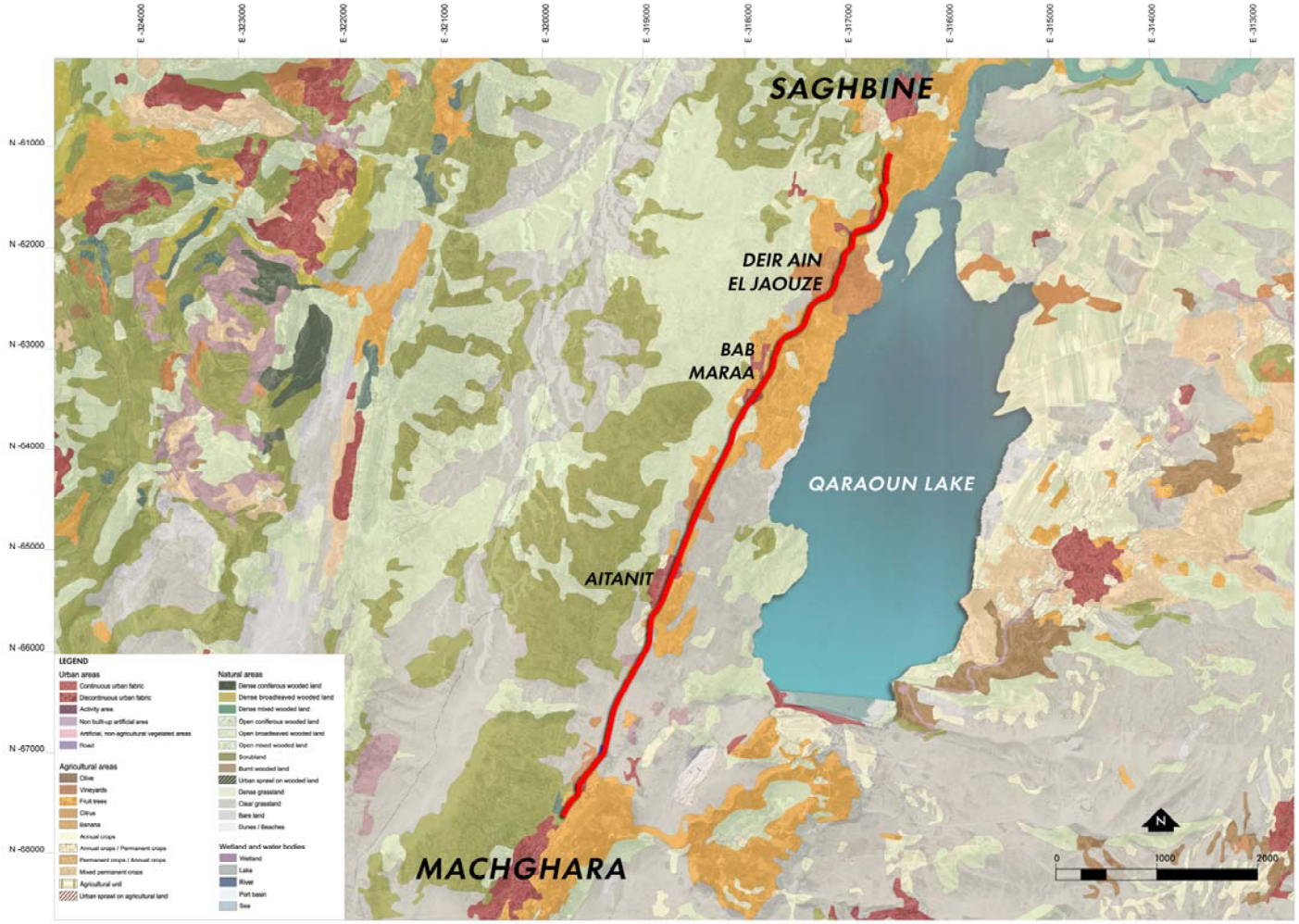
The mean modelled annual concentrations maps for NO_2 and PM_{10} (Source: Abdallah et al., 2018)



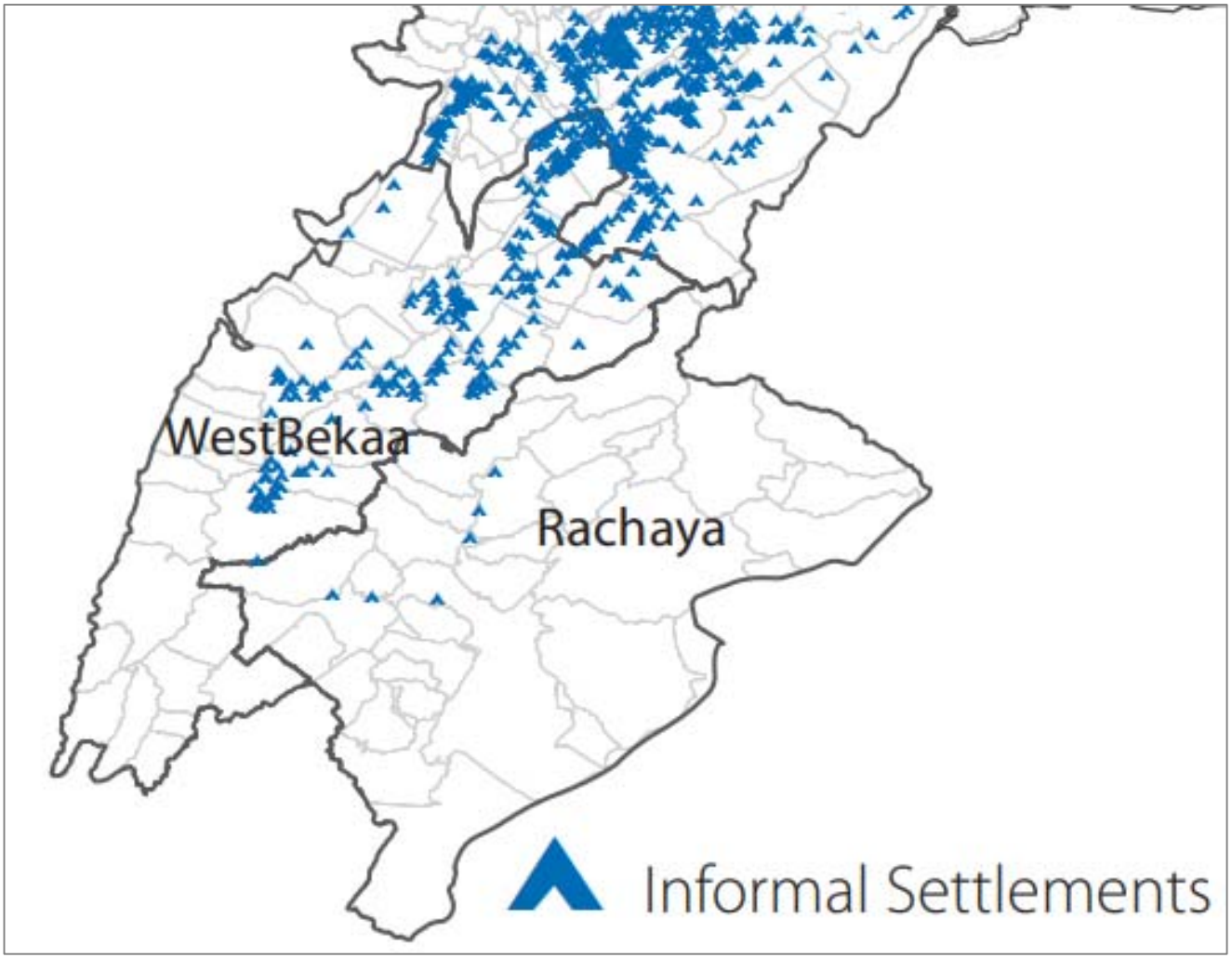


ANNEX 8: LAND USE/LAND COVER MAP

Figure 1: LU/LC map along the Road



ANNEX 9: INFORMAL SETTLEMENTS AND MOST VULNERABLE LOCALITIES



Source: OCHA, 2016

ANNEX 10: SENSITIVE AREAS MAP

ANNEX 11: PLANS AND PROCEDURES DURING REHABILITATION ACTIVITIES

Pollution Prevention Plan

The Contractor shall prepare and abide by a Pollution Prevention Plan to ensure that pollution to air, water or land is prevented or, where this is not possible, reduced and mitigated as far as practicable during the construction phase. The Pollution Prevention Plan will be developed for managing:

- liquid effluents
- air emissions
- noise and vibration
- fuel, oil, and chemical storage and handling
- hazardous, non-hazardous, and household waste handling, storage and final disposal
- vehicle and equipment selection and maintenance

Effluent Management Provisions

- No effluent shall be discharged under any condition neither into water courses or bodies including surface water bodies nor to ground surface or infiltrated into subsoils
- Install mobile porta-cabins and connect the generated wastewater from workers to the existing sewage network or to polyethylene tank
- Empty the tank in the sewer network or into nearby operational wastewater treatment plants either by municipality-owned or contracted wastewater tankers

Rainwater run-off Management Provisions

- Install temporary structures to prevent runoff from reaching nearby water bodies
- Remove base coarse and sand from active rehabilitation sites to prevent the transfer of suspended solids in rainwater
- All platforms where generators or hydrocarbon storage tanks are installed have an impervious layer
- Restrict excavation activities during periods of intense rainfall

Atmospheric Emissions and Dust Management Provisions

- Exercise care to minimize emissions of dust from its activities, including traffic, at work sites, in residential areas and on access roads.
- Stop dust generating activities during windy weather especially in residential areas
- Where it is deemed that dust is impacting or may have an impact on human, plant or animal receptors or where dust may cause sedimentation of watercourses/water bodies or unacceptable levels of soil loss, water shall be applied to the area creating the dust
- Control vehicle speeds to reduce traffic-induced dust dispersion and resuspension by setting and enforcing speed limits
- Post speed limit signs in sensitive areas
- Ensuring trucks hauling sand, dirt or other loose materials are covered (sheeting trucks)
- Cover dusty stockpiles
- Suspending topsoil stripping and replacement during strong winds
- Using a dust collection system for bulk materials unloading
- Ensure proper handling and storage of materials thus minimising the areas of stockpiled materials
- When storage, transport and handling of bulk materials is made in the open air and exposed to the wind, necessary dust abatement measures shall be implemented
- Regular maintenance of construction machinery, equipment and vehicles

Spill Prevention and Management

- Spill clean-up procedure to reduce the risks of accidental leakages

- Carry out all re-fuelling in designated areas with impervious surfaces and guarantee no fuel spills
- A spill collection tank must be installed under generators and specific equipment
- All chemicals shall be stored in dedicated areas on a paved or sealed floor and in tightly closed containers and be protected from adverse weather conditions
- Used oil or chemical must be stored in an appropriate area until it is collected and disposed in licensed sites
- Use of secondary containment basins for long term storage of lubricants and fuels
- Ensure that the plan is present at the construction site and that oil spill response kits are available
- Ensure proper housekeeping conditions are maintained at the oil/chemical storage areas
- Train all workers to implement this plan in case of accidental spillage

Waste Management Plan

This plan shall be developed and implemented by the Contractor to manage the generated waste effectively. The plan shall include the following components:

- Establish and maintain a waste register which is at the disposal of the Engineer. This register will record all waste management operations: production, collection, transport and disposal. Waste shall be categorized according to the following definitions:
    - Non-hazardous solid waste generated at rehabilitation sites and offices includes excess fill materials from grading and excavation activities, scrap wood and metals, and small concrete spills. Other non-hazardous solid wastes include office and kitchen wastes.
    - Hazardous solid waste includes contaminated soils, oily rags, used oil filters, used oil, as well as spill cleanup materials from oil and fuel spills
- Waste shall be collected from rehabilitation sites and from offices at the same rate that it is produced
- All the waste materials generated at work sites and offices shall be segregated into domestic (organic/ paper and cardboard/ metals, glass and plastics) and hazardous waste and disposed into the color-coded containers (one for the disposal of organic waste, one for paper and cardboard and one for aluminium, glass and plastics)
- The domestic waste containers shall be emptied 2 to 3 times per week by the municipality to maintain rehabilitation sites sanitation
- Segregated recyclables shall be sent to recycling facilities in the area where possible
- Reuse of excavation materials generated during cutting and filling activities whenever possible and disposal of remaining material in controlled disposal site to be identified by the contractor in coordination with the relevant municipality
- Approval letters shall be obtained from the concerned municipalities for domestic and construction waste disposal
- Reuse or recycle the generated waste whenever possible
- Train workers on waste reduction procedures
- Provide workers with nearby sanitation facilities and inform them about their location
- The work zone shall be cleaned on a daily basis. Construction leftovers that are external to the working zone shall be removed regularly. Site housekeeping must be maintained

Hazardous Materials Management Plan

A Hazardous Materials Management Plan will be developed for hazardous materials that pose a potential risk to human health or the environment and include cleaning chemicals, solvents and fuels. The plan shall include the following:

- Fuel and hazardous chemicals/materials shall be stored in designated areas, except for quantities generated or required for the daily construction activities.

- All fuel and hazardous chemical storage facilities shall be located on flat or gently sloping ground and shall be contained within a bund designed to contain at least 110% of the total capacity of the storage containers plus 10% of the aggregate tank volume within the containment area or as otherwise specified by regulatory requirements. The bund walls and floor shall be constructed of concrete or other suitably impermeable material. The filling connection must be within the bund. No drain valves or other connections through the bund walls shall be permitted. Tanks shall be fitted with a gauge to allow the fill level to be monitored during refilling and preferably with a high-level alarm.
- Hydrocarbons, lubricants, paints, solvents and batteries are transported in drums to suitable waste management facilities, if available

Emergency Preparedness and Response Plan

An Emergency Preparedness and Response Plan (EPRP) will be developed so that the Contractor is prepared to respond to accidental and emergency situations in a manner that prevents and mitigates harm to people and the environment. The EPRP needs to be discussed and disclosed to service providers and local affected communities prior to construction. The EPRP shall cover the following emergency situations as a minimum/;

- Medical emergency
- Fire or explosion;
- Hazardous Material Spill or Release;

The EPRP will identify

- Accidents and emergency situations and the communities and individuals that may potentially be impacted
- Response procedures, provision of equipment and resources, designation of responsibilities, communication systems and channels and periodic response training

The Project will need to ensure that the Contractor shall

- Maintain fit-for-purpose Emergency Response Capability, which shall be clearly documented
- Make contingency arrangements for calling a Doctor and transporting injured persons to hospital. The telephone numbers of the emergency services and the name, address and telephone number of the Doctor and the nearest hospital shall be prominently displayed in the Contractor´s office.
- Ensure that all personnel are informed and aware of how to react in an emergency situation, and responsibilities are defined. Information and awareness training shall be documented, and available on all Project Areas
- Organize and document emergency simulation exercises within 3 months of the physical start of the works, and subsequently once every 12 months

Traffic Management Plan

A Traffic and Management Plan (TMP) will need to be developed by the main contractor. The TMP shall be a starting point for further discussion between the main contractor, local authorities and road agencies. The plan will include preventative measures to manage the risks from potential increases in traffic from construction activities including transportation of material and workers to and from the rehabilitation activity sites. In addition, it will include measures to protect workers and manage the risks from civilian traffic within close proximity to rehabilitation activities especially within residential areas. The TMP will be refined and updated as access routes are confirmed and the timing and type of abnormal loads become known.

The TMP shall include the following:

- Proposed program of works;
- Details of key stakeholders;
- Details regarding the proposed method of construction;
- Proposed temporary traffic control plans;

- Various traffic diversion plan layouts for various type of activities;
- Diversion signs;
- Regulatory signs;
- Informative signs;
- Analysis of impacted roads;
- Risk Assessment;
- Proposed working hours; and
- Protection of Work Zones and road users including pedestrians

Public Health and Safety Plan

An effective Public Health and Safety Plan for construction will need to be developed by the main contractor. It shall include at least the following components:

- Secure the site and restrict access to it
- Prohibit unattended/unauthorized public access
- No children are allowed to be present on the work site, reminding workers and community members of this in all related communications
- Install barriers with warning lights at night around excavations, material dumps or other obstructions at the rehabilitation sites
- Install warning signs for drilling and maintenance at the external part of the site and at a distance of 100 meters
- Inform residents and place proper safety and diversion signs at sensitive areas within the project area (i.e. near schools, shops hospitals and agriculture areas)
- Install pedestrian and vehicular passages near residential areas
- Accidental oil spillage shall be well controlled
- Make sure at least three sets of first aid kits are present on the construction site.
- Access to hospitals should not be impeded at any time
- Properly manage trucks and heavy machinery entering and exiting the construction site.
- Training of heavy machinery drivers about road safety
- Equip Project drivers with telephones for contacting the emergency services to enact the EPRP if necessary in case of emergency.
- Keep stakeholders informed of rehabilitation schedule and abide by assigned timing
- Manage the grievance mechanism through which community members can make complaints about project activities
- The community health and safety plan shall cross reference with other relevant management plans such as the TMP and EPRP. Local health care and emergency services shall be consulted in the development of the plan.

Occupational Health and Safety (OHS) Plan

In addition, the Contractor will need to develop a site-specific OHS plan to ensure the workers' health and safety against possible accidents and injuries from the various rehabilitation activities. The plan shall be reviewed by the Employer or his designated representative and shall include, inter alia, the following:

- Hazard Identification and assessment including (Physical injuries from: Traffic accidents, Falling from moving vehicles, Loss of stability and overturning of equipment, Falling from height, Hit by construction materials, Slips, trips and falls, Electrical incidents, Burns from hot works, Health problems due to: Fumes and dust, Noise and vibration, Excessive manual handling, Disease outbreaks, Asphyxiation in confined spaces and Fire)
- OHS protection measures for the identified hazards
- OHS protection measures for Unexploded Explosive Ordnance
- Prevention and precaution measures for COVID-19
- Identify the mandatory personal protective equipment (PPE) to be used including hard hats, safety boots, reflective vest as well as specific PPEs

- Identify and manage dangerous substances planned to be used on the project area
- Work Permit System for Confined Space Entry, Hot Works, Excavation, Lifting, Working at Height, Handling of Hazardous Materials, and Electrical works
- Safe Work Method Statements
- Hazard communication
- Emergency and Evacuation procedures
- Accident and incident reporting and investigation

The Contractor shall implement mitigation measures as per the Occupational Health and Safety Plan. Measures include but not limited to:

- Personnel and visitors to rehabilitation activity areas shall be equipped with a safety helmet, safety shoes and a reflective jacket as a minimum.
- Adequate quantities of PPE shall be available on the project areas and stored properly
- Personnel shall be trained on how to use and care for PPE
- Conduct training and awareness meetings including correct use of PPE, health and safety procedures, and handling hazardous material containers and related wastes
- Ensure refreshing training session on occupational health and safety measures is conducted on a monthly basis
- Ensure that supervision, directly in charge of construction activities, fully brief and discuss with Personnel HS Tool Box Talks at the start of each work day and prior to commencing new activities. These talks shall be conducted in a language understood by the workforce. A checklist shall be utilised for this purpose. At a minimum it shall include the following: Nature of the job, associated hazards, safe working methods to be adopted and requirements of the Permit to Work
- Ensure a minimum of first-aid provisions on any work site, including: suitably stocked first-aid kits; a person, respectively an adequate number of staff appointed and trained to take charge of first-aid arrangements and ensure that staff and workers are informed about first-aid arrangements
- Equip the project area with a communication system exclusively for the purposes of communication with the first aid services. Information on how to communicate with the first aid services shall be clearly indicated near the communications equipment
- Collaborate with local health authorities and make arrangement with an appropriate number of local doctors, and/or nurses, hospitals and ambulance services to ensure that medical staff, first aid facilities, and ambulance service are available within the project area
- Measures as per national guidelines published by WHO and Ministry of Public Health regarding COVID-19 prevention and quarantine procedures
- Workplace inspections

Chance Finds Procedure

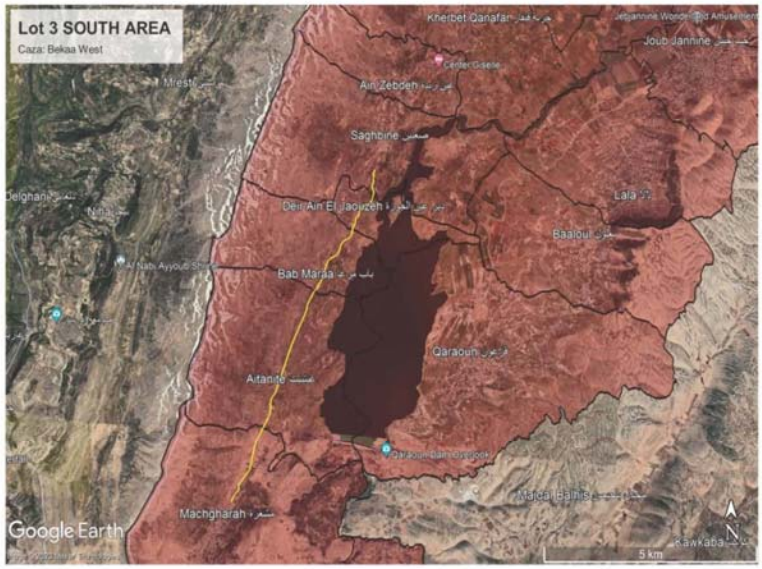
The chance find procedure is a project-specific procedure that identify actions necessary if previously unknown heritage resources, particularly archaeological resources, are unexpectedly encountered during project construction phase. Chance Find Procedure will set out how chance finds associated with the project will be managed and will include the following requirements:

- Notify relevant authorities (Directorate of General of Antiquities) of found objects or sites
- Fence the area of finds or sites to avoid further disturbance
- Conduct an assessment of found objects or sites by cultural heritage experts in order to identify and implement actions consistent with the national legal requirements Train project personnel and project workers on chance find procedures

ANNEX 12: PUBLIC CONSULTATION

Announcement

إعلان



عدد الطرق: ١ قضاء: **البقاع الغربي** طول الطرق الإجمالي: ٨,٥٠ كلم

ضمن إطار مشروع الطرق والعمالة الممّول من قبل البنك الدولي، كلّف مجلس الإنماء والإعمار المكتب الهندسي الإستشاري (ACE) للقيام بالدراسة المفصلة وإعداد ملفات تلزيم لتأهيل طرق محددّة تقع ضمن نطاق قضاء **البقاع الغربي** كما هو مبين في الخريطة أعلاه.

إن المشروع سيشمل أعمال تأهيل ٨,٥٠ كلم من الطرق ضمن قضاء **البقاع الغربي**، حسب المتطلبات الفنية والسلامة العامة وسيتضمن أعمال تزفيت وطبقة أساس وإشارات السير كما أعمال تصليح جدران دعم، حواجز أمان، أرصفة، أقنية ومجاري.

ووفقاً لمعايير البنك الدولي، إن المكتب الهندسي الإستشاري يقوم بإعداد خطة إدارة بيئية واجتماعية (ESMP) لهذا المشروع من أجل تحديد ومعالجة وتقليص أي آثار ضارة محتملة أثناء أعمال تنفيذ التأهيل وبالتالي سيتم عقد لقاء عام لعرض مكونات المشروع ومناقشة المواضيع البيئية والاجتماعية المتعلقة بالمشروع يوم **الخميس** بتاريخ **٢٧ نيسان ٢٠٢٣** الساعة **العاشرة صباحاً** في **مركز إتحاد بلديات البحيرة**.

شاكرين لكم تعاونكم وتجاوبكم، وآملين استمرار التعاون لكل ما فيه خدمة وصحة وسلامة الوطن والمواطن.

Invitation Sample

المكتب الهندسي الاستشاري ايس ش.م.ل.
شركة مساهمة لبنانية رأسمالها ٣٠،٠٠٠،٠٠٠،٠٠٠ مدفوع بكامله – سجل تجاري ١٦٥٢٢
Associated Consulting Engineers S.A.L.

بيروت في ٢٠ نيسان ٢٠٢٣

٦٩/٠٢٣/L2102

جانب رئيس إتحاد بلديات البحيرة المحترم

المشروع: **تأهيل الطرق (تمويل من البنك الدولي)**
قضاء البقاع الغربي – محافظة البقاع

الموضوع: **اجتماع مشاركة عامة**

تحية طيبة وبعد،

بالإشارة الى المشروع والموضوع أعلاه، وضمن إطار مشروع الطرق والعمالة الممّول من قبل البنك الدولي، كلّف مجلس الإنماء والإعمار المكتب الهندسي الإستشاري (ACE) للقيام بالدراسة المفصلة وإعداد ملفات تلزيم لتأهيل طرق محدّدة تقع ضمن نطاق قضاء البقاع الغربي.

إن المشروع سيشمل أعمال تأهيل ٨,٥٠ كلم من الطرق ضمن قضاء **البقاع الغربي**، حسب المتطلبات الفنية والسلامة العامة وسيتضمن أعمال تزفيت وطبقة أساس وإشارات السير كما أعمال تصليح جدران دعم، حواجز أمان، أرصفة، أقنية ومجاري.

ووفقاً لمعايير البنك الدولي، إن المكتب الهندسي الإستشاري يقوم بإعداد خطة إدارة بيئية واجتماعية (ESMP) لهذا المشروع من أجل تحديد ومعالجة وتقليص أي آثار ضارة محتملة أثناء أعمال تنفيذ التأهيل وبالتالي سيتم عقد لقاء عام لعرض مكونات المشروع ومناقشة المواضيع البيئية والاجتماعية المتعلقة بالمشروع يوم **الخميس** بتاريخ ٢٧ **نيسان** ٢٠٢٣ الساعة **العاشرة صباحاً** في **مركز إتحاد بلديات البحيرة**.

وعليه يسرنا أن نوجه لكم الدعوة للمشاركة في هذه الورشة راجين التكرم بتسمية مندوب من طرفكم للحضور والاتصال للتأكيد مع السيدة كارلا منصور (المكتب الهندسي الاستشاري) على هاتف رقم (٠١/٤٩٧٢٥٠ رقم فرعي ١٢٩) أو فاكس رقم (٠١/٤٩٧٥٥٠).

كما نرفق ربطاً مع هذا الكتاب إعلان لإجتماع المشاركة العامة هذا ونرجو من حضرتكم وضعه حيث ترونه مناسباً ليتمكن سكان البلدة والمعنيين من الإطلاع عليه.

إن هذه الدعوة مفتوحة لأصحاب المنفعة، ضمناً وليس حصراً: منظمات المجتمع المدني والمنظمات الغير حكومية وكافة البلديات المعنية بأعمال التأهيل.

وتفضلوا بقبول فائق الاحترام،

هشام الخليلي
مدير المشروع

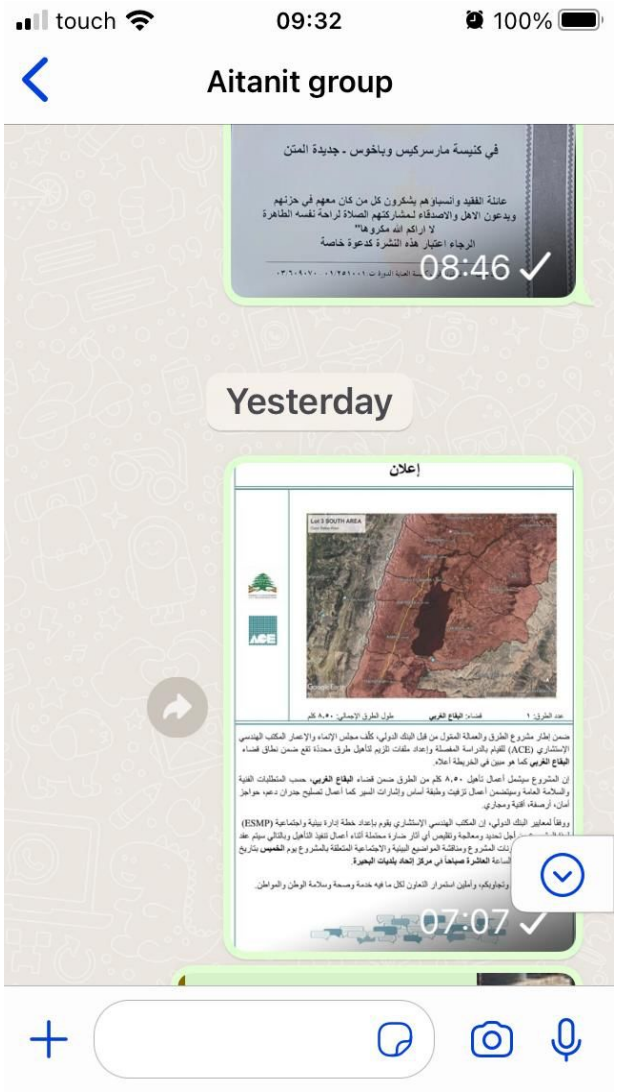
مرفقات: إعلان الإجتماع

P.O.Box 11-3446 - Fax: 01 - 497550 - Beirut, Lebanon - Tel: 01 - 497250/1/2 - email:ace@ace-intl.com (٠١)٤٩٧٢٥٠/١/٢ ص.ب ١١-٣٤٤٦ - فاكس (٠١)٤٩٧٥٥٠ - بيروت - لبنان - تلفون:

Invitation to public communities

on Facebook platform

on whatsapp group



Attendance Sheet

جلسة مشاركة عامة - الحضور

PUBLIC HEARING - ATTENDANCE SHEET

مشروع الطرق والعمالة في لبنان

ESMP

Date: 27/04/2023 ; 10:00 am

Caza: Bekaa West

Venue: مركز اتحاد بلديات البحيرة

الامضاء Signature	الهاتف Telephone	الصفة Position	البلدة Town	المؤسسة Institution	الاسم Name	
	03 940276	Env and Social Expert	—	CDR-REP PMU	ريتا أ. عطفان	1
	70-875298	رئيسة التعاونية	مشغرة	التعاونية الحرفية مشغرة	خولة عيسى	2
	76-043521	عضو	مشغرة	التعاونية الحرفية	ناديا مرعي	3
	81-088204	نائب رئيس البلدية	مشغرة	بلدية مشغرة	عادل ضاهر	4
	71-150467	رئيس الارشاد		اتحاد بلديات البحيرة	يحيى ضاهر	5
	71770093	رئيسة بلدية	باب مارع	بلدية باب مارع	نينا شحادة يونس	6
	70/830908		جب جنين	مجتمع محلي	رشا ادريس الغيث	7
	03/776595		جب جنين	مجتمع محلي	ابراهيم الحدشيتي	8
	٠٣/٧٥٤٠٤٤	رئيس بلدية	عين زبدة	بلدية عين زبدة	سهيل زينة	9
	٠٣/٤٧٥٠٦٨٥	عضو بلدي	منصورة	بلدية منصورة	خليل زرق	10
	٠٣٨٠٧٩٦٨	-	مشغرة	مختار مشغرة	صبري صالح	11
	71-145791		باب مارع	نائب الرئيس	عزيز الكاملاني	12
		عضو بلدي	[illegible]	عضو	[illegible]	13
						14
	08670260		صغبين	دير عين الجوزة	الأب شارل الشامية	15
	03-911567	مهندس بلدية	[illegible]	بلدية [illegible]	وجيه سالم	16
	03612971	رئيس البلدية	عيتنيت	بلدية عيتنيت	أسعد نجم	17
	70/397808	Road Safety Expert	—	ACE	سلمى نقار	18
	70/575357	Road Design Eng.	—	ACE	ربيع مدرس	19
	03/049111	نائب رئيس البلدية	القرعون	بلدية القرعون	احمد عماش	20

Public Hearing Presentation and Photos

3. مراحل إعداد الخطة البيئية والإجتماعية

دراسة إطار السياسات والأطر القانونية

دراسة البيئة الطبيعية والإجتماعية في موقع المشروع

تقدير وتقييم الآثار البيئية المحتملة الناتجة عن المشروع

المشاورة العامة مع المعنيين والمهتمين بالمشروع

تحديد الإجراءات التخفيفية للآثار السلبية

تحديد وسائل الرصد والمراقبة

4. وصف المشروع

4.1 الطريق التي سيتم إعادة تأهيلها في قضاء البقاع الغربي

- صغبين – مشغرة

طول الطريق المذكورة أعلاه: 8.5 كيلومتر تقريباً

4.2 موقع المشروع في قضاء البقاع الغربي

4.3 صور لعدة مواقع ضمن طريق صغبين - مشغرة في قضاء البقاع الغربي

4.3 صور لعدة مواقع ضمن طريق صغبين - مشغرة في قضاء البقاع الغربي (تابع)

Existing Severe Pavement Deterioration

4.3 صور لعدة مواقع ضمن طريق صغبين - مشغرة في قضاء البقاع الغربي (تابع)

Poor Road Side & Absence of Road Safety Barriers

4.3 صور لعدة مواقع ضمن طريق صغبين - مشغرة في قضاء البقاع الغربي

Deteriorated Stone Wall

4.3 صور لعدة مواقع ضمن طريق صغبين - مشغرة في قضاء البقاع الغربي (تابع)

Special Treatment Required Due To Existing Potable Water Network

5. ماذا يتضمن المشروع خلال مرحلة التنفيذ؟

بناءً على الدراسات الهندسيّة، إن أعمال التأهيل المقترحة خلال مرحلة التنفيذ تضمّ التّالي حسب المتطلبات الفنية والسلامة العامة:

- تأمين/تأهيل الطبقات الإسفلتية والأساس
- تأمين/تأهيل إشارات سير و تخطيط الطرقات
- تأمين/تأهيل جدران دعم إستنادية
- تأمين/تأهيل حواجز سلامة جانبية

4.3 صور لعدة مواقع ضمن طريق صغبين - مشغرة في قضاء البقاع الغربي (تابع)

5. ماذا يتضمن المشروع خلال مرحلة التنفيذ؟ (تابع)

بناءً على الدراسات الهندسيّة، إن أعمال التأهيل المقترحة خلال مرحلة التنفيذ تضمّ التّالي حسب المتطلبات الفنية والسلامة العامة:

- تأمين/تأهيل الأقنية والعبّارات لتصريف مياه الأمطار
- تأهيل الأرصفة الموجودة

6. الآثار البيئية والإجتماعية الإيجابية للمشروع

- تقليل الإزدحام المروري وتسهيل التنقل داخل وإلى القضاء
- خلق فرص عمل لأبناء المنطقة والمساهمة في التنمية الإقتصادية المحلية
- المحافظة على السلامة العامة في الطرقات من خلال تقليل حوادث السير والإنجرافات
- تشجيع الشركات المحلية من خلال بيع المواد الخام والآلات والسلع
- إزدهار التنمية الإقتصادية والإجتماعية في المناطق الريفية
- التقليل من تلوث الهواء والغبار

7. الآثار البيئية والاجتماعية السلبية المحتملة للمشروع خلال مرحلة التنفيذ (تابع)

النشاط	الاثر المحتمل
حركة الآليات والمركبات	زيادة إحتمال حوادث السير
إنبعاثات الغبار وزيادة نسبة الضجيج	ضرر على السلامة العامة وسلامة العمال
التدابير التخفيفية	
• إدارة حركة المرور أثناء تنفيذ المشروع وتعيين موظف لهذه الغاية	
• التأكد من أن الإشارات التحذيرية وأنظمة الإضاءة ظاهرة وموجودة في الأماكن المكتظة وخاصة قرب المدارس والمستشفيات والمناطق التجارية	
• حصر أعمال التنفيذ خلال فترة النهار	

7. الآثار البيئية والإجتماعية السلبية المحتملة للمشروع خلال مرحلة التنفيذ

النشاط	الاثر المحتمل
أعمال بناء أو إصلاح مجاري مياه الأمطار	أضرار على البنية التحتية
التخلص غير السليم من النفايات الصلبة	تلوث التربة والمياه
إحتمال لحالة حوادث تسرب	تلوث التربة والمياه
التدابير التخفيفية	
• التخلص السليم من النفايات الصلبة الناتجة عن أعمال التنفيذ	
• صيانة كافة الآليات بشكل دوري لمنع حوادث التسرب	

8. الآثار البيئية والإجتماعية السلبية المحتملة للمشروع خلال مرحلة التشغيل

النشاط	الاثر المحتمل
زيادة حركة المرور	زيادة إحتمال حوادث السير
زيادة حركة التنقل على الطرق	زيادة إنبعاث ملوثات الهواء والضجيج والإرتجاجات
زيادة الإنسكابات والتسريبات الناتجة عن المركبات المتنقلة	تلوّث التربة والمياه
التدابير التخفيفية	
• الصيانة الدورية للطرق	
• صيانة البنية التحتيّة مع تفادي تأثيرها على الطرق	
• تقليل حركة مرور الشاحنات الثقيلة بهدف المحافظة على الطريق	

9. آلية مراجعة الشكاوى

يمكن للأشخاص المعنيين الإستفسار عن معلومات إضافية أو/و تقديم أية شكوى (في حال وجودها) بالتواصل مع وحدة آلية مراجعة الشكاوى من الإثنين حتى الجمعة بين 9:00 صباحاً و15:00 بعد الظهر، عبر:

الهاتف: 01980096 مقسم 317

البريد الالكتروني: GRM.REP@cdr.gov.lb

تسجيل كتاب رسمي لدى مجلس الانماء والاعمار

(العنوان: تلة السراي - رياض الصلح، بيروت – لبنان)

كما يمكن إبداء الرأي حول تنفيذ المشروع من خلال تعبئة النموذج الموجود عبر الرابط التالي

https://cdr.impact.gov.lb/worldbankmobile/home/main?lang=ar

أو عن طريق مسح هذا الباركود

سيكون رأيك مجهول المصدر

أسئلة ومناقشة عامة

يمكنكم إبداء رأيكم:

عبر التواصل مع
المكتب الهندسي الإستشاري
هاتف: 01/497250
فاكس: 01/497550
بريد الكتروني: ace@ace-intl.com

أو

عبر التواصل مع
وحدة مشروع الطرق والعمالة
في مجلس الانماء والاعمار
هاتف: Ext. 317 01/980096
بريد الكتروني: rstephan@cdr.gov.lb

شكـــــراً لحضوركم ومشاركتكم

ANNEX 13: GRIEVANCE MECHANISM FORM AND LOG

Reference No:	
Contact Information **Please mark how you wish to be contacted (mail, telephone, e-mail).**	☐ **By Post: Please provide mailing address:** _____ _____ _____ ☐ **By Telephone:** _____ ☐ **By E-mail** _____
Preferred Language for communication	☐ **Arabic** ☐ **English**

Description of Incident or Grievance:	What happened? Where did it happen? Who did it happen to? What is the result of the problem?
Date of Incident/Grievance	
	☐ **One time incident/grievance (date _____)** ☐ **Happened more than once (how many times? _____)** ☐ **On-going (currently experiencing problem)**
What would you like to see happen to resolve the problem?	

Signature: _____

Date: _____

GM Log Book

Name/group of commenter/ complainant	Complaint Received date	Description of Issues	Proposed Corrective Actions	Date of Response	Status		
					Solved	Ongoing	Pending