

Council for Development and Reconstruction

**Environmental and Social Management Framework
(ESMF) Addendum FOR THE ROADS AND EMPLOYMENT
PROJECT (REP) – COMPONENT 4: AGRICULTURAL SUPPORT
TO SMALL-SCALE FARMERS**

Volume I

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LIST OF ACRONYMS

AFAOR	Assistant FAO Representative
CAS	Central Administration of Statistics
CBD	Convention on Biological Diversity
CDR	Council for Development and Reconstruction
CFM	Complaints Feedback Mechanism
CNRS-L	Conseil National de la Recherche Scientifique - Liban
COM	Council of Ministers
COVID-19	Novel Coronavirus
CRC	Central Review Committee
CREAL	Centre de Recherches & d'Etudes Agricoles Libanais
EHSGs	Environmental, Health and Safety Guidelines
ELARD	Earth Link and Advanced Resources Development
ESMF	Environmental and Social Management Framework
ESMMF	Environmental and Social Management and Monitoring Framework
ETF	European Training Federation
FAO	Food and Agriculture Organization of the United Nations
FAO RNE	FAO Regional Office for the Near East and North Africa
FAOR	FAO Representative
GAP	Good Agricultural Practices
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gases
GOL	Government of Lebanon
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immuno-Deficiency Syndrome
IBAs	Important Bird Areas
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
ILO	International Labour Organization
IPAs	Important Plant Areas
IPM	Integrated Pest Management
ISWM	Integrated Solid Waste Management
KBAs	Key Biodiversity Areas
LARI	Lebanese Agricultural Research Institute
LBP	Lebanese Pound

LCRP	Lebanon Crisis Response Plan
LIBNOR	Lebanese Standards Institution
LINQ	Lebanon Investment In Quality
MCM	Million Cubic Meters
MoA	Ministry of Agriculture
MoA DAR	Ministry of Agriculture – Directorate of Animal Resources
MoA RC	Ministry of Agriculture Regional Centers
MoE	Ministry of Environment
MOET	Ministry of Economy and Trade
MPWT	Ministry of Public Works and Transport
MSDS	Material Safety Data Sheet
MSW	Municipal Solid Waste
NEO	National Employment Office
NGO	Non-Governmental Organization
NSEQ	National Standards for Environmental Quality
OIG	Office of the Inspector-General
OMSAR	Office of the Minister of State for Administrative Reform
OP	Operational Policy
OP/BP	Operational Policy/Bank Procedure
PDO	Project Development Objectives
PHI	Pre-Harvest Interval
PIU	Project Implementation Unit
PMP	Pest Management Plan
PPE	Personal Protective Equipment
PSC	Project Steering Committee
PSEA	Protection from Sexual Exploitation and Abuse
RACs	Regional Approval Committees
REP	Roads and Employment Project
RPF	Resettlement Policy Framework
SDATL	Schéma D'Aménagement du Territoire Libanais
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SPNL	Society for the Protection of Nature in Lebanon
SWM	Solid Waste Management
TPMA	Third-Party Monitoring Agent
UN	United Nations
UN ESCWA	United Nations Economic and Social Commission for Western Asia
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
USD	United States Dollar
WB	World Bank
WBG	World Bank Group
WFP	World Food Programme
WHO	World Health Organization
YASA	Youth Association for Social Awareness

EXECUTIVE SUMMARY

PROJECT BACKGROUND

As part of the support provided to Lebanon to meet its development needs the World Bank approved in February 2017 the Road and Employment Project (REP) through a US\$200 million Loan from the International Bank for Reconstruction and Development (IBRD). The REP aims to improve the efficiency of road sector expenditures, while stimulating the economy and creating jobs. The REP was declared effective on October 30, 2018 when the Lebanese Parliament endorsed Law 90 that allowed the Lebanese Government to sign the Loan agreement with IBRD for its implementation by the Council for Development and Reconstruction (CDR), representing the Government of Lebanon (GOL).

Originally, the REP comprised three components as follows:

1. Roads Rehabilitation and Maintenance (US\$185 million) will primarily finance work for the rehabilitation and maintenance of about 500 kilometers of primary, secondary, and tertiary roads, including road safety and spot improvements as well as supporting consultancy services.
2. Improving Road Emergency Response Capacity (US\$7.5 million), aims at improving the capacity of the Ministry of Public Works and Transport (MPWT) to deal with road emergency works, especially those induced by snow and climate extremes.
3. Capacity Building and Implementation Support (US\$7.5 million), is aimed at building the capacity of the Lebanese agencies in the planning and management of the road sector.

The parent REP is classified as a Category “B” project, with two safeguard policies triggered: OP4.01 and OP4.12. An Environmental and Social Management Framework (ESMF)¹ and Resettlement Policy Framework (RPF)² were prepared, consulted, Bank-cleared and disclosed in 2018. In addition, all site-specific safeguard instruments (ESMPs developed for 25 selected sites across Lebanon) were consulted, Bank-cleared and disclosed in 2020³.

As a result of the COVID-19 pandemic and the financial crisis that have threatened the overall food security of Lebanon, and in order to support small farmers in facing reduced ability to produce, the initial REP loan has been restructured to create a fourth component on Farmers Support, upon the request of Ministry of Agriculture (MoA) and following the approval of Lebanese Parliament through Law No. 186 of October 7, 2020.

The restructuring of the abovementioned loan resulted in allocating US\$10 million to support small-scale farmers in order to enable agricultural production on these farms through the provision of agricultural inputs such as fertilizers, seeds, seedlings and animal feed through the Food and Agriculture Organization (FAO), the Implementing Agency for Component 4, and under the technical leadership of the Ministry of Agriculture (MoA).

¹ For the disclosed ESMF, please refer to this link:

<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/ESMF.pdf>

² For the disclosed RPF, please refer to this link:

<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/RPF.pdf>

³ For the disclosed ESMPs, please refer to this link: <https://www.cdr.gov.lb/en-US/Studies-and-reports/Roads-and-Employment.aspx>

PROJECT DESCRIPTION

Component 4 is expected to support farmers through a voucher program, as well as distribute around 1 million vaccines through the vaccination program. At least 10 % of beneficiaries are expected to be female producers (based on the Agricultural Census of 2010, only 9% of the total number of farms in Lebanon are women-led (MoA/FAO/AICS, 2010)). The provision of support to the farmers will be based on the following two subcomponents:

i. Subcomponent 1. Vouchers for crop and livestock production inputs (US\$9 million - funded by IBRD).

Approximately 26,700 smallholder (with land area of up to 20 dunums⁴) farmers in Lebanon (whereby at least 10% of the beneficiaries shall be women) will be supported by providing them with vouchers for the procurement of essential agricultural inputs, to mitigate the impact of COVID-19 lockdowns and financial crises on food security in the country. Two types of paper-based vouchers would be offered: one for crop production inputs, and another for livestock production inputs, mostly feed. The crop production input vouchers will not finance any type of pesticides from the list of agricultural inputs. The value of the voucher would be US\$300, which allows reaching around 26,700 farmers, or around 20% of the approximate 140,000 farmers meeting the land area criterion under the support program.

ii. Subcomponent 2. Vaccination program (US\$1 million - funded by IBRD).

Veterinary vaccines will be procured under this subcomponent. The vaccination program will target small and medium-sized livestock producers (having a maximum of 10 dairy cows, or 75 sheep/goats,); as larger farms tend to procure vaccines themselves. The subcomponent will support the annual animal vaccination campaigns of the Directorate of Animal Resources (DAR) under the MoA. The eligible expenditures under this sub-component will include vaccines, vaccination equipment to deliver the procured vaccines, and fuel necessary for the delivery of vaccines and the vaccination teams to the locations where the vaccines are necessary, in addition to recruitment of technicians to support the MOA-DAR vaccination team.

Project Information Campaign

The MoA and FAO will jointly announce the support program through awareness raising and media campaigns at the national level and across all the seven target governorates. The campaigns will provide information on the eligibility criteria for beneficiary selection, the agricultural inputs and animal feed that will be on offer, and the application procedures to be followed.

In order to ensure the effective implementation of the project in engaging the largest possible number of beneficiaries, as well as to ensure their access to relevant information, a communication and visibility plan has been developed by FAO. Moreover, the MoA will ensure wide dissemination of the call for applications through the municipalities/local authorities, MoA's General Directorate of Cooperatives, farmers' associations, trade associations and other suitable channels via the relevant audio and visual media outlets as well as social media platforms.

⁴ Detailed beneficiary eligibility criteria are in the Voucher Program Operations Manual.

Several tools and communication channels shall be utilized from the beginning of the implementation phase of the project in order to ensure that all targeted beneficiaries are aware of the project. These include:

- Organizing a launching event;
- Producing an animated movie;
- Printing of brochures, vouchers, and posters;
- Sending mass emails based on MoA's list of farmers;
- Disseminating project information via LARI's mobile application that many farmers use;
- Social media posting (on Twitter, Facebook, and Whatsapp); and
- TV/radio media coverage

Most of the activities listed under the communication plan will not incur additional costs on the project as the services for developing and distributing them will be conducted internally by the FAO communication department. However, additional costs will be incurred for printing the vouchers and the vouchers-related printed material (such as posters). The estimated costs of the latter activities is estimated at 28,450 USD.

PROJECT RATIONALE

As of October 2019, Lebanon's economic and social status started rapidly plunging into a dire state due to multiple and concurrent crises namely:

- i. The COVID-19 pandemic and associated severe measures of lockdown imposed between March 2020 and June 2020 on the population and businesses in Lebanon to reduce the spread of COVID-19, and again in November and December 2020 (before the holidays). Another lockdown was announced on January 2, 2021 from January 7 until February 22, 2021. The lockdowns caused severe disruption in people's lives and most of the economic activities in the country.
- ii. The impacts of COVID-19 on the agricultural sector further exacerbated the consequences of the financial crisis, threatening the overall food security of Lebanon. Due to border closures, movement restrictions, and supply chain disruptions affecting food imports, Lebanon's food security in particular was negatively affected. The food insecurity situation is further aggravated by the raising poverty rate, which was estimated at 55% in August 2020 (UN ESCWA, 2020b). The risk associated with food security is more significant in Lebanon given the reliance on imports, the current economic and monetary crises, and the capital control measures hindering the payment of suppliers. According to the Centre de Recherches & d'Etudes Agricoles Libanais (CREAL), agricultural production and GDP will decrease by 38 % (plant production -47%; animal production -26%) as a result of reduced use of inputs due to absence of credit facilities, devaluation of currency and reliance on imported inputs. The preliminary discussions with importers of agricultural inputs indicate that their volume of business would decline by 40-60 % in 2020.
- iii. The massive explosion at the Beirut Port on August 4, 2020 devastated the city, killing at least 200 people, wounding thousands, and displacing around 300,000, adding to the multiple crises Lebanon had already been facing. These included: (i) spill overs from the conflict in Syria, which led Lebanon to host the largest per capita refugee population in the world; (ii) a financial and economic crisis that induced systemic macro-financial failures, such as impairments of the banking sector, risks to deposits, an exchange rate collapse, a default on sovereign debt, triple digit inflation

rates, and severe economic contraction; and (iii) impacts from the COVID-19 pandemic. The impacts of these crises are reversing hard-won development gains.

The crises aforementioned have affected the livelihoods of smallholder producers, and have threatened the food security in Lebanon. Supporting access to inputs for Lebanese farmers is therefore crucial to mitigate the short-term risk of food insecurity, boost the economy, and ensure continued food production.

Implementing the farmers' support programme under Component 4 might entail several environmental and social impacts, thus this report serves as an addendum to the existing Bank-cleared Environmental and Social Management Framework (ESMF) report of 2018⁵. This addendum focuses on providing an environmental and social management process for the design and implementation of Component 4 activities.

The addition of Component 4 does not require changing the safeguard category for the REP. In order to manage the environmental and social risks associated with the new Component 4, relevant mitigation measures as well as the necessary institutional arrangements are elaborated through this addendum to the ESMF.

The addendum to the ESMF includes a veterinary waste management plan (for the vaccination program – Appendix D in Volume 2) and road safety measures to address the logistics of delivering the vaccines. Given the current COVID-19 pandemic, all environmental and social risks associated with the project activities, and consultation outcomes, and the project's GRM, are covered in the addendum to the ESMF as per the World Bank technical note to conduct consultations during times of constraints (Appendix F in Volume 2).

INSTITUTIONAL, POLICY AND LEGAL FRAMEWORK

The institutional framework for the implementation of REP Component 4 is shared between government authorities including the Ministry of Agriculture (MoA), the Council for Development and Reconstruction (CDR), the Ministry of Environment (MOE), as well as the United Nations Food and Agriculture Organization (FAO). In addition, field validations and verifications will be conducted by a Third-Party Monitoring Agent (TPMA) to be recruited by FAO. Another TPMA, to be recruited by CDR, will be responsible to verify that the vaccinations have been delivered as per the outputs agreement. Both TPMAs will be hired with terms of references acceptable to the World Bank.

CDR shall liaise with the World Bank on all issues related to the financial aspects of the project. FAO will be the implementing agency for the farmer support program, under the technical leadership of the MoA. FAO will implement and supervise the identified environmental and social mitigation measures germane to FAO's scope of work under this component.

The implementation of Component 4 is affected by a number of legislations and regulations covering various sectors including environment, Health and Safety, agriculture, Solid Waste management, labor, and gender.

The most important environmental legislations are listed below:

- Decree 5605 of 2019 – Domestic Waste Sorting at Source;
- Decree 5606 of 2019 - Determination of the Fundamentals of Hazardous Waste Management;
- Law 80 of 2018 – Integrated Solid Waste Management;
- Decree 13389 of 2004 - Types and Management of Medical Waste;
- Law 444 of 2002 – Environment Protection Law;
- Decision 52/1 of 1996 - National Standards for Environmental Quality (NSEQ) and the Environmental Limit Values (ELVs) for air, water, and noise; and
- Law 64 of 1988 – Protection of the Environment against Pollution from Solid Waste and Hazardous Material.

As for the agricultural legislations, the Lebanese Government and MoA have issued many decisions between 1946 and 2020 in an effort to manage this sector, most notably:

- Law 158 of 2020 - Organization of the Organic Farming Sector;
- Decree 5706 of 2019 – Endorsement of LIBNOR standards related to fertilizers and soil conditioners;
- Decision 1102/1 of 2012 - Amendment of MoA Decision 507/1 with respect to the allowed concentration of chemicals in fertilizers, as well as to the labelling requirements of the fertilizers;
- Law 68/6 of 1968 - Regulating the trade of fertilizers, agricultural medicines and fodder.

With regards to social legislations, the most prominent legal texts issued in Lebanon include:

- Law 205 of 2020 – Criminalizing sexual harassment and victims' rehabilitation.
- Decree 3791 of 2016 – Official minimum wage for employees and workers subject to the Labor Law;
- Law 293 of 2014 - Law on the Protection of Women and Family Members from Domestic Violence;
- Decree 8987 of 2012 – Prohibition of the employment of adolescents and children under 18 years of age in jobs that pose a risk to their health, safety and behavior;
- Decree 11802 of 2004 – Occupational Health and Safety;
- Law 207 of 2000 – Prohibition of all forms of discrimination between men and women in the workplace; and
- Labor Law of 1946 and its amendments – Regulation of the framework of an employer-employee relationship. It is worth mentioning that the law protects vulnerable people such as women, includes provisions against child labor, and defines the work conditions for children above the age of 13 in order to protect them from exploitation (minimum age of employment further increased to 18 years of age as per Decree 8987 of 2012).

BASELINE CONDITIONS

This addendum to the ESMF presents general background information about the environmental and social baseline and settings related to Component 4 only, given that comprehensive baseline conditions were documented in the initial REP ESMF. The baseline conditions presented are generic given that Component 4 of the REP will be implemented across the country and no specific locations have been determined.

From an environmental point of view, Lebanon has abundant water resources distributed all over the country with 13 rivers, some of which with recognizable flow rates such as Litani River, Orontes (Assi) River,

El Kebir River and Hasbani River. Moreover, Lebanon has around 5,050 springs, whereby the major ones are fed by either the Sannine-Maameltain (C4-C5) Aquifer such as Afqa Spring, Keserouane Aquifer (J4) such as Ain El Delbi, or both, which is the case in the Wazzani Spring. Water wells on the other hand are also considered as an important water resource in Lebanon for agricultural, domestic, industrial and commercial purposes. However, the majority of the wells in the country are unlicensed private wells.

In addition, Lebanon comprises 12 different soil types with Leptosols covering the largest surface area. Cambisols on the other hand, are considered to be good for agricultural usage and can be one of the most productive soils in terms of agriculture which justifies their presence in the Bekaa valley and Akkar. As such, natural and agricultural areas are the most prominent land use/cover in Lebanon. Natural areas in Lebanon can be considered to be a biodiversity “hotspot” due to its situation in the Mediterranean area.

Finally, since Component 4 includes an animal vaccination program that will ultimately generate veterinary waste, the veterinary healthcare waste management system in the country has been slowly improving as several facilities are now available in the country for the treatment of healthcare hazardous waste. Empty vaccine vials and used needles from animal vaccination campaigns are currently returned back by the veterinarians and technicians to the MoA RCs. Empty vials are not refrigerated and are disposed of along with regular domestic waste. On the other hand, the used needles are boiled to sterilize them before being disposed of or reused again in the vaccination campaign if needed.

The country’s population is estimated at 4,842,500, 79.8% of which are Lebanese and 87.31% residing in urban areas. Lebanon has also seen significant influx of displaced Syrians, whereby it is estimated that around 919,578 registered displaced Syrians live in Lebanon as of September 2019.

Given the recent economic and financial crises in the country, it is estimated that almost 45% of the Lebanese population now lives in poverty due to currency depreciation and hyperinflation. Unemployment rates amongst the population is on the rise as the labor market has been severely affected by COVID-19 pandemic and the current economic and financial crises.

The agricultural sector in Lebanon accounts for only 5% of the Gross Domestic Product (GDP) in Lebanon, supporting around 140,000 farmers or landholders. Smallholder farmers mainly prevail in the governorates of Mount Lebanon, North Lebanon, and Nabatiyeh, whereas large scale farmers in Lebanon are mostly distributed over the Beqaa Valley, Akkar governorate, and the Qasmiyeh plains in South Lebanon (MoA/FAO/AICS, 2010).

Around one third of male-headed Syrian refugee households are engaged in agriculture, compared to 46% of female-headed households (UNHCR, UNICEF, and WFP, 2020). A 2016 study showed that 2.3% of the total Palestine Refugees in Lebanon (PRL) are skilled agricultural and fisheries workers. Men are more engaged in agricultural activities than women, with 2.6% and 0.6% of the total labour force, respectively (Chaaban et al., 2016).

The agricultural sector has been facing tough challenges since the 1990s, and the farmers’ resilience has been quite tested ever since. Nowadays, with the current COVID-19 pandemic and the financial crisis in Lebanon, the entire sector (farmers, retailers, and importers) has been affected.

POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

Activities executed under the Component 4 of the REP will affect the natural and social environment. The main environmental and social aspects to take into consideration are related to the procurement of agricultural inputs (seeds, seedlings, fertilizers, animal vaccines, and fodder), their storage and transportation along with the transportation of personnel for the vaccination campaign, management of the vaccination waste, and the use of fertilizers by the farmers.

Component 4 of the REP project is expected to have positive impact on the social level. The activities will result in:

- Restoration of production and enhancement of productivity and business opportunities in the agricultural sector;
- Enhancement of food security and alleviation of poverty;

Since Component 4 comprises activities that involve chemical and biological compounds (fertilizers for crop production, fuel and diesel for transportation, waste generated from the vaccination activity, etc.), negative impacts might arise, mainly affecting natural resources (soil, water, and biodiversity), air quality, occupational hazards, and risks to public health.

On the other hand, social risks that might arise from Component 4 during implementation include potential social tensions, risk of gender-based violence (Sexual Exploitation and Abuse – SEA; and Sexual Harassment - SH), potential risk of sexual exploitation, abuse of women and exchange for sexual favors during voucher distribution, potential risk of transmission of viral diseases –especially COVID-19, potential risk of child labor, under-participation of women, as well as accountability and inadequate transparency risks.

ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLAN

Potential impacts from REP Component 4, proposed measures to mitigate and alleviate these impacts, and the responsible agencies for each are shown in Table 1, whereas the Environmental and Social Monitoring Framework for Component 4 is provided in Table 2.

Table 1 Potential environmental and social Impacts from REP Component 4 and proposed mitigation measures

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
Environment						
Air Quality	Generation of air pollutants from increased traffic and mobility of vehicles for implementing the vaccination campaign	0	<ul style="list-style-type: none"> Avoid idling vehicles that are left running unnecessarily; Ensuring adequate maintenance and repair of the vehicles assigned to transport the animal vaccines and implement the animal vaccination programme; Maximize the efficiency of the transport and delivery of vaccines through proper planning. 	0	MoA field and veterinary staff	Part of operations activities cost
Non-hazardous Solid Waste	Generation of solid wastes such as packaging materials that include plastic/nylon covers and carton boxes, etc. from the vaccination campaign ⁶	N	<ul style="list-style-type: none"> Domestic waste generated should be disposed of in municipal waste bins to be collected by the responsible waste collection parties. The generated waste should be sorted at the source and transported to municipal solid waste management facilities. Domestic waste should be separated from any types of hazardous waste generated. Good housekeeping practices should be maintained 	0	FAO Recruited Environmental and Social Safeguards Specialist in coordination with MoA.	No added cost imposed
Veterinary medical waste	Mismanagement and haphazard disposal of the used veterinary animal vaccination supplies.	2N	<ul style="list-style-type: none"> Good housekeeping practices should be maintained during the application of vaccines; All needles and syringes must be stored in hard durable plastic sharps boxes, returned to MoA RCs, disinfected by boiling for 10 minutes) and shredded at treatment facilities approved by MoE (arcenciel or Abbassiyeh facility). During transportation, place the sharps boxes in plastic bags to avoid any leakages. The detailed veterinary waste management framework can be found in Appendix D in Volume 2. Ensure the provision of tight, thick plastic boxes to dispose of the empty vaccine vials. Boxes should be closed when they are three quarters full, and should be disinfected before reuse. During transportation, place the hard boxes in plastic bags to avoid any leakages. Empty vials made of glass or recyclable plastics can be disinfected using chlorine or by boiling them in water for 10 minutes as a precautionary principle. They can then be sent for recycling after they have been disinfected, or disposed off. If during project implementation the MOA/DAR requests to add vaccines for animal diseases currently not funded by Sub-Component 2, especially vaccines for animal diseases that could be considered potentially infectious to humans, such a request should be assessed and approved by the World Bank before the additional vaccines can be procured using funding from Component 1. In the event such vaccines are approved by the Bank, the empty vials will be considered as hazardous waste and must be treated either by boiling or autoclaving in accordance with the recommendations of the vaccine manufacturer. 	0	MoA in coordination with FAO. MoA/FAO shall liaise with Arcenciel and Abbassiyeh for Medical Waste to arrange the institutional procedure for collecting and treating the vaccination waste. FAO Environmental and Social Safeguards Specialist to ensure the proper implementation of the MWMF	Estimated costs for implementing the veterinary waste management plan: Waste treatment cost: US\$ 1.5/kg (arcenciel) or US\$ 0.8/kg (Abbassiyeh Facility) Sharps boxes: US\$ 20/box

⁶ Non-hazardous solid waste will also be generated from the agricultural inputs to be provided; however, such waste management falls under the responsibility of the suppliers who will be providing these inputs to farmers, and the farmers who will be using these inputs. Management of this waste falls outside the control of the project proponents (MoA/FAO) given the emergency aspect of the project and its scope.

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
Soil, ground and surface water quality	<ul style="list-style-type: none"> Over application of fertilizers (negligible contribution of Component 4 (5 million USD) compared to the annual volume of inputs (seeds and fertilizers) applied by farmers (80 million USD); Unsafe transportation of vaccines that could result in road accidents leading to uncontainment of transported material; and Improper disposal of solid waste, in particular waste from animal vaccination. <p>It should be noted that approximately USD 5 million out of the USD 10 million will support agricultural inputs for famers; which is negligible compared to the total annual agricultural inputs purchased in Lebanon: in 2019: the imported agricultural inputs are estimated at USD 80 million (seeds and fertilizers).</p>	<ul style="list-style-type: none"> 0 N N 	<ul style="list-style-type: none"> Ensure that input suppliers provide farmers with general instructions for the proper application of fertilizers upon delivery of the inputs,. Ensure that suppliers store fertilizers in proper conditions as specified by the manufacturer. Implement the mitigation measures relating to safe driving (under workers health and safety). Implementation of the veterinary waste management framework figuring in Appendix D in Volume 2. 	0	FAO in coordination with MoA	No added cost imposed Costs incurred as part of the veterinary waste management plan: see previous row.
Biodiversity	<ul style="list-style-type: none"> Inadequate disposal of waste from the vaccination campaign; Contamination of rivers or waterways with fertilizers that may negatively affect aquatic ecosystems and local fisheries nearby (although the amount of fertilizers contribution by the intervention is negligible compared to the total annual input); and Potential risk of introducing new pests in case improperly treated plant seeds were procured and distributed amongst the farmers. 	<ul style="list-style-type: none"> 0 	<ul style="list-style-type: none"> Implement the veterinary waste management framework figuring in Appendix D in Volume 2 Require input suppliers to provide general instructions for use Abide by and adopt FAO's "Quality Declared Seed System" in order to ensure that poor quality seeds are not procured throughout the project implementation phase. All seeds to be included in the voucher scheme should be technically cleared by FAO. 	0	FAO in coordination with MoA	No added cost imposed
Health and Safety						
Workers Health and safety	<ul style="list-style-type: none"> Handling of veterinary waste generated from the animal vaccination program. Traffic road accidents by the vehicles assigned to transport vaccines from the MOA-HQ to MOA regional centers. Potential risk of transmission of COVID-19 among farmers claiming their vouchers is possible). 	<ul style="list-style-type: none"> N 	<ul style="list-style-type: none"> Ensure the use of applicable PPEs when administering the animal vaccines (face masks and gloves) All needles and syringes must be stored in hard durable plastic sharps boxes, returned to MoA RCs and shredded at facilities approved by MoE (arcenciel or Abbassiyeh facility). During transportation, place the sharps boxes in plastic bags to avoid any leakages. The detailed veterinary waste management framework can be found in Appendix D in Volume 2. Ensure the provision of tight, thick plastic boxes to dispose of the empty vaccine vials. Boxes should be closed when they are three quarters full, and should be disinfected before reuse. During transportation, place the hard boxes in plastic bags to avoid any leakages. Empty vials made of glass or recyclable plastics will be disinfected using chlorine or by boiling them in water for 10 minutes. They can then be sent for recycling after they have been disinfected. MoA to ensure the vehicles and drivers assigned to transport the vaccines to the farmers and the veterinary waste take into consideration the following measures in order to protect the safety of the drivers and the general public: <p>Ensure the health fitness of the MoA drivers assigned for transportation tasks;</p>	0	MoA in coordination with FAO for implementation FAO for monitoring the implementation of the mitigation measures	PPEs Prices/ person: PVC Gloves ~2 USD Face Mask ~1 USD Goggles ~ 3 USD In addition to the costs incurred as part of the veterinary waste management plan (see above).

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
			Ensure drivers are trained on defensive driving practices; Ensure all drivers have a valid driving license Prepare driver rosters to be filled accordingly Prohibit night trips to avoid drivers fatigue; Provide the drivers with directions on the safest routes ahead of any trips; Enforce speed limits on the drivers; Assign and place a number on each vehicle used and provide a clear phone number to file complaints in case of poor driving behavior. Ensure the vehicles used are well maintained and equipped with all the required formal documentations.			
Community Health and Safety	<ul style="list-style-type: none"> Traffic road accidents by the vehicles assigned to transport vaccines from the importers to MoA regional centers and then to the farms. Negative health effects can prevail on the general public consuming the crops with high doses of fertilizer. However, the impact from the current intervention in this respect is negligible since it is contributing approximately USD 5 million as agricultural inputs, while the total yearly imported agricultural inputs (both seeds and fertilizers) in 2019 are estimated at USD 80 million. Potential risk of transmission of viral diseases (COVID-19 transmission among farmers claiming their vouchers is possible). 	<ul style="list-style-type: none"> N 0 N 	<ul style="list-style-type: none"> MoA to ensure the vehicles and drivers assigned to transport the vaccines to the farmers and the veterinary waste take into consideration the following measures in order to protect the safety of the drivers and the general public: <ul style="list-style-type: none"> Ensure the health fitness of the MoA drivers assigned for transportation tasks; Ensure drivers are trained on defensive driving practices; Ensure all drivers have a valid driving license Prepare driver rosters to be filled accordingly Prohibit night trips to avoid drivers fatigue; Provide the drivers with directions on the safest routes ahead of any trips; Enforce speed limits on the drivers; Assign and place a number on each vehicle used and provide a clear phone number to file complaints in case of poor driving behavior. Ensure the vehicles used are well maintained and equipped with all the required formal documentations. Ensure the proper transportation of empty vials and hazardous sharp veterinary waste in line with the veterinary waste management framework (Appendix D, Volume 2). Raising awareness about the transmission of COVID-19 and related prevention measures (wearing masks, social distancing, washing hands), especially when collecting vouchers from MoA centers. 	0	MoA for implementation	Costs incurred as part of the veterinary waste management plan: see relevant row above.
Socio-economic context						
Restoration of production and enhancement of productivity and business opportunities in	<ul style="list-style-type: none"> Provision of agricultural input material will restore agricultural production and enhance productivity. Enhanced business opportunities among agricultural suppliers and providers through the supply of agricultural input materials and provision of animal feed to farmers. 	<ul style="list-style-type: none"> P 	-	-	-	-

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
the agricultural sector						
Enhancement of food security and alleviation of poverty	<ul style="list-style-type: none"> Small-scale farmers targeted under Component 4 will be enabled to face the difficult economic situation as well as the COVID-19 pandemic repercussions by providing them with agricultural fertilizers, seeds, seedlings and animal feeds and vaccines, restoring their agricultural production potential, and thus alleviating poverty and enhancing food security in the country. 	<ul style="list-style-type: none"> P 		-	-	-
General Work Conditions and tensions on vouchers distribution	<ul style="list-style-type: none"> No laborers will be recruited by FAO during implementation of Component 4. which is not financing any labor recruitment, and thus the impact from this component on general work conditions is not applicable. The project proponents cannot have control over the potential worker exploitation and other non-decent work conditions that might indirectly result from the intervention. Nepotism, mistrust of government, unequal access to project information, weak communications strategy and transparency, and weak grievance redress mechanism that is not widely distributed 	<ul style="list-style-type: none"> Not applicable N 	<ul style="list-style-type: none"> Beneficiaries should be informed of the exact timing and procedures related to the activities prior to the commencement of Program. Ensure maximum transparency, clear and transparent communication of the project components, eligibility criteria, and beneficiary selection process, using various channels (media, social media, local authorities, trade associations and others). Ensure comprehensive coverage of the project information campaign through social media, TV and radio channels, newspapers, advertisements billboards, farmer cooperatives and municipalities; use these channels to announce and widely disseminate the GRM details and procedure to reach all potential citizens, beneficiaries and vulnerable groups. 	0	FAO in coordination with MoA	No added cost imposed as project information campaign is part of project implementation
Child labor	<ul style="list-style-type: none"> No children will be recruited by FAO during implementation of Component 4, which is not financing any labor recruitment either, and thus the impact from this component on child labor is not applicable. The project proponents cannot have control over the potential indirect employment of child labor that might result from the intervention. 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> The eligibility criteria for benefiting from the voucher system comprise a minimum age. Ensure enforcement of this criterion during the distribution process. 	Not applicable	Not applicable	No added cost imposed
Labor	<ul style="list-style-type: none"> Potential Risk of Labor Influx and Labor-induced Sexual Harassment (SH) and Sexual Exploitation and Abuse (SEA) and Gender-Based Violence (GBV) The likelihood of labor influx is low: the slight increase in agricultural production can be catered for by previous (existing) workers, by local citizens given the increasing unemployment rate and poverty in the country, or by existing Syrian refugees. In all cases, REP Component 4 is not financing any recruitment, and thus the impact from this component on labor influx is negligible and beyond control by the project proponents. Potential risk of Sexual Harassment (SH), Sexual Exploitation and Abuse (SEA) and Gender-Based Violence (GBV) from project actors' employees/ consultants, particularly in relation to the distribution of vouchers,. 	0	<ul style="list-style-type: none"> MoA field and veterinary staff, PMU staff / consultants or others associated with the project – including FAO and MoA staff working on Component 4 should be trained on SEA/SH and GBV Ensure that there is an efficient GRM (grievance redress mechanism) established for the project that is sensitive to SEA/SH, with clear and known referral pathways and capacitated staff in this regard Enable the community to report cases of GBV through the GRM while respecting the principles of confidentiality and anonymity. Verifying that the GRM is adequately implemented with capacitated staff to record complaints from the surrounding communities, to find adequate resolutions and implement corrective actions. Conduct awareness trainings and campaign on GBV, SEA, and SH with information on referral pathways in case of grievances; and clearly communicate such risks during the workshops and consultation sessions and through the dissemination campaign relating to the project support. 	0	FAO in coordination with MoA	No added cost imposed

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
			<i>All PIU staff that will be recruited by FAO as project staff will abide by standard FAO HR procedures (as per the terms set forth in the Output Agreement). All such staff will sign a standard FAO contract, which already includes a clause on Code of Conduct on SEA/SH. All staff are also required to take mandatory training on SEA/SH upon the start of their contract.</i>			
Social conflict	<ul style="list-style-type: none"> Dissatisfaction with the allocation of vouchers and other forms of support Perception of exclusion of vulnerable farmer groups Unequal access, limitation faced by potential beneficiaries to provide the necessary and complete set of paperwork and evidence to be eligible for the program, resulting in increased tensions 	N	<ul style="list-style-type: none"> Communicate the criteria for beneficiary selection to the community, ensure transparency of the process, and maximize the outreach and information campaign to reduce the likelihood of tension Provide support through the MoA centers to farmers who are not capable of providing the necessary and complete set of paperwork and evidence to be eligible for the program Prepare, publicize and widely and effectively disseminate to citizens, beneficiaries, and vulnerable groups the GRM for handling complaints and obtaining redress in case of social tension issues or complaints with a clear referral pathway for SEA/SH complaints. 	0	FAO in coordination with MoA	No added cost imposed
Gender inequality	<ul style="list-style-type: none"> Inability of women to access and benefit equally to men from the assistance provided 	N	<ul style="list-style-type: none"> Clear criteria for allocation should be adopted accounting for the ratio imposed and monitor adherence to the minimum percentage of women beneficiaries from the provided input vouchers (10%) Conducting widespread communication and additional consultations where needed with women groups Consider and support: (i) a complaints feedback mechanism sensitive to Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) and (ii) women's equal participation in and benefit from the Programme where it is anticipated that approximately 2,670 rural women (i.e. 10% of total beneficiaries) will participate in and benefit from the agricultural inputs' voucher and distribution scheme. 	0	FAO in coordination with MoA	No added cost imposed
Gender-based violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)	<ul style="list-style-type: none"> Potential for women to be subject to sexual exploitation and abuse, and to the potential exchange for sexual favors during voucher distribution. 	N	<ul style="list-style-type: none"> Promote awareness of female beneficiaries regarding organizations to contact in case of exposure to GBV/ SEA/ SH Verifying that the GRM is adequately implemented with capacitated staff to record complaints from the surrounding communities, to find adequate resolutions and implement corrective actions, and with a clear referral pathway for SEA/SH complaints. Conduct awareness trainings on GBV, SEA, and SH with information on referral pathways in case of grievances, and clearly communicate such risks during consultation sessions and through information campaigns. 	0	FAO in coordination with MoA	No added cost imposed

P= positive impact, 0=low adverse impact, N=moderate adverse impact, 2N= severe adverse impact

Table 2 Environmental and Social Monitoring Framework for REP Component 4

Impact	Parameters to Monitor	Frequency	Monitoring Location	Standards/Guidelines National/International	Institutional Responsibility
Environmental Impacts					
Air Pollution	<ul style="list-style-type: none"> Visual inspection of color of fumes from vehicles used for implementing the vaccination campaign. Vehicles Registration License and their expiry date. 	<ul style="list-style-type: none"> Daily (for fume color)/ Upon complaint reception or ticket issued by traffic police Yearly (upon license renewal) 	<ul style="list-style-type: none"> Vehicle exhaust systems 	-	MoA
Sharp-hazardous Waste	<ul style="list-style-type: none"> Visual inspection of the collected veterinary waste at the source to ensure compliance with the veterinary waste management framework. Visual inspection of the collected veterinary waste at the storage locations to ensure compliance. Record keeping (quantities, types, sources, dates) upon generation, storage at MoA Regional Centers, collection of waste by Arcenciel as stipulated in the Waste Management Framework, and waste transfer notes and documentation provided by arcenciel as a proof of shredding. 	<ul style="list-style-type: none"> Upon veterinary waste generation at the farms Upon veterinary waste delivery at the MoA Regional Centers. Upon veterinary waste collection and shredding by arcenciel. 	<ul style="list-style-type: none"> Waste generation locations (farms) Waste storage locations (MoA Regional Centers) 	<ul style="list-style-type: none"> MoE Decision 13389/2004 	MoA and FAO
Health and Safety impacts					
Workers Health and Safety	<ul style="list-style-type: none"> Number of risk identification and assessment training and awareness sessions Risks identified and assessed Proper Use of PPE by staff Number, type and cause of accidents and injuries 	<ul style="list-style-type: none"> Continuous 	Farms MoA regional centers	-	MoA and FAO

Impact	Parameters to Monitor	Frequency	Monitoring Location	Standards/Guidelines National/International	Institutional Responsibility
	<ul style="list-style-type: none"> Number of briefings addressing COVID-19 prevention, and number of COVID-19 cases reported Number of complaints received from workers. 				
Community Health and Safety	<ul style="list-style-type: none"> Number, type and cause of accidents and injuries 	<ul style="list-style-type: none"> Continuous 	-	-	MoA and FAO
Socio-economic impacts					
Transmission of disease	<ul style="list-style-type: none"> Number of trainings addressing COVID-19 	<ul style="list-style-type: none"> Continuous 	Training records and reports	WB OP 4.01	MoA and FAO
Social Conflict	<ul style="list-style-type: none"> Number of grievances submitted/resolved per month and the duration for resolving these complaints (including nepotism related grievances) 	<ul style="list-style-type: none"> Monthly 	GRM log	WB OP 4.01	MoA and FAO
Gender Inequality, GBV, SEA-SH	<ul style="list-style-type: none"> Number of sexual abuse, exploitation/harassment, and Gender-based violence cases/ grievances reported (while ensuring principles of confidentiality and anonymity), Number of information leaflets on Sexual abuse and exploitation/harassment and on Gender-Based Violence (GBV) distributed to female beneficiaries. 	<ul style="list-style-type: none"> Continuous 	<ul style="list-style-type: none"> GRM log Training records and reports 	WB OP 4.01	MoA and FAO

GRIEVANCE REDRESS MECHANISM

Component 4 includes a Grievance Redress Mechanism (GRM) to register and address grievances and complaints from individuals who are affected by the implementation of its activities. Anonymous grievances will be ensured and addressed in the GRM. All grievances and complaints received as part of this project shall be addressed and closed within a maximum period of 30 days.

The purpose of the GRM will be to provide clear and accountable means for project beneficiaries and affected persons to raise concerns of possible tensions and feelings of exclusion and complaints, and seek solutions when they believe they have been harmed by the project. As such, the GRM will allow citizens to directly voice concerns or grievances to the implementing agency (i.e. FAO) and ensure that these concerns are responded to and addressed in a timely manner.

Another platform to register complaints from Component 4 is the REP GRM that was developed by the CDR for the initial Project components. The CDR GRM unit will directly forward any complaint, concern or suggestion received at the CDR addresses to the FAO GRM unit to take the necessary actions.

STAKEHOLDER CONSULTATION

Under the Bank's OP 4.01 Policy, a virtual stakeholder consultation due to COVID-19 restrictions was held on the 28th of January 2021, i.e., before MoA and FAO took the decision to cancel all types of pesticides from the list of agricultural inputs to be financed under Component 4. Overall, 26 participants were consulted (46% of which were women), including representatives from agricultural cooperatives, syndicates, farmers associations, local and international NGOs, in addition to the several government authorities and international organizations such as NCLW, MoA, MoE, CDR, and FAO. The complete lists of invitees and participants are available in Appendix E.

The project details, potential impacts and mitigation measures were presented in a 45-minute online presentation followed by an open discussion. The main concerns and comments raised during the consultation were related to the applicability and feasibility of implementing the mitigation and monitoring measures, the criteria for the selection of beneficiaries, as well as questions related to ensuring transparency and equitable implementation. It is worth noting that some of the discussions were related to pesticides as the decision to cancel the provision of pesticides under the voucher program was taken by MoA and FAO after the virtual consultation session which was held on January 28, 2021.

A follow up virtual consultation session was held on February 10, 2021 in order to properly receive and address comments and concerns raised by two stakeholders after holding the first consultation session. Overall, 7 persons participated in this meeting who represented FAO, MoA, CDR, and the two concerned stakeholders who raised comments. The main issues discussed tackled the need to provide further support to a wider pool of farmers, criteria for selecting beneficiaries, and transparency in implementation.

الملخص التنفيذي

خلفية المشروع

كجزء من الدعم المقدم إلى لبنان لتلبية احتياجاته التنموية، وافق البنك الدولي على مشروع الطرقات والعمالة (REP) في شباط ٢٠١٧ من خلال تقديم قرض بقيمة ٢٠٠ مليون دولار أمريكي من البنك الدولي للإنشاء والتعمير (IBRD) من ضمنه ٤٥,٤ مليون دولار أمريكي كهبة من البرنامج العالمي للتمويل المُيسر. يهدف مشروع الطرقات والعمالة إلى تحسين كفاءة نفقات قطاع الطرق وإلى تحفيز الاقتصاد وخلق فرص عمل.

لقد تم الإعلان عن سريان عمل المشروع في ٣٠ تشرين الأول ٢٠١٨، عندما أقر البرلمان اللبناني القانون رقم ٩٠ الذي يسمح بموجبه للحكومة اللبنانية التوقيع على اتفاقية القرض مع البنك الدولي للإنشاء والتعمير (IBRD) ليتم تنفيذه من قبل مجلس الإنماء والإعمار (CDR) الممثل للحكومة اللبنانية.

يتألف مشروع الطرق والعمالة الأساسي من ثلاثة أقسام على الشكل التالي:

1. القسم الأول: إعادة تأهيل الطرق وصيانتها (١٨٥ مليون دولار أمريكي) وسوف يمول بشكل رئيسي الأعمال المتعلقة بإعادة تأهيل وصيانة نحو ٥٠٠ كيلومتر من الطرق الرئيسية والثانوية والفرعية، بما في ذلك سلامة الطرق والتحسينات الموضوعية بالإضافة إلى دعم الخدمات الاستشارية.
 2. القسم الثاني: تحسين القدرة على الاستجابة للطوارئ على الطرق (٧,٥ مليون دولار أمريكي)، يهدف إلى تحسين قدرة وزارة الأشغال العامة والنقل على الاستجابة لحالات الطوارئ على الطرق لاسيما الحالات الناتجة عن الظروف المناخية الشديدة والتلجية.
 3. القسم الثالث: بناء القدرات ودعم عملية التنفيذ (٧,٥ مليون دولار أمريكي)، ويهدف هذا القسم إلى بناء قدرات الهيئات اللبنانية في مجال تخطيط قطاع الطرق وإدارته.
- يصنف مشروع الطرقات والعمالة الأساسي على أنه مشروع من "الفئة B" مع اتباع سياسيتين للإجراءات الوقائية وهي: OP4.01 و OP4.12. لقد تم إعداد إطار الإدارة البيئية والاجتماعية/ESMF مع إطار سياسة إعادة الاسكان/RPF/ وتم التشاور حولها كما تم إيضاحها والإعلان عنها من قبل البنك عام ٢٠١٨. إضافة إلى أنه جرى التشاور حول كافة أدوات الوقاية الخاصة بالموقع (حيث تم تطوير خطط الإدارة البيئية والاجتماعية من أجل ٢٥ موقع تم اختياره في مختلف أرجاء لبنان) وقد تم إيضاحها والإعلان عنها من قبل البنك عام ٢٠٢٠.^٧
- ونتيجة لجائحة كورونا COVID-19 والأزمة المالية التي هددت الأمن الغذائي اللبناني العام ولدعم صغار المزارعين في مواجهة القدرة المنخفضة على الإنتاج فقد تم إعادة هيكلة قرض مشروع الطرق والعمالة الأولي لإنشاء قسم رابع لدعم المزارعين وذلك بناءً على طلب وزارة الزراعة بعد الحصول على موافقة البرلمان اللبناني من خلال القانون رقم ٧/١٨٦ تشرين الأول ٢٠٢٠.

لقد أدت عملية إعادة هيكلة القرض المذكور سابقاً إلى تخصيص ١٠ مليون دولار أمريكي لدعم صغار المزارعين لتمكين الإنتاج الزراعي في المزارع من خلال تأمين المدخلات الزراعية اللازمة مثل الأسمدة، البذار، الشتلات وعلف الحيوانات عبر منظمة الأغذية والزراعة FAO والهيئة المنفذة للقسم الرابع وتحت الإدارة الفنية لوزارة الزراعة.

^٧ من أجل الحصول على المعلومات حول إطار الإدارة البيئية والاجتماعية ESMF المعين عنها، يرجى مراجعة الرابط:

<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/ESMF.pdf>

^٨ من أجل الحصول على المعلومات حول إطار سياسة التوظيف RPF المعين عنها، يرجى مراجعة الرابط:

<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/RPF.pdf>

^٩ من أجل الحصول على المعلومات حول خطة الإدارة البيئية والاجتماعية ESMPs المعين عنها، يرجى مراجعة الرابط:

<https://www.cdr.gov.lb/en-US/Studies-and-reports/Roads-and-Employment.aspx>

وصف المشروع

من المتوقع أن يدعم القسم الرابع المزارعين من خلال برنامج قسائم (قسائم شراء)، ومن خلال توزيع حوالي مليون لقاخ عبر برنامج التلقيح. من المتوقع أن لا تقل نسبة النساء المنتجات عن ١٠% من المستفيدين (استناداً إلى عملية التعداد (الإحصاء) الزراعي لعام ٢٠١٠)، لذلك فإن ٩% فقط من إجمالي عدد المزارع في لبنان هي تحت قيادة نسائية (وزارة الزراعة، منظمة الأغذية والزراعة، الوكالة الإيطالية للتعاون التنموي، ٢٠١٠).

ستعتمد عملية تقديم الدعم للمزارعين على القسمين الفرعيين التاليين:

i. القسم الفرعي الأول: قسائم من أجل مدخلات (مستلزمات) إنتاج المحاصيل والمواشي (بقيمة ٩ مليون دولار أمريكي ممولة من قبل البنك الدولي للإنشاء والتعمير)

سيصل الدعم لقرابة ٢٦٧٠٠ شخص من صغار المزارعين (الذين لا تتجاوز مساحة أرضهم ٢٠ دونماً) في لبنان (بِحسب لا تقل نسبة المستفيدين من النساء عن ١٠%) وذلك من خلال منحهم قسائم لشراء المدخلات الزراعية الأساسية ولتخفيف آثار الإغلاق العام بسبب جائحة كورونا والأزمات المالية على الأمن الغذائي في لبنان.

سيتم تقديم نوعين من القسائم الورقية للشراء: واحدة لشراء مستلزمات إنتاج المحاصيل، والأخرى لشراء مستلزمات تربية الماشية معظمها سيكون أعلاف. إن قسائم شراء مستلزمات إنتاج المحاصيل لن تمول أو تغطي أي نوع من مبيدات الحشرات المدرجة على قائمة المستلزمات الزراعية. ستكون قيمة كل قسيمة ٣٠٠ دولار أمريكي بحيث تسمح للوصول إلى نحو ٢٦,٧٠٠ مزارع أو حوالي ٢٠% من المزارعين البالغ عددهم حوالي ١٤٠,٠٠٠ محققين بذلك معيار مساحة الأرض في إطار برنامج الدعم.

ii. القسم الفرعي الثاني: برنامج التلقيح (مليون دولار أمريكي ممول من قبل البنك الدولي للإنشاء)

سيتم تأمين اللقاحات البيطرية تحت هذا البند الفرعي حيث سيستهدف برنامج التلقيح منتجي ومربي الماشية الصغار ومتوسطي الحجم (الذين يملكون كحد أعلى ١٠ بقرات حلوب أو ٧٥ رأس من الأغنام/الماعز)؛ أما المزارع الأكبر فهي تميل إلى تأمين اللقاحات بنفسها. سيعمل القسم الفرعي على دعم حملات لقاخ الحيوانات السنوية لمديرية الموارد الحيوانية التابعة لوزارة الزراعة.

ستتضمن النفقات المستحقة الداخلة تحت بند هذا المكون الفرعي: اللقاحات، معدات التلقيح لتسليم اللقاحات المتوفرة، الوقود اللازم لإيصال اللقاحات وفرق التلقيح إلى الأماكن التي تكون فيها اللقاحات ضرورية. إضافة إلى تعيين فنيين لدعم فريق التلقيح في مديرية الموارد الحيوانية في وزارة الزراعة.

حملة المعلومات الخاصة بالمشروع

ستعلن كلاً من وزارة الزراعة ومنظمة الأغذية والزراعة بشكل مشترك عن برنامج الدعم عبر حملات التوعية والحملات الإعلامية على المستوى المحلي، وعبر جميع المحافظات السبعة المستهدفة. حيث ستوفر الحملات معلومات حول معايير الاستحقاق من أجل اختيار المستفيدين، والمستلزمات/ المدخلات الزراعية وعلف الحيوانات التي سيتم تقديمها، وإجراءات التطبيق الواجب اتباعها.

لضمان التنفيذ الفعال للمشروع عبر اشتراك أكبر عدد ممكن من المستفيدين وكذلك لضمان وصولهم إلى المعلومات ذات الصلة، فقد تم تطوير خطة التواصل والرؤية من قبل منظمة الأغذية والزراعة. علاوة على ذلك، ستضمن وزارة الزراعة نشر وتعميم الدعوة إلى تقديم الطلبات على نطاق واسع من خلال السلطات المحلية/ البلديات، المديرية العامة للتعاونيات التابعة لوزارة الزراعة، جمعيات الفلاحين، الجمعيات التجارية والجهات الأخرى المناسبة، وذلك عبر وسائل الإعلام المرئية والمسموعة بالإضافة إلى منصات التواصل الاجتماعي.

يجب استخدام العديد من أدوات وقنوات التواصل منذ بداية مرحلة تنفيذ المشروع لضمان أن المستفيدين المستهدفين هم على اطلاع ودراية بالمشروع. وهذا يتضمن:

- تنظيم حفل إطلاق المشروع.
- إنتاج فيلم رسوم متحركة.
- طباعة بروشورات وقسائم وبوسترات.
- إرسال رسائل الكترونية على نطاق واسع بالاستناد إلى قائمة وزارة الزراعة للمزارعين.
- نشر معلومات حول المشروع بواسطة برنامج على الهاتف المحمول /LARI/ يستخدمه العديد من المزارعين.
- النشر عبر وسائل التواصل الاجتماعي (تويتر، فيسبوك، واتس آب).
- التغطية الإعلامية الإذاعية/ التلفزيونية.

١ تتوفر معايير استحقاق المستفيدين المنفصلة في دليل تشغيل برنامج القسائم.

لن يترتب عن القيام بمعظم الأنشطة المدرجة ضمن خطة التواصل أية تكاليف إضافية على المشروع، حيث أنه سيتم القيام بخدمات تطوير ونشر هذه الأنشطة داخلياً بواسطة قسم التواصل في منظمة الأغذية والزراعة. ومع ذلك سيترتب على المشروع تكاليف إضافية ناتجة عن طباعة القسائم وعن المادة المطبوعة المتعلقة بالقسائم (مثل البوسترات). وتقدر التكاليف للأنشطة الأخيرة بحوالي ٢٨,٤٥٠ دولار أمريكي.

مببرات المشروع

في تشرين الأول ٢٠١٩، بدأ الوضع الاقتصادي والاجتماعي في لبنان بالتدهور بشكل سريع ليصبح في حالة مريعة بسبب أزمات متزايدة ومتعددة وهي:

- i. جائحة كورونا COVID-19 وما رافقها من الإجراءات الصارمة للإغلاق العام الذي تم فرضه بين آذار وحزيران ٢٠٢٠ على الأشخاص والأعمال التجارية في لبنان للحد من انتشار كورونا. كما تم فرض الإغلاق العام من جديد في شهر تشرين الثاني وكانون الأول لعام ٢٠٢٠ (قبل الأعياد). كذلك تم فرض إغلاق عام آخر أعلن عنه في ٢ كانون الثاني ٢٠٢١ (من ٧ كانون الثاني حتى ٢٢ شباط ٢٠٢١). لقد أدى الإغلاق العام إلى اضطراب شديد في حياة الناس وفي معظم الأنشطة الاقتصادية في البلد.
- ii. لقد أدت آثار جائحة كورونا COVID-19 على القطاع الزراعي إلى تفاقم تداعيات الأزمة المالية لتهدد الأمن الغذائي اللبناني بأكمله. ونظراً لإغلاق الحدود والقيود المفروضة على الحركة واضطراب سلسلة التوريد الذي أثر على واردات الأغذية، فقد تأثر بشكل سلبي الأمن الغذائي اللبناني على وجه الخصوص. كما تفاقمت حالة انعدام الأمن الغذائي من خلال ارتفاع نسبة الفقر حيث تم تقديرها بـ ٥٥% في آب ٢٠٢٠ (لجنة الأمم المتحدة الاقتصادية والاجتماعية لغرب آسيا، 2020b). إن الخطر المرتبط بالأمن الغذائي أكثر أهمية في لبنان نتيجة الاعتماد على الواردات وبسبب الأزمات المالية والاقتصادية الحالية، وتدابير رقابة رأس المال التي تعيق الدفع للموردين. وفقاً لمركز البحوث والدراسات الزراعية اللبنانية (CREAL) سيكون هنالك انخفاض في الإنتاج الزراعي وإجمالي الناتج المحلي بنسبة ٣٨% (الإنتاج النباتي - ٤٧% والإنتاج الحيواني - ٢٦%) نتيجة للاستخدام المنخفض للمدخلات نظراً لعدم وجود التسهيلات الائتمانية، وانخفاض قيمة العملة والاعتماد على المدخلات المستوردة. كما أشارت النقاشات الأولية التي أجريت مع موردي المدخلات الزراعية إلى أن حجم أعمالهم التجارية سينخفض بنسبة ٤٠-٦٠% في عام ٢٠٢٠.
- iii. يعتبر الانفجار الضخم الذي حدث في مرفأ بيروت في ٤ آب ٢٠٢٠، والذي أدى إلى تدمير المدينة وخلف وراءه ٢٠٠ قتيل على الأقل وآلاف الجرحى وتسبب بنزوح حوالي ٣٠٠ ألف شخص، إضافة إلى الأزمات العديدة التي واجهها لبنان. وهذه الأزمات تتضمن: (i) التداعيات الناشئة عن الصراع الدائر في سورية الذي حذا بلبنان إلى استضافة أعلى نسبة من اللاجئين لكل فرد من السكان في العالم، (ii) الأزمة المالية والاقتصادية التي تعرض لها لبنان والتي بدورها تسببت في الإخفاقات المالية الكلية مثل تدهور القطاع المصرفي، انهيار سعر الصرف، العجز عن سداد الديون المستقلة، معدلات التضخم ثلاثية الأرقام، والانكماش الاقتصادي الحاد، (iii) الآثار الناجمة عن جائحة كورونا COVID-19. إن آثار هذه الأزمات تقلب مسار المكاسب الإنمائية التي تحققت بصعوبة. لقد أثرت الأزمات التي تم ذكرها سابقاً على سبل عيش صغار المنتجين، كما هددت الأمن الغذائي في لبنان. كذلك يعتبر دعم الوصول إلى مستلزمات الإنتاج الخاصة بالمزارعين اللبنانيين أمراً في غاية الأهمية وذلك لتخفيف الخطر قصير الأمد لانعدام الأمن الغذائي وتعزيز الاقتصاد وضمان استمرار الإنتاج الغذائي. قد يؤدي تنفيذ برنامج دعم المزارعين الوارد تحت بند القسم الرابع إلى حدوث عدة تأثيرات بيئية واجتماعية وبالتالي فإن هذا التقرير يعمل كملحق/ إضافة لتقرير إطار الإدارة البيئية والاجتماعية الصادر عن البنك الدولي في ٢٠١٨. يركز هذا الملحق على تقديم عملية الإدارة البيئية والاجتماعية لتصميم وتنفيذ أنشطة القسم الرابع. لا تتطلب إضافة القسم الرابع تغيير في تصنيف "الإجراءات الوقائية للبنك الدولي" لمشروع الطرق والعمالة. وبهدف إدارة المخاطر البيئية والاجتماعية المرتبطة بالقسم الرابع الجديد، فقد تم وضع إجراءات التخفيف ذات الصلة وكذلك كافة الترتيبات المؤسسية الضرورية من خلال هذا الملحق الخاص بإطار الإدارة البيئية والاجتماعية. ويتضمن هذا الملحق خطة إدارة النفايات البيطرية (برنامج التلقيح - الملحق D في النسخة الثانية) وكذلك يتضمن الإجراءات الخاصة بالسلامة الطرقية لمعالجة الأعمال اللوجستية المتعلقة بتسليم اللقاحات. نتيجة لجائحة كورونا COVID-19 الحالية فقد تم تغطية كافة المخاطر البيئية والاجتماعية الخاصة بأنشطة المشروع ونتائج المشاورات وآلية معالجة المظالم في ملحق إطار الإدارة البيئية والاجتماعية وفقاً للمذكرة الفنية للبنك الدولي وذلك للقيام بالاستشارات المطلوبة خلال أوقات القيود (الملحق F في النسخة الثانية).

الإطار المؤسسي والسياسي والقانوني

يتقاسم الإطار المؤسسي لتنفيذ القسم الرابع لمشروع الطرق والعمالة مع العديد السلطات الحكومية بما في ذلك وزارة الزراعة، مجلس الإنماء والإعمار، وزارة البيئة وكذلك منظمة الأغذية والزراعة. سيتم تعيين مشرف مراقب كطرف ثالث من قبل منظمة الأغذية والزراعة للقيام بعمليات التقييم والتحقق الميدانية. كما سيتم تعيين مشرف مراقبة آخر كطرف ثالث من قبل مجلس الإنماء والإعمار وسيكون مسؤولاً عن التحقق من أن اللقاحات قد جرى تسليمها وفقاً لاتفاقية المخرجات/المنتجات. سيتم توظيف كلاً من مشرفي المراقبة (الطرف الثالث) بما يتوافق مع الشروط المرجعية المقبولة من البنك الدولي. سيعمل مجلس الإنماء والإعمار على التنسيق مع البنك الدولي حول كافة القضايا المتعلقة بالجوانب المالية للمشروع. وستكون منظمة الأغذية والزراعة الوكالة المنفذة لبرنامج دعم المزارعين تحت الإدارة الفنية لوزارة الزراعة. وستقوم منظمة الأغذية والزراعة بتنفيذ والإشراف على الإجراءات التخفيفية البيئية والاجتماعية المحددة ذات الصلة الوثيقة بنطاق عمل المنظمة ضمن إطار هذا القسم.

تتأثر عملية تنفيذ القسم الرابع بعدد من التشريعات والأنظمة التي تغطي قطاعات متعددة بما فيها البيئة، الصحة والسلامة، الزراعة، إدارة النفايات الصلبة، العمالة والجنس (ذكر-أنثى). فيما يلي ترد التشريعات البيئية الأكثر أهمية:

- المرسوم رقم ٥٦٠٥ لعام ٢٠١٩ - فرز النفايات المنزلية الصلبة من المصدر.
 - المرسوم رقم ٥٦٠٦ لعام ٢٠١٩ - تحديد أصول إدارة النفايات الخطرة.
 - القانون رقم ٨٠ لعام ٢٠١٨ - الإدارة المتكاملة للنفايات الصلبة.
 - المرسوم رقم ١٣٣٨٩ لعام ٢٠٠٤ - أنواع النفايات الطبية وإدارتها.
 - القانون رقم ٤٤٤ لعام ٢٠٠٢ - قانون حماية البيئة.
 - القرار رقم ١/٥٢ لعام ١٩٩٦ - المعايير الوطنية لنوعية البيئة والقيم الحدية البيئية للهواء والمياه والضجيج.
 - القانون رقم ٦٤ لعام ١٩٨٨ - حماية البيئة من التلوث الناجم عن النفايات الصلبة والمواد الخطرة.
- أما بالنسبة للتشريعات الزراعية فقد أصدرت الحكومة اللبنانية ووزارة الزراعة العديد من القرارات بين عامي ١٩٤٦ و ٢٠٢٠ وذلك ضمن جهود إدارة هذا القطاع ونذكر منها بشكل خاص:
- القانون رقم ١٥٨ لعام ٢٠٢٠ - تنظيم قطاع الزراعة العضوية.
 - المرسوم رقم ٥٧٠٦ لعام ٢٠١٩ - المصادقة على المواصفات القياسية لمؤسسة المواصفات والمقاييس اللبنانية (LIBNOR) المتعلقة بالأسمدة ومحسنات التربة.
 - القرار رقم ١/١١٠٢ لعام ٢٠١٢ - المعدل لقرار وزارة الزراعة رقم ١/٥٠٧ المتعلق بمستويات التراكيز المسموح فيها للمواد الكيماوية في الأسمدة وكذلك فيما يتعلق بمتطلبات تسمية الأسمدة.
 - القانون رقم ٦/٦٨ لعام ١٩٦٨ - تنظيم تجارة الأسمدة والأدوية الزراعية والأعلاف.
- فيما يتعلق بالتشريعات الاجتماعية، فإن أبرز النصوص القانونية الصادرة في لبنان هي:
- القانون رقم ٢٠٥ لعام ٢٠٢ - تجريم التحرش الجنسي وتأهيل ضحاياه.
 - المرسوم رقم ٣٧٩١ لعام ٢٠١٦ - الحد الأدنى الرسمي لأجور الموظفين والعمال الخاضعين لقانون العمل.
 - القانون رقم ٢٩٣ لعام ٢٠١٤ - قانون حماية النساء وأفراد الأسرة من العنف الأسري.
 - المرسوم رقم ٨٩٨٧ لعام ٢٠١٢ - منع تشغيل اليافعين والأطفال/الاحداث/ قبل بلوغهم سن الثامنة عشرة في الأعمال التي تشكل خطراً على صحتهم أو سلامتهم أو سلوكهم.
 - المرسوم رقم ١١٨٠٢ لعام ٢٠٠٤ - الصحة والسلامة المهنية.
 - القانون رقم ٢٠٧ لعام ٢٠٠٠ - منع كافة أشكال التمييز بين الرجال والنساء في مكان العمل.
 - قانون العمل لعام ١٩٤٦ وتعديلاته حول تنظيم إطار العلاقة بين صاحب العمل والموظف، والجدير بالذكر أن القانون يحمي الأشخاص العرضة للخطر مثل النساء ويتضمن أحكام تعارض عمالة الأطفال وتحديد ظروف العمل بالنسبة للأطفال فوق سن الـ ١٣ وذلك من أجل حمايتهم من الاستغلال (حيث تم رفع الحد الأدنى لسن العمل ليصبح ١٨ عاماً وفقاً للمرسوم رقم ٨٩٨٧ لعام ٢٠١٢).

الظروف الأساسية

يضيف هذا الملحق إلى إطار الإدارة البيئية والاجتماعية معلومات أساسية عامة عن الظروف الأساسية البيئية والاجتماعية وعن الأوساط الخاصة بالقسم الرابع فقط، بينما تم توثيق الظروف الأساسية الكلية في إطار الإدارة البيئية والاجتماعية الأولى لمشروع الطرق والعمالة.

تعتبر الظروف الأساسية التي تم التطرق إليها بأنها ظروف عامة، بحيث سيتم تنفيذ القسم الرابع لمشروع الطرق والعمالة في أنحاء لبنان بشكل عام دون تحديد أي مواقع خاصة.

من وجهة نظر بيئية، يمتلك لبنان موارد مائية وفيرة متوزعة في كافة المناطق، حيث يوجد ١٣ نهراً، بعضها ذات معدلات تدفق غزيرة مثل نهر الليطاني، نهر العاصي، نهر الكبير ونهر الحاصباني.

علاوة على ذلك، يوجد في لبنان حوالي ٥,٠٥٠ نبع، حيث يتم تغذية الينابيع الكبيرة منها إما من حامل المياه الجوفية "صننين – معاملتين" (C4-C5) مثل نبع أفقا، وحامل كسروان (J4) مثل عين الدلبة، أو كلاهما في حال نبع الوزاني. كذلك تعتبر آبار المياه مورد مائي هام في لبنان تستخدم للأغراض الزراعية والمنزلية والصناعية والتجارية. على أية حال، فإن معظم الآبار في لبنان هي آبار ذات ملكية خاصة غير مرخصة.

إضافة إلى ذلك، يتألف لبنان من ١٢ نوعاً من التربة المختلفة حيث تغطي طبقة Leptosols المساحة الأكبر. أما Cambisols فتعتبر بأنها جيدة للاستخدام الزراعي ومن الممكن أن تكون إحدى أكثر أنواع التربة خصوبةً من حيث الزراعة وهذا مايرر وجودها في وادي البقاع و عكار. وبالتالي، تعتبر المناطق الطبيعية والزراعية بأنها غطاء الأراضي الأكثر أهمية في لبنان. حيث يمكن اعتبار المناطق الطبيعية في لبنان بأنها "نقطة فعالة/ ساخنة" للتنوع البيولوجي نظراً لموقعها في منطقة حوض البحر الأبيض المتوسط.

أخيراً، بما أن القسم الرابع يتضمن برنامج تلقيح سيولد نفايات بيطرية، بينما نظام إدارة نفايات الرعاية الصحية البيطرية في لبنان يتحسن ببطء، باعتبار أن هنالك العديد من المنشآت متوفرة الآن في البلد لمعالجة نفايات الرعاية الصحية الخطرة.

حالياً يتم إعادة زجاجات اللقاح الفارغة والإبر المستخدمة في حملات لقاح الحيوانات من قبل الأطباء البيطريين والفنيين إلى المراكز الزراعية التابعة لوزارة الزراعة. لا يتم تبريد الزجاجات الفارغة بل يتم التخلص منها مع النفايات المنزلية التي يتم التخلص منها بشكل اعتيادي، ومن جهة أخرى، يتم غلي الإبر المستخدمة بهدف تعقيمها قبل التخلص منها أو إعادة استخدامها مرة أخرى في حملة التلقيح إذا استدعت الحاجة لذلك.

يقدر عدد سكان لبنان بحوالي ٤,٨٤٢,٥٠٠ نسمة، حيث يشكل اللبنانيين نسبة ٧٩,٨% من عدد السكان. يسكن في المناطق الحضرية حوالي ٨٧,٣١% منهم.

كما شهد لبنان موجة تدفق كبيرة من النازحين السوريين، حيث يقدر عددهم بحوالي ٩١٩,٥٧٨ سوري نازح يعيش في لبنان مسجل في أيلول ٢٠١٩.

على ضوء الأزمات المالية والاقتصادية الحالية التي يشهدها لبنان، تقدر نسبة اللبنانيين الذين يعيشون الآن في فقر بنحو ٤٥% من السكان بسبب انخفاض قيمة العملة الوطنية والتضخم المفرط. كما أن معدلات البطالة أخذت في ازدياد نتيجة لتأثر سوق العمل بشكل حاد بجائحة كورونا COVID-19 وبسبب الأزمات المالية والاقتصادية الحالية التي عصفت بالبلاد.

تبلغ مساهمة القطاع الزراعي اللبناني ٥% فقط من إجمالي الناتج المحلي، حيث يدعم حوالي ٤٠ ألف مزارع أو مالكي الأراضي. يتوزع صغار المزارعين بشكل رئيسي في محافظات جبل لبنان، شمال لبنان والنبطية، بينما يتوزع المزارعين أصحاب الملكية الكبيرة على نطاق واسع في وادي البقاع وقضاء عكار وسهول القاسمية في جنوب لبنان (وزارة الزراعة، منظمة الأغذية والزراعة، الوكالة الإيطالية للتعاون التنموي، ٢٠١٠).

يعمل حوالي ثلث الأسر من اللاجئين السوريين التي يعيها الذكور في الزراعة مقارنة مع ٤٦% من الأسر التي تعيها إناث (المفوضية السامية للأمم المتحدة لشؤون اللاجئين، منظمة الأمم المتحدة للطفولة (اليونيسيف)، وبرنامج الأغذية العالمي، ٢٠٢٠). أظهرت دراسة تمت في عام ٢٠١٦ أن ٢,٣% من إجمالي عدد اللاجئين الفلسطينيين في لبنان يعتبرون من العمال المؤهلين في مجال الزراعة وصيد الأسماك. كما يعتبر الرجال بأنهم أكثر انخراطاً في الأنشطة الزراعية من النساء بنسبة ٢,٦% و ٠,٦% تبعاً من إجمالي عدد القوى العاملة (Chaaban et al.2016).

لقد واجه القطاع الزراعي تحديات كبيرة منذ تسعينات القرن الماضي، كذلك خضعت مرونة المزارعين إلى الاختبار منذ ذلك الحين. في الوقت الحالي، في ظل جائحة كورونا COVID-19 الحالية والأزمة المالية التي تشهدها لبنان نستطيع القول أن القطاع الزراعي بكامله قد تأثر (المزارعين، تجار التجزئة، والموردين).

الآثار البيئية والاجتماعية المحتملة

ستؤثر الأنشطة التي سيتم تنفيذها في إطار القسم الرابع لمشروع الطرق والعمالة على البيئة الطبيعية والاجتماعية. تتعلق المظاهر البيئية والاجتماعية الأساسية التي يجب أخذها بالحسبان بشراء المدخلات/ المستلزمات الزراعية (البذور، الغراس،

الأسمدة، اللقاحات البيطرية، والأعلاف)، وتخزينها ونقلها، إضافة إلى نقل الأشخاص القائمين على حملة اللقاح، وإدارة نفايات اللقاحات، واستخدام المزارعين للأسمدة.

من المتوقع أن يكون للقسم الرابع لمشروع الطرق والعمالة تأثير إيجابي على المستوى الاجتماعي. حيث ستؤدي الأنشطة إلى:

- استعادة الإنتاج وتعزيز الإنتاجية وفرص الأعمال التجارية في القطاع الزراعي.
- تعزيز الأمن الغذائي والتخفيف من الفقر.

وعلى اعتبار أن القسم الرابع يشتمل على أنشطة تستخدم فيها مركبات كيميائية وبيولوجية (أسمدة لإنتاج المحاصيل، والوقود والديزل للنقل، النفايات الناتجة عن أنشطة التلقيح، الخ.) فإن هذا الأمر من شأنه أن يؤدي إلى حدوث آثار سلبية تؤثر بشكل رئيسي على الموارد الطبيعية (التربة، المياه، والتنوع الحيوي)، نوعية الهواء، المخاطر المهنية، والمخاطر على الصحة العامة.

بمعنى آخر تتضمن المخاطر الاجتماعية التي قد تنشأ من القسم الرابع خلال التنفيذ التوترات الاجتماعية المحتملة، خطر العنف القائم على نوع الجنس (الاستغلال والإيذاء الجنسي، والتحرش الجنسي)، خطر محتمل للاستغلال الجنسي وإيذاء النساء، وكذلك الاستغلال والإيذاء مقابل مصالح جنسية خلال توزيع قسائم الشراء، خطر محتمل يتمثل في نقل الأمراض الفيروسية وخاصة كورونا COVID-19، خطر محتمل ناتج عن عمالة الأطفال، وقلة مشاركة النساء وعدم المساءلة وغياب الشفافية.

خطة الإدارة والمراقبة البيئية والاجتماعية

يبين الجدول ١ التأثيرات المحتملة الناجمة عن أنشطة القسم الرابع لمشروع الطرق والعمالة، والتدابير المقترحة للحد من هذه التأثيرات والتخفيف منها، وكذلك الهيئات المسؤولة عن كل واحدة منها، بينما يبين الجدول ٢ إطار المراقبة البيئية والاجتماعية للقسم الرابع.

الجدول ١ الآثار البيئية والاجتماعية المحتملة الناتجة عن القسم الرابع لمشروع الطرقات والعمالة مع إجراءات التخفيف المقترحة

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
البيئة						
نوعية الهواء	انطلاق الملوثات الهوائية الناتجة عن حركة المرور وحركة المركبات للقيام بحملة التلقيح	0	<ul style="list-style-type: none"> تجنب ترك المركبات في وضعية التشغيل بشكل غير ضروري. ضمان الصيانة والإصلاح المناسب للمركبات المخصصة لنقل لقاحات الحيوانات ولتنفيذ برنامج اللقاح البيطري. تحقيق أقصى قدر من الكفاءة في نقل وتسليم اللقاحات من خلال التخطيط المناسب. 	0	وزارة الزراعة والفريق البيطري	جزء من تكلفة أنشطة العمليات
النفائات الصلبة غير الخطرة	توليد نفائات صلبة مثل مواد التغليف التي تتضمن أغلفة بلاستيكية/ نايلون وعلب كرتون، الخ. ناتجة عن حملة اللقاح ¹	N	<ul style="list-style-type: none"> يجب التخلص من النفائات المنزلية الناتجة بوضعها في حاويات البلدية التي يتم جمعها من قبل الجهات المسؤولة عن جمع النفائات. كما يجب أن يتم فرز النفائات الناتجة في المصدر ونقلها إلى مرافق إدارة النفائات الصلبة البلدية. فصل النفائات البلدية عن أنواع النفائات الخطرة الناتجة. المحافظة على ممارسات التدبير الجيدة. 	0	عينت منظمة الغذاء والزراعة خبير الإجراءات الوقائية البيئية والاجتماعية بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية
النفائات الطبية البيطرية	سوء إدارة والتخلص العشوائي من اللوازم المستخدمة في التلقيح الحيواني البيطري	2N	<ul style="list-style-type: none"> الحفاظ على ممارسات التدبير الجيد خلال إعطاء اللقاحات. تخزين كافة أدوات وإبر الحقن في صناديق بلاستيكية متينة وإعادتها إلى MoA RCs حيث يتم تعقيمها بغليها لمدة ١٠ دقائق، وفرمها في مرافق معالجة خاصة مصدق 	0	وزارة الزراعة بالتنسيق مع منظمة الأغذية والزراعة. يجب أن تتسق وزارة الزراعة/ منظمة الفاو مع مرفق العباسية ومرفق	التكاليف التقديرية لتطبيق خطة إدارة النفائات البيطرية: تكاليف معالجة النفائات ١,٥ دولار أمريكي/ كيلوغرام (arcenciel) أو ٠,٨

كذلك سوف تتولد النفائات الصلبة الغير ضارة من المدخلات الزراعية المقدمة. على أية حال تعتبر إدارة هذه النفائات من مسؤولية الموردن الذين سيقدمون هذه المدخلات إلى المزارعين لاستخدامها. حيث تعتبر إدارة هذه النفائات خارج نطاق سيطرة أصحاب المشروع (وزارة)¹ منظمة الفاو) بالنظر إلى حالات الطوارئ للمشروع ونطاقه. /الزراعة

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلية التقديرية
			<p>عليها من قبل وزارة البيئة (منشأة العباسية أو arcenciel). وخلال عملية النقل يجب وضع الصناديق في أكياس بلاستيكية لتجنب حدوث أية تسربات محتملة.</p> <ul style="list-style-type: none"> • يمكن إيجاد معلومات مفصلة عن إطار إدارة النفايات البيطرية في الملحق D في النسخة ٢. • ضمان توفير صناديق بلاستيكية سميكة محكمة الإغلاق للتخلص من زجاجات اللقاح الفارغة، حيث يجب إغلاق الصناديق عندما يكون ثلاثة أرباعها ممتلئ وكذلك يجب تعقيمها قبل إعادة استخدامها. خلال عملية النقل يجب وضع الصناديق في أكياس بلاستيكية لتجنب حدوث أية تسربات محتملة. يمكن تعقيم القوارير الفارغة المصنوعة من الزجاج أو من المواد البلاستيكية القابلة للتدوير وذلك باستخدام الكلور أو عن طريق غليها بالماء لمدة عشرة دقائق كمبدأ احترازي ومن ثم يتم إرسالها ليعاد تدويرها بعد تعقيمها أو التخلص منها. • في حال طلبت وزارة الزراعة/ مديرية الموارد الحيوانية خلال تنفيذ المشروع لقاحات إضافية لأمراض الحيوانات غير ممولة حالياً من قبل القسم الفرعي رقم ٢ وخاصة اللقاحات الخاصة بأمراض الحيوانات التي بالإمكان اعتبارها معدية للإنسان، عندئذ يجب أن يتم تقييم هذا الطلب والموافقة عليه من قبل البنك الدولي قبل شراء اللقاحات الإضافية عبر استخدام 		<p>Arcenciel للتخلص من النفايات الطبية لترتيب إجراء مؤسسي يعنى بجمع ومعالجة نفايات اللقاحات. خبير الفاو للحماية البيئية والاجتماعية لضمان التطبيق المناسب لـ MWMF.</p>	<p>دولار أمريكي/كيلو غرام (مرفق العباسية). صناديق شاريس: ٢٠ دولار أمريكي للصندوق.</p>

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
			التمويل من القسم الأول. في حال تمت الموافقة على هذه اللقاحات من قبل البنك عندئذ سيتم اعتبار الزجاجات الفارغة كنفائيات خطرة ويجب معالجتها إما بالغلي أو تعقيمها بما يتوافق مع توصيات الشركة المصنعة لللقاحات.			
نوعية التربة والمياه السطحية والجوفية	<ul style="list-style-type: none"> ● الاستخدام المفرط للأسمدة (مساهمة ضئيلة للقسم الرابع (٥ مليون دولار أمريكي) مقارنة مع حجم المدخلات السنوي (بذار وأسمدة) من قبل المزارعين (٨٠ مليون دولار أمريكي). ● النقل غير الآمن لللقاحات الذي قد يؤدي إلى حوادث تؤدي إلى عدم احتواء المادة المنقولة. ● التخلص غير المناسب من النفايات الصلبة بشكل خاص النفايات المتولدة عن اللقاح البيطري. ● إن حوالي ٥ مليون دولار أمريكي من أصل ١٠ مليون سوف تدعم المدخلات الزراعية للمزارعين وهذا المبلغ يعتبر ضئيل مقارنة بإجمالي المدخلات الزراعية المشتراة سنوياً في لبنان ٢٠١٩: يقدر ثمن المدخلات الزراعية المستوردة بـ ٨٠ 	0	<ul style="list-style-type: none"> ● ضمان أن موردي المدخلات يزودون المزارعين بالتعليمات العامة للاستخدام المناسب للأسمدة عند تسليم المدخلات ● ضمان أن الموردين يقومون بتخزين الأسمدة وفقاً لشروط مناسبة كما تم تحديدها من قبل الشركة المصنعة. ● تطبيق الإجراءات التخفيفية المتعلقة بالقيادة الآمنة (لتأمين صحة وسلامة العمال). ● تنفيذ إطار إدارة النفايات البيطرية الموجود في الملحق D في المجلد ٢. 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية. تترتب التكاليف كجزء من خطة إدارة النفايات البيطرية: الرجوع إلى الصف السابق.

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
	<ul style="list-style-type: none"> ● مليون دولار أمريكي (بذور وأسمدة). ● التخلص غير المناسب من النفايات المتولدة عن حملة التلقيح ● تلوث الأنهار أو مجاري الأنهار بالأسمدة مما يؤثر سلباً على النظام الأيكولوجي المائي والمسالك المحلية المجاورة (بالرغم من أن حجم مشاركة تدخل الأسمدة يعتبر ضئيل مقارنة مع إجمالي الدخل السنوي) ● خطر محتمل لدخول وانتشار أفات جديدة في حال شراء بذار نباتية غير معالجة بشكل مناسب وتوزيعها على المزارعين. 	0	<ul style="list-style-type: none"> ● تطبيق إطار إدارة النفايات البيطرية الموضحة في الملحق D في المجلد رقم ٢. ● مطالبة موردي المدخلات بتزويد المزارعين بتعليمات الاستخدام. ● الالتزام واختيار "نظام نوعية البذار المعطن عنه" من قبل منظمة الأغذية والزراعة لضمان عدم شراء البذار ذات النوعية الرديئة خلال مرحلة تنفيذ المشروع. كما يجب أن تكون كافة البذار المضمنة في نظام القسائم مصدق عليها فنياً من قبل منظمة الأغذية والزراعة. 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية مفروضة.
الصحة والسلامة						
صحة وسلامة العمال	<ul style="list-style-type: none"> ● معالجة النفايات البيطرية المتولدة من برنامج التلقيح البيطري. ● حوادث السير الطرقية التي تسببها المركبات المخصصة لنقل اللقاحات من المركز الرئيسي لوزارة الزراعة إلى المراكز المحلية لوزارة الزراعة. 	N	<ul style="list-style-type: none"> ● التأكيد على استخدام معدات الوقاية الشخصية المطبقة عند إعطاء اللقاحات الحيوانية (أقنعة للوجه وقفازات) ● تخزين كافة أدوات وإبر الحقن في صناديق بلاستيكية متينة وإعادتها إلى MoA RCs حيث يتم تعقيمها بغليها لمدة ١٠ دقائق، وفرمها في مرافق معالجة خاصة مصادق عليها من قبل وزارة البيئة (منشأة العباسية أو arcenciel). وخلال عملية النقل يجب 	0	وزارة الزراعة بالتنسيق مع منظمة الأغذية والزراعة من أجل القيام بعملية التنفيذ حيث تقوم بمراقبة تنفيذ إجراءات التخفيف.	<p>أسعار معدات الوقاية الشخصية/ للشخص الواحد:</p> <p>قفازات من الكلوريد المتعدد الفيتيل ٢ دولار أمريكي.</p> <p>قفاز واقى للوجه: ١ دولار أمريكي.</p> <p>نظارات: ٣ دولار أمريكي.</p>

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلية التقديرية	
	<ul style="list-style-type: none"> • خطر احتمال انتقال مرض الكورونا وانتشاره بين المزارعين الذين يدعون بأن قسائمهم ممكنة. 		<ul style="list-style-type: none"> • وضع الصناديق في أكياس بلاستيكية لتجنب حدوث أية تسريبات محتملة. • ضمان توفير صناديق بلاستيكية سميكة محكمة الإغلاق للتخلص من زجاجات اللقاح الفارغة، حيث يجب إغلاق الصناديق عندما يكون ثلاثة أرباعها ممتلئ وكذلك يجب تعقيمها قبل إعادة استخدامها. خلال عملية النقل يجب وضع الصناديق في أكياس بلاستيكية لتجنب حدوث أية تسريبات محتملة. بالإمكان تعقيم القوارير الفارغة المصنوعة من الزجاج أو من المواد البلاستيكية القابلة للتدوير وذلك باستخدام الكلور أو عن طريق غليها بالماء لمدة عشرة دقائق كمبدأ احترازي ومن ثم يتم إرسالها ليعاد تدويرها بعد تعقيمها أو التخلص منها. • يجب على وزارة الزراعة التي يقع على عاتقها تأمين المركبات والسائقين المخصصين لنقل اللقاحات إلى المزارعين ونقل النفايات البيطرية أن تأخذ بعين الاعتبار التدابير التالية لحماية السائقين وسلامتهم ومن أجل تأمين السلامة العامة: - ضمان تمتع سائقي وزارة الزراعة المخصصين لمهام النقل بالصحة واللياقة البدنية. - ضمان تدريب السائقين على ممارسات القيادة الوقائية. - التأكد من حصول كافة السائقين على رخصة قيادة صالحة. 				بالإضافة إلى التكاليف المترتبة كجزء من خطة إدارة النفايات البيطرية (راجع أعلاه)

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلية التقديرية
			<ul style="list-style-type: none"> - إعداد قوائم بأسماء السائقين بحيث يتم ملأها وفقاً لمهامهم. - حظر الرحلات الليلية لتجنب إجهاد السائقين. - تزويد السائقين بتوجيهات بشأن أكثر الطرق أماناً قبل أي رحلة. - إجبار السائقين على التقيد بحدود السرعة المسموح بها. - تخصيص ووضع رقم على كل مركبة مستخدمة مع التزويد برقم هاتف واضح للتقدم بالشكاوى في حال صدور أي تصرف سيء من قبل السائقين. - التأكد من صيانة المركبات المستخدمة بشكل جيد وبأنها مزودة بكافة الوثائق الرسمية المطلوبة. • رفع مستوى الوعي وفرض تطبيق الإجراءات الوقائية حول انتقال فيروس كورونا (ارتداء كمادات، التباعد الاجتماعي، غسل اليدين) وخاصة عند القيام بجمع القسائم من مراكز وزارة الزراعة. 			
صحة وسلامة المجتمع	<ul style="list-style-type: none"> • حوادث السير على الطرقات التي تسببها المركبات المخصصة لنقل اللقاحات من الموردين إلى المراكز الإقليمية التابعة لوزارة الزراعة ومن ثم إلى المزارعين. • التأثيرات الصحية السلبية التي من الممكن أن تؤثر على العامة المستهلكة للمحاصيل التي يستخدم لإنتاجها جرعات عالية 	N	<ul style="list-style-type: none"> • يجب على وزارة الزراعة التي يقع على عاتقها تأمين المركبات والسائقين المخصصين لنقل اللقاحات إلى المزارعين ونقل النفايات البيطرية أن تأخذ بعين الاعتبار التدابير التالية لحماية السائقين وسلامتهم ومن أجل تأمين السلامة العامة: <ul style="list-style-type: none"> - ضمان تمتع سائقي وزارة الزراعة المخصصين لمهام النقل بالصحة واللياقة البدنية. 	0	وزارة الزراعة من أجل التنفيذ	التكاليف المترتبة كجزء من خطة إدارة النفايات البيطرية: انظر إلى الصف أعلاه.

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
	<p>من الأسمدة، على أية حال فإن التأثير الناجم عن التدخل الحالي في هذا المجال يعتبر ضئيل حيث تساهم بحوالي ٥ مليون دولار أمريكي كمدخلات زراعية بينما يقدر إجمالي المدخلات الزراعية السنوية (لكلاً من البذار والأسمدة) في عام ٢٠١٩ بـ ٨٠ مليون دولار أمريكي.</p> <p>• الخطر المحتمل من نقل الأمراض الفيروسية (نقل مرض كورونا وانتشاره بين المزارعين الذين يدعون بأن قسائمهم ممكنة.</p>		<ul style="list-style-type: none"> - التأكد من أن جميع السائقين لديهم رخصة قيادة صالحة. - إعداد قوائم بأسماء السائقين بحيث يتم ملئها وفقاً لمهامهم. - حظر الرحلات الليلية لتجنب إجهاد السائقين - تزويد السائقين بتوجيهات بشأن أكثر الطرق أماناً قبل أي رحلة. - إجبار السائقين على التقيد بحدود السرعة المسموح بها. - تخصيص ووضع رقم على كل مركبة مستخدمة مع تزويدها برقم هاتف واضح للتمكن من تقديم شكوى على السائق في حال صدور أي تصرف سيء منه - التأكد من صيانة المركبات المستخدمة بشكل جيد وبأنها مزودة بكافة الوثائق الرسمية المطلوبة. • ضمان النقل المناسب للزجاجات الفارغة والنفايات البيطرية الخطرة بما يتماشى مع تعليمات إطار إدارة النفايات البيطرية (الملحق D النسخة ٢) • رفع مستوى الوعي وفرض تطبيق الإجراءات الوقائية حول انتقال فيروس كورونا (ارتداء كمامات، التباعد الاجتماعي، غسل اليدين) وخاصة عند القيام بجمع القسائم من مراكز وزارة الزراعة. 			
	<p>الإطار الاجتماعي الاقتصادي</p> <p>استعادة الإنتاج وتعزيز الانتاجية</p> <p>• توفير مادة المدخل الزراعي ستسهم في استعادة الإنتاج الزراعي وتعزيز الإنتاجية.</p>	P				

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلية التقديرية
	<ul style="list-style-type: none"> • تعزيز فرص الأعمال التجارية في القطاع الزراعي 					
تعزيز الأمن الغذائي والتخفيف من الفقر	<ul style="list-style-type: none"> • سيتم تمكين صغار المزارعين المستهدفين تحت بند القسم الرابع لمواجهة الوضع الاقتصادي الصعب وتداعيات جائحة كورونا، من خلال تقديم الأسمدة الزراعية والبيادر والغراس والأعلاف واللقاحات الحيوانية لهم واستعادة إمكانيات الإنتاج الزراعي. وبالتالي التخفيف من حدة الفقر وتعزيز الأمن الغذائي. 	P				
ظروف العمل العامة وحالات التوتر عند توزيع القسائم	<ul style="list-style-type: none"> • لن يتم استخدام أية عمالة من قبل منظمة الأغذية والزراعة خلال تنفيذ القسم الرابع الذي لن يمول أي تشغيل للعمالة، وبالتالي فإن التأثير الناجم عن هذا القسم على ظروف العمل العامة لن يكون مطبقاً حيث لا تستطيع الجهات المقترحة للمشروع مراقبة أو السيطرة على موضوع استغلال العمال وظروف العمال الأخرى غير 	غير مطبق	<ul style="list-style-type: none"> • يجب إعلام الأشخاص المستفيدين في الوقت المناسب وكذلك القيام بالإجراءات العائدة إلى النشاطات قبل البدء بالبرنامج. • ضمان تحقيق الشفافية بأقصى درجاتها، التواصل الشفاف والواضح لأقسام المشروع، تطبيق معايير الاستحقاق وعملية اختيار الأشخاص المستفيدين، وذلك عبر استخدام وسائل متعددة (وسائل الاعلام، وسائل التواصل الاجتماعي، السلطات المحلية، والجمعيات التجارية، وغيرها). 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية حيث أن الحملة الإعلامية الخاصة بالمشروع هي جزء من تنفيذ المشروع.

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلية التقديرية
	<ul style="list-style-type: none"> اللائقة التي قد تنشأ بشكل غير مباشر عن التدخل. انتشار المحسوبة (الواسطة)، عدم الثقة بالحكومة، عدم المساواة في الوصول إلى المعلومات المتعلقة بالمشروع. ضعف استراتيجية التواصل والشفافية وضعف آلية معالجة المظالم التي لا يتم توزيعها على نطاق واسع. 		<ul style="list-style-type: none"> ضمان توفير التغطية الشاملة للحملة الإعلامية للمشروع من خلال استخدام وسائل التواصل الاجتماعي، قنوات ومحطات الإذاعة والتلفزيون، الصحف واللوحات الإعلانية وتعاونيات الفلاحين والبلديات حيث يتم استخدام هذه القنوات لإعلان ونشر تفاصيل وإجراءات آلية معالجة المظالم ولتصل إلى كافة المواطنين المحتملين والمستفيدين والفئات المستضعفة (العرضة للخطر). 			
عمالة الأطفال (تشغيل الأطفال)	<p>لن يتم تشغيل الأطفال من قبل منظمة الأغذية والزراعة خلال تنفيذ القسم الرابع، والذي لن يمول أي عملية تشغيل. وبالتالي فإن التأثير الناجم عن هذا القسم على تشغيل الأطفال لن يكون مطبقاً. حيث لا تستطيع الجهات المقترحة للمشروع مراقبة أو السيطرة على موضوع تشغيل الأطفال غير المباشر الذي قد ينشأ من التدخل.</p>	غير مطبق	تتضمن معايير الأهلية للاستفادة من نظام قسائم الشراء على تحديد الحد الأدنى للعمر، لذا يجب ضمان فرض تطبيق هذا المعيار أثناء عملية التوزيع.	غير مطبق	غير مطبق	لا توجد أية تكاليف إضافية
العمالة	<ul style="list-style-type: none"> الخطر المحتمل لتدفق العمالة والتحرش الجنسي والإيذاء والاستغلال الجنسي والعنف القائم على نوع الجنس. احتمال تدفق العمالة هو احتمال ضعيف: حيث من الممكن أن يغطي العمال (الموجودين) السابقين الزيادة الطفيفة في الإنتاج الزراعي، أو من قبل 	0	<ul style="list-style-type: none"> يجب تدريب كلاً من فريق الموظفين الميداني في وزارة الزراعة وكذلك فريق البيطريين التابع لها، وموظفي/ مستشاري PMU، وغيرهم من الموظفين المعنيين بالمشروع بما فيهم فريق منظمة الأغذية والزراعة ووزارة الزراعة العاملين في القسم الرابع من المشروع وذلك على تجنب حدوث الاستغلال والإيذاء الجنسي 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	المسؤولية	الكلفة التقديرية
	<p>المواطنين المحليين في ظل وجود معدلات فقر وبطالة مرتفعة في البلاد، أو من الممكن تغطيتها من قبل اللاجئين السوريين الموجودين. عموماً نستطيع القول أنه في كافة الأحوال، فإن القسم الرابع لمشروع الطرق والعمالة لن يمول أية عملية تشغيل للعمالة وبالتالي فإن التأثير الناجم عن هذا القسم على تدفق العمالة هو تأثير ضئيل وخارج نطاق سيطرة الجهات المقترحة للمشروع.</p> <p>• خطر احتمال التعرض لتحرش جنسي، إيذاء واستغلال جنسي والعنف القائم على نوع الجنس من قبل موظفي/ مستشاري الجهات الفاعلة في المشروع، لا سيما فيما يتعلق بتوزيع القسائم.</p>		<p>والتحرش الجنسي والعنف القائم على أساس نوع الجنس.</p> <ul style="list-style-type: none"> • ضمان وجود آلية فعالة لمعالجة المظالم خاصة بالمشروع تكون استجابتها سريعة وحساسة لموضوع الاستغلال والإيذاء الجنسي والتحرش الجنسي، مع مسارات إحالة واضحة ومعروفة وفريق مؤهل في هذا المجال. • تمكين المجتمع من الإبلاغ عن الحالات المتعلقة بالعنف القائم على نوع الجنس من خلال اللجوء إلى آلية معالجة المظالم مع احترام مبادئ الثقة وعدم الكشف عن الهوية. • التحقق من أن آلية معالجة المظالم تطبق بشكل مناسب من قبل فريق موظفين مؤهل يقوموا بتسجيل الشكاوى التي تصلهم من المجتمعات المحيطة لإيجاد الحلول المناسبة وتطبيق الإجراءات الصحيحة. • القيام بدورات وحملات توعوية حول الإيذاء والاستغلال الجنسي والتحرش الجنسي والعنف القائم على أساس نوع الجنس مع تقديم معلومات حول سبل الإحالة في حال الشكوى وأن يتم بشكل واضح التواصل بشأن هذه الأخطار من خلال ورش العمل والجلسات الاستشارية ومن خلال الحملة الإعلامية لدعم المشروع. <p>سيلتزم جميع موظفي وحدة تنفيذ المشروع الذين سيتم استقدامهم للعمل من قبل منظمة الأغذية والزراعة كطاقم عمل للمشروع بالإجراءات المعيارية التي وضعتها المنظمة</p>		

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
			(وفقاً للشروط والأحكام المنصوص عليها في اتفاقية المخرجات). كذلك سيوقع جميع هؤلاء الموظفين على عقد المنظمة المعياري والذي يحتوي على بند مدونة قواعد السلوك حول الإيذاء والاستغلال الجنسي/ التحرش الجنسي. كذلك ينبغي أن يخضع كافة الموظفين إلى دورة تدريبية إلزامية حول الإيذاء الجنسي عند بدء عقدهم.			
النزاع الاجتماعي	<ul style="list-style-type: none"> • حالة الاستياء من تخصيص القسائم وأشكال الدعم الأخرى. • تصور استبعاد مجموعات المزارعين المستضعفين (العرضة للخطر). • عدم المساواة في الوصول إلى المعلومات، القيود التي يواجهها المستفيدون المحتملون لتقديم الوثائق والأوراق الكاملة والضرورية والثبوتيات التي يجب أن تكون مؤهلة للبرنامج التي بدورها تؤدي إلى زيادة التوتر. 	N	<ul style="list-style-type: none"> • التواصل مع المجتمع لاطلاعه على معيار اختيار المستفيدين، وضمان شفافية العملية وزيادة التوعية والحملة الإعلامية وانتشارها للحد من احتمالية حدوث التوتر. • توفير الدعم عبر مراكز وزارة الزراعة للمزارعين غير القادرين على تقديم الأوراق والثبوتيات الكاملة والضرورية ليتمكنوا من الاستفادة من البرنامج. • إعداد وإعلان ونشر معلومات عن آلية معالجة المظالم بشكل فعال وعلى نطاق واسع لتصل إلى المواطنين والمستفيدين والفئات المستضعفة (المعرضة للخطر)، وذلك لمعالجة المظالم والإنصاف في حال حدوث التوتر الاجتماعي أو الشكاوى مع وجود مسار إحالة واضح لشكاوى حول الإيذاء والاستغلال الجنسي/ التحرش الجنسي. 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية
عدم المساواة بين الجنسين	عدم قدرة النساء على الوصول والاستفادة المقدمة بشكل مساوي مع الرجال	N	<ul style="list-style-type: none"> • يجب اعتماد معيار توزيع واضح مع مراعاة النسبة المفروضة ومراقبة الالتزام بالحد الأدنى من النساء المستفيدات من قسائم المدخلات المقدمة (١٠%) 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
			<ul style="list-style-type: none"> القيام بالتواصل على نطاق واسع مع القيام بالاستشارات الإضافية مع النساء عند الحاجة. مراعاة ودعم (I) آلية تعليقات الشكاوى الحساسة لقضايا الإيذاء والاستغلال الجنسي والتحرش الجنسي و(II) المساواة في مشاركة النساء والاستفادة من البرنامج، حيث من المتوقع أن تشارك حوالي ٢٦٧٠ امرأة ريفية (أي ١٠% من إجمالي عدد المستفيدين من البرنامج) وتستفيد من قسيمة المدخلات الزراعية ونظام التوزيع. 			
العنف القائم على نوع الجنس (GBV)، الإيذاء والاستغلال الجنسي (SEA) والتحرش الجنسي (SH)	من المحتمل أن تخضع النساء إلى إيذاء واستغلال جنسي ولعرض ما يقابل مصلحة جنسية خلال توزيع القسائم.	N	<ul style="list-style-type: none"> تعزيز وعي الإناث المستفيدات فيما يتعلق بالمنظمات التي يجب الاتصال بها في حالة التعرض للعنف على أساس نوع الجنس، الإيذاء والاستغلال الجنسي/ التحرش الجنسي. التحقق من أن آلية معالجة المظالم تطبق بشكل مناسب من قبل طاقم موظفين أكفاء يقوموا بتسجيل الشكاوى التي تصلهم من المجتمعات المحيطة لإيجاد الحلول المناسبة وتنفيذ الإجراءات التصحيحية، مع مسار إحالة واضح لشكاوى الإيذاء والاستغلال الجنسي والتحرش الجنسي إجراء دورات تدريبية للتوعية حول الإيذاء والاستغلال الجنسي والتحرش الجنسي والعنف القائم على أساس نوع الجنس مع تقديم معلومات حول مسارات الإحالة في حالة المظالم. وأن يتم بشكل واضح التواصل 	0	منظمة الأغذية والزراعة بالتنسيق مع وزارة الزراعة	لا توجد أية تكاليف إضافية

الوسط	التأثير المحتمل	شدة التأثير قبل التخفيف (+/-)	إجراءات التخفيف المقترحة	شدة التأثير بعد التخفيف (+/-)	المسؤولية	الكلفة التقديرية
			بشأن هذه الأخطار خلال جلسات المشاورات وعبر الحملات الإعلامية.			

P = تأثير إيجابي، 0 = تأثير سلبي منخفض، N = تأثير سلبي متوسط، N₂ = تأثير سلبي شديد.

الجدول ٢ إطار عمل المراقبة البيئية والاجتماعية الخاص بالقسم الرابع لمشروع الطرقات والعمالة

المسؤولية المؤسساتية	المعايير/الإرشادات الوطنية/ال دولية	موقع المراقبة	معدل التكرار (المراقبة)	البارامترات الواجب مراقبتها	الأثر
					التأثيرات البيئية
وزارة الزراعة		• أنظمة عوادم المركبات	• يومياً (بالنسبة للون الأذخنة) أو عند استلام شكوى أو مخالفة صادرة عن شرطة المرور سنوية (عند تجديد الرخصة)	• المراقبة البصرية والكشف عن لون الأذخنة الصادرة عن المركبات المستخدمة لتنفيذ حملة التلقيح. • رخصة تسجيل المركبات مع تاريخ انتهاء صلاحيتها	تلوث الهواء
وزارة الزراعة ووزارة الأغذية والزراعة ومتظمة	قرار وزارة الزراعة ١٣٣٨٩/٢٠٠٤	• مواقع توليد النفايات (المزارع) • مواقع تخزين النفايات (المراكز الاقليمية لوزارة الزراعة)	• عند توليد النفايات البيطرية في المزارع • عند تسليم النفايات الطبية في المراكز الاقليمية التابعة لوزارة الزراعة • عند جمع النفايات البيطرية وتقطيعها في مرفق arcenciel	• المراقبة البصرية للنفايات البيطرية التي تم جمعها في المصدر لضمان الامتثال لإطار إدارة النفايات البيطرية. • المراقبة البصرية للنفايات البيطرية التي تم جمعها في المصدر في مواقع التخزين للتأكد من مطابقتها. • حفظ السجلات (الكميات، الأنواع، المصادر، التواريخ) عند توليد النفايات وتخزينها في المراكز الاقليمية التابعة	النفايات الحادة الخطرة

الأثر	البارامترات الواجب مراقبتها	معدل التكرار (المراقبة)	موقع المراقبة	المعايير/الإرشادات الوطنية/ال دولية	المسؤولية المؤسساتية
	لوزارة الزراعة، جمع النفايات يتم من قبل مرفق Arcenciel كما هو منصوص عليه في إطار عمل إدارة النفايات، والاشعارات ووثائق ترحيل النفايات المقدمة من قبل مرفق arcenciel تستخدم كدليل على عملية تقطيع وفرم النفايات.				
التأثيرات على الصحة والسلامة					
صحة وسلامة العمال	<ul style="list-style-type: none"> • عدد جلسات التوعية والتدريب على تحديد وتقييم المخاطر. • المخاطر المحددة والتي جرى تقييمها. • الاستخدام الجيد لمعدات الحماية الشخصية من قبل فريق العمل • عدد، نوع، وسبب الحوادث والإصابات. • عدد الجلسات الإعلامية التي تتناول الوقاية من COVID-19 وعدد حالات الإصابة المسجلة. 	مستمرة	المزارع المراكز الاقليمية الزراعة وزارة	وزارة الزراعة الأغذية والزراعة	وزارة الزراعة الأغذية والزراعة ومتظمة

المسؤولية المؤسسية	المعايير/الإرشادات الوطنية/ال دولية	موقع المراقبة	معدل التكرار (المراقبة)	البارامترات الواجب مراقبتها	الأثر
				• عدد الشكاوى المستلمة من العمال.	
وزارة الزراعة والأغذية والزراعة ومتظمة	-	-	• مستمرة	• عدد، نوع، وسبب الحوادث والإصابات	الصحة والسلامة المجتمعية
التأثيرات الاجتماعية الاقتصادية					
وزارة الزراعة والأغذية والزراعة ومتظمة	WB OP 4.01	سجلات وتقارير التدريب	• مستمرة	• عدد الدورات التدريبية التي تتناول مرض كورونا	نقل الأمراض
وزارة الزراعة والأغذية والزراعة ومتظمة	WB OP 4.01	سجل آلية معالجة المظالم	• شهرياً	• عدد الشكاوى المقدمة (التي تم حلها ومعالجتها في الشهر) ومدة معالجة وحل هذه المشاكل (بما فيها الشكاوى المتعلقة بالمحسوبة)	النزاعات الاجتماعية
وزارة الزراعة والأغذية والزراعة ومتظمة	WB OP 4.01	• سجل خاص بآلية معالجة المظالم • سجلات وتقارير التدريب	• مستمرة	• عدد مرات التعرض للإيذاء والاستغلال الجنسي/ التحرش الجنسي وعدد حالات التعرض للعنف القائم على نوع الجنس/ عدد الشكاوى المسجلة (مع ضمان مبادئ السرية وعدم الكشف عن الهوية). • عدد النشرات الإعلامية الموجهة حول الإيذاء	عدم المساواة بين الجنسين، العنف القائم على نوع الجنس، الإيذاء والاستغلال الجنسي- التحرش الجنسي

المسؤولية المؤسسية	المعايير/الإرشادات الوطنية/ال دولية	موقع المراقبة	معدل التكرار (المراقبة)	البارامترات الواجب مراقبتها	الأثر
				والاستغلال الجنسي /التحرش الجنسي وحول العنف القائم على نوع الجنس الموزعة على النساء المستفيدات.	

آلية معالجة الشكاوى

يتضمن القسم الرابع آلية معالجة المظالم لتسجيل الشكاوى والمظالم العائدة للأشخاص المتضررين من تنفيذ أنشطة القسم الرابع من المشروع. سيتم التعامل مع التظلمات/ الشكاوى مجهولة الهوية ومعالجتها ضمن نظام آلية معالجة المظالم. ستم المعالجة والتسوية الكاملة لكافة الشكاوى والتظلمات المستلمة كجزء من هذا المشروع في غضون حوالي ٣٠ يوم كحد أقصى.

تهدف هذه الآلية إلى توفير وسائل واضحة ومسؤولة للمستفيدين من المشروع وللأشخاص المتأثرين عندما يتولد لديهم الشعور بتوتر محتمل وبالإقصاء، وبضرورة الشكاوى والبحث عن حلول عندما تتكون لديهم قناعة أنهم قد تعرضوا للأذى والضرر جراء المشروع. وبالتالي فإن آلية معالجة الشكاوى/ المظالم ستتيح للمواطنين إيصال صوتهم والتعبير عن قلقهم وشكواهم بشكل مباشر إلى الهيئة المسؤولة عن التنفيذ (مثل منظمة الأغذية والزراعة) وأن يتأكدوا من أن هذه المخاوف قد تم الاستجابة إليها ومعالجتها بالوقت المناسب.

ثمة هنالك منصة أخرى لتسجيل الشكاوى الناجمة عن تنفيذ القسم الرابع وهي آلية معالجة الشكاوى الخاصة بمشروع الطرق والعمالة التي تم إنشائها وتطويرها من قبل مجلس الإنماء والإعمار من أجل الأقسام الأولية للمشروع حيث ستقوم وحدة آلية معالجة المظالم التابعة لمجلس الإنماء والإعمار وبشكل مباشر بتلقي أية شكاوى تقدم إليها أو أية مخاوف أو اقتراح يقدم إلى مجلس الإنماء والإعمار ليتم توجيهها إلى وحدة آلية معالجة المظالم التابعة لمنظمة الأغذية والزراعة لاتخاذ الإجراءات اللازمة.

التشاور مع أصحاب المصلحة

بموجب سياسة البنك OP 4.01 تم إجراء مشاورات افتراضية مع أصحاب المصلحة، وذلك بسبب القيود المفروضة نتيجة لجائحة كورونا وذلك في ٢٨ كانون الثاني ٢٠٢١، أي قبل أن تتخذ وزارة الزراعة ومنظمة الأغذية والزراعة القرار بإلغاء كافة أنواع المبيدات الحشرية وحذفها من قائمة المدخلات الزراعية الممولة تحت بند القسم الرابع. لقد تم التشاور مع ٢٦ مشارك (٤٦% منهم من النساء)، من ضمنهم ممثلين عن التعاونيات الزراعية، النقابات، الجمعيات الفلاحية والمنظمات غير الحكومية المحلية والدولية، بالإضافة إلى عدة هيئات حكومية ومنظمات دولية مثل الهيئة الوطنية لشؤون المرأة اللبنانية، وزارة الزراعة، وزارة البيئة، مجلس الإنماء والإعمار ومنظمة الأغذية والزراعة (الفاو). للاطلاع على كامل قوائم المدعوبين والمشاركين يرجى مراجعة الملحق E.

لقد تم تقديم تفاصيل عن المشروع ومعلومات حول التأثيرات المحتملة وإجراءات التخفيف خلال مدة ٤٥ دقيقة من خلال عرض تقديمي عبر الإنترنت متبوعاً بجلسة مناقشة مفتوحة. لقد تمحورت المخاوف والملاحظات الرئيسية التي أثرت خلال جلسة التشاور حول إمكانية التطبيق والجدوى من تطبيق إجراءات التخفيف والمراقبة، وكذلك حول طبيعة المعيار المعتمد في اختيار المستفيدين، وقد تخلل الجلسة تساؤلات تؤكد على ضرورة تطبيق الشفافية والمساواة. والجدير بالذكر أن بعض النقاشات تمحورت حول المبيدات الحشرية والقرار بإلغاء تقديمها ضمن برنامج القسائم من قبل وزارة الزراعة اللبنانية ومنظمة الفاو وبعد جلسة المشاورات الافتراضية التي عقدت في ٢٨ كانون الثاني ٢٠٢١.

تم عقد جلسة افتراضية لمتابعة المشاورات في ١٠ شباط ٢٠٢١ لتلقي ومعالجة الملاحظات والمخاوف التي تم رفعها من قبل اثنين من أصحاب العلاقة المهتمين بعد عقد جلسة المشاورات الأولى. شارك باللقاء ٧ أشخاص وهم ممثلون عن منظمة الفاو، وزارة الزراعة، مجلس الإنماء والإعمار واثنين من أصحاب العلاقة الذين قاموا بطرح ملاحظاتهم. تناولت القضايا الرئيسية التي تمت مناقشتها الحاجة إلى توفير دعم لاحق إلى مجموعة أوسع من المزارعين، ومعيار اختيار المستفيدين، والشفافية في التنفيذ.

1. INTRODUCTION

1.1 PROJECT BACKGROUND

To meet Lebanon's developmental needs in the road sector while also stimulating the economy and creating jobs, the World Bank approved in February 2017 the Road and Employment Project (REP) through a US\$200 million Loan¹ from the International Bank² for Reconstruction and Development (IBRD).

The REP has been declared effective on October 30, 2018 when the Lebanese Parliament endorsed Law 90 that allowed the Lebanese Government to sign the Loan agreement with IBRD for the implementation of REP. The REP is implemented by the Council for Development and Reconstruction (CDR) representing the Government of Lebanon (GOL). The list of roads that are financed under the project has been approved by the Council of Ministers (COM) Decision No. 32 of June 27, 2019.

The project covers classified¹ roads in 25 Districts (or Caza³) throughout Lebanon and grouped into six lots as follows:

- Lot 1: roads in Cazas of Jbeil, Kesrouane and El Maten.
- Lot 2: roads in the Cazas of Aley, Baabda, Chouf and Zahle.
- Lot 3A: roads in the Cazas of Nabatiye, Marjaoun, Hasbaya, Rachaya and Bekaa West.
- Lot 3B: roads in the Cazas of Bent Jbeil, Jezzine, Saida, and Sour.
- Lot 4: roads in the Cazas of Akkar, Minieh-Danniyeh and Zgharta.
- Lot 5: roads in the Cazas of Batroun, Bcharre, Koura and Tripoli.
- Lot 6: roads in the Cazas of Baalbeck and Hermel.

1.2 PROJECT COMPONENTS

When it was approved by the World Bank in 2017, the REP had originally three components as follows:

1. Roads Rehabilitation and Maintenance (US\$185 million), will primarily finance work for the rehabilitation and maintenance of about 500 kilometers of primary, secondary, and tertiary roads, including road safety and spot improvements as well as supporting consultancy services.
2. Improving Road Emergency Response Capacity (US\$7.5 million), aims at improving the capacity of the Ministry of Public Works and Transport (MPWT) to deal with road emergency works, especially those induced by snow and climate extremes.
3. Capacity Building and Implementation Support (US\$7.5 million), is aimed at building the capacity of the Lebanese agencies in the planning and management of the road sector.

By the end of 2020, a new component has been added to the above three which is Component 4 about the support to farmers engaged in crop and livestock production (see more details in Sections 1.4 and 2). It was added upon the request of Ministry of Agriculture (MoA) and following the approval of Lebanese Parliament through Law No. 186 of October 7, 2020; part of the loan was reallocated for the benefit of small Lebanese farmers in the light of the financial and economic crisis and covid-19.

¹ non-concessional portion of US\$154.6 million, concessional portion of US\$45.4 million from the Concessional Financing Facility made on a grant basis

¹ Classified roads are based on the official Ministry of Public Works road classification which classifies the roads in Lebanon as primary, secondary or tertiary.

1.3 PROJECT STATUS

Under Component 1 (Roads Rehabilitation and Maintenance), the design services have been completed, the design consultants are now supporting the Project Implementation Unit (PIU) in the evaluation of bids. Five civil works contracts have been signed in September 2020, one civil works contract was signed in December 2020, and are now in early stages of implementation; the works were put-on hold during the lockdown period of January 2021 and resumed during March 2021.

Under Component 2 (Improving Road Emergency Response Capacity), the four packages of equipment have been awarded and delivered. Cost savings in the amount of US\$3 million have been made under this component.

Under Component 3 (Capacity Building and Implementation Support), the PIU hired an Environmental and Social focal point who has been fully on board since December 2019 and the unit will also be expanded to include an Occupational Health and Safety specialist, and a Traffic and Road Safety Expert.

1.4 PROJECT RESTRUCTURING

The addition of Component 4 upon MoA's request required the World Bank to restructure and redistribute the abovementioned loan amount by allocating US\$10 million to support small-scale farmers in order to enable them to face the difficult economic situation as well as the COVID-19 pandemic repercussions by providing them with agricultural fertilizers, seeds, seedlings and feed for a variety of animals, through the Food and Agriculture Organization (FAO), the Implementing Agency for Component 4 and under the technical leadership of the Ministry of Agriculture (MoA) (see more details in Section 2).

The restructuring has: (i) created a new component (Component 4) to the REP to support farmers; (ii) created a new category of expenses for Loan No. 8705-LB to implement Component 4; (iii) reallocated project funds equivalent to US\$10 million between disbursement categories; (iv) presented details of the institutional arrangements for the Component 4; and (v) revised the PDO and results framework. This is the first request for REP restructuring.

1.5 PROJECT RATIONALE

1.5.1 *Rationale behind project restructuring*

As of October 2019, Lebanon's economic and social status started rapidly plunging into a dire state due to multiple and consequent crises namely:

- i. The massive explosion at the Beirut Port on August 4, 2020 devastated the city, killing at least 200 people, wounding thousands, and displacing around 300,000, adding to the multiple crises Lebanon had already been facing. These included: (i) spill overs from the conflict in Syria, which led Lebanon to host the largest per capita refugee population in the world; (ii) a financial and economic crisis that induced systemic macro-financial failures, such as impairments of the banking sector, risks to deposits, an exchange rate collapse, a default on sovereign debt, triple digit inflation rates, and severe economic contraction; and (iii) impacts from the COVID-19 pandemic. The impacts of these crises are reversing hard-won development gains.

- ii. The COVID-19 pandemic has affected Lebanon quite severely. As of January 19, 2021, there have been 260,315 COVID-19 cases in Lebanon, with 2,020 deaths. Severe measures of lockdown were imposed between March 2020 and June 2020 on the population and businesses in Lebanon to reduce the spread of COVID-19, and again in November and December 2020 (before the holidays). The lockdown caused severe disruption in people's lives and most of the economic activities in the country. Main borders crossings, airports and seaports were shut down for almost 3 months, so were the schools, universities, shopping centers, restaurants and shops. Public and private-sector institutions were also closed with few exceptions. Several less stringent lockdowns took place, and public and private institutions are asked to incorporate home-based-work schemes or rotating shifts to minimize close interactions between employees and thus the spread of the virus. Another lockdown was announced on January 2, 2021 from January 7 until February 8, 2021.
- iii. The impacts of COVID-19 on the agricultural sector further exacerbated the consequences of the financial crisis. Due to border closures, movement restrictions, and supply chain disruptions affecting food imports, Lebanon's food security in particular was negatively affected. The food insecurity situation is further aggravated by the raising poverty rate, which was estimated at 55 % in August 2020 (UN ESCWA, 2020b). The risk associated with food security is more significant in Lebanon given the reliance on imports, the current economic and monetary crises, and the capital control measures hindering the payment of suppliers. According to the Centre de Recherches & d'Etudes Agricoles Libanais (CREAL, 2020), agricultural production and GDP will decrease by 38 % (plant production -47%; animal production -26%) as a result of reduced use of inputs due to absence of credit facilities, devaluation of currency and reliance on imported inputs. The study also estimates that farmers owe US\$80 million to input retailers, who in turn owe US\$60 million to banks and importers/wholesalers. The preliminary discussions with importers of agricultural inputs indicate that their volume of business would decline by 40-60 % in 2020. Therefore, the consequences of COVID-19 and the financial crisis are threatening the overall food security of Lebanon.

Thus, based on the current situation of Lebanon described above, preserving and strengthening domestic production and value chains is therefore not only critical to mitigate the short-term risk related to food security, but also to boost the local economy in the medium and long term. Of Lebanon's 170,000 farmers, many have been affected by the health crisis and are experiencing associated delays to the planting season for a number of reasons, including lack of access to inputs, social distancing and others, which will negatively impact the volume of food at harvest. Supporting access to inputs for Lebanese farmers is therefore crucial to ensure continued food production. Agricultural input distribution in sufficient quantity and good quality to farmers will help in increasing farming activities to maintain and strengthen agricultural and animal production, increasing food security to targeted beneficiaries, creating, increasing and diversifying sources of income (vegetables, fruits, nuts and dairy).

1.5.2 Rationale for the ESMF

This present report will be used as an addendum to the existing Bank-cleared Environmental and Social Management Framework (ESMF) report of 2018¹. The objective of this addendum to the ESMF is to provide an environmental and social management process for the design and implementation of

¹ Available here:

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<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/ESMF.pdf>

Component 4 activities. The Addendum to ESMF consists of two volumes: (1) main report (the present one) and (2) Appendices including (A) List of Legislations and Regulations relevant to REP Component 4, (B) Stratigraphy and Hydrostratigraphy of Lebanon, (C) Demographic Profile of Lebanon, (D) Veterinary Waste Management Framework, (E) Stakeholder Consultation and (F) Technical Note: Public Consultation and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings.

The addition of Component 4 does not require changing the environmental and social safeguard categories for the REP. In order to manage the environmental and social risks associated with the new Component 4, relevant mitigation measures as well as necessary institutional arrangements will be prepared before appraisal¹ through this addendum to the ESMF.

The addendum to the ESMF includes a veterinary waste management framework (for the vaccination program) and road safety measures to address the logistics of delivering the vaccines. Given the current COVID-19 pandemic, all environmental and social risks associated with the project activities, including carrying out consultations, were covered in the addendum to the ESMF as per the latest WHO guidelines and the World Bank technical note to conduct consultations during times of constraints (Appendix F in Volume 2). As for the RPF, since land acquisition, physical or economical resettlement are not anticipated in the new component, no additional changes will be required. To mitigate the risk of beneficiaries' perception of exclusion, inclusive consultations with potential beneficiaries will be carried out. The project's GRM will be adopted for the purposes and potential beneficiaries of Component 4 and widely disseminated to reach all vulnerable groups.

1.5.3 *Project Development Objectives*

The original Project Development Objectives (PDOs) were:

- a. to improve transport connectivity along select paved road sections; and
- b. to create short term jobs for Lebanese and Syrians.

Given the restructuring of the overall project, an additional objective was added to target Component 4. Then, it will be to support farmers engaged in crop and livestock production.

¹ Considering the urgency of having the kits ready for the farmers before the planting season, and the growing food insecurity situation in the country, we will seek the exceptional clearance to restructure the project, in parallel to the update of the ESMF, with a conditionality of disbursements linked to the clearance and publishing of the ESMF.

2. PROJECT DESCRIPTION

2.1 PROJECT SUBCOMPONENTS

The new Component 4 - Support to farmers engaged in crop and livestock production (US\$10 million) - under the REP, will be based on the following two subcomponents, and its expected implementation period extends from end of May 2021 until end of June 2022 (in principle):

- i. **Subcomponent 1. Vouchers for crop and livestock production inputs (US\$9 million - funded by IBRD).**

Under Subcomponent 1 the support to approximately 26,700 smaller crop and animal producers in Lebanon (whereby at least 10% of the beneficiaries shall be women) will be extended by providing them with vouchers for the procurement of essential inputs to enable continued agricultural production following this year's COVID-19-related planting and harvesting delays. Two types of paper-based vouchers would be offered: one for crop production inputs, and another for animal production inputs, mostly feed. On the other hand, the vouchers will not finance the purchase of pesticides¹.

The value of the voucher would be US\$300, which allows reaching around 26,700 farmers, or around 20% of the approximate 140,000 farmers meeting the land area criterion under the support program. Given that most of the agricultural inputs in Lebanon are imported, both the transactions and accounting under the project will take place in US Dollars.

The farmer support program will be demand driven, on first come, first served basis within the regional distribution limits on the number of farmers to be reached in each governorate as set forth in the Program Operations Manual (Table 2-1), provided the beneficiaries have submitted the required proof that they meet the eligibility criteria elaborated below. In case of excessive demand in one region and lack of demand in another region, vouchers program funds will be reallocated.

Table 2-1 Tentative number of smallholders to be reached by the voucher program in each Governorate

Governorate	Share (%)	Tentative Number of Beneficiaries
Mount Lebanon	14	3,738
Akkar	15	4,005
North	14	3,738
Baalbeck Hermel	17	4,539
Bekaa	13	3,471
South	15	4,005
Nabatiyeh	12	3,204
Total	100	26,700

The latter information will be clearly communicated during the information campaign which will also include communication on the project's Grievance Redress Mechanism (GRM). The communication

¹ The crop production input vouchers were supposed to finance the purchase of bio-pesticides only until February 25, 2021 when MoA and FAO decided to remove all kinds of pesticides from the list of agricultural inputs.

campaign will be conducted by the MoA, with the support of FAO. Care will be taken to ensure that the farmers are widely informed of the availability of the support program and the eligibility criteria through various channels (media, social media, local authorities, trade associations and others). The support will only target **Lebanese** smallholder producers of at least 18 years of age who have been permanent residents of Lebanon for at least 2 years upon the submission of the application, with a land area (whether the land is owned, rented, or invested) not exceeding 20 dunums (3.5 dunums in case of greenhouses), or a maximum of 10 dairy cows or 75 sheep or goats, or 50 beehives, or a pond area limited to 200 m² in case of fish producers. The land can be either owned, rented, or invested in. The beneficiaries will also be expected to generate a substantial portion of their income – 40% minimum – from agricultural production and to have a gross income from total annual agricultural sales between US\$ 1,000 and 15,000 in 2019 (exchange rate of LBP 1,515/US\$ 1). The eligible applicants shall also be able to submit the required productive agricultural asset ownership proof, and must not have received similar support from any sources in 2020 or 2021. The eligible inputs have been provided in the Law No 186 and will be attached in the detailed implementation procedures (Program Operations Manual). Interested applicants will be able to submit their applications at one of the nearest 33 MoA Regional Centers which are distributed across all the Lebanese governorates, covering all areas of the country.

The selection of the input suppliers (stores) will be done in accordance with the agreed eligibility criteria, which will include that the supplier has/is: i) registered with the MoA; (ii) specialized to operate in the input business (as an importer and supplier); (iii) operated in Lebanon for at least last 3 years; (iv) carries and sells a variety of inputs considered under this programme; (v) been profitable for 2017, 2018 and 2019; (vi) has the available cash-flow to source and pre-finance inputs and materials in the initial stage of the program (or have the minimum initial stock available and ability to restock as needed); (vii) has branches in at least three Governorates and representatives in the other four Governorates; and (viii) meets several other criteria agreed with FAO and MoA. Moreover, the selection of input suppliers shall also take into consideration their environmental, health, and safety practices in terms of their available storage facilities for agricultural inputs. Good industry practices must be implemented in terms of proper storage conditions of inputs as per manufacturer requirements, controlled access to storage areas, and provision of relevant EHS training sessions for their personnel in line with IFC guidelines (IFC, 2016).

In order to ensure supply of good quality inputs under the program, the potential suppliers will be required to present certificates and results of tests confirming the technical specifications and quality of the inputs, materials and tools supplied. The settlement of accounts between FAO and the input suppliers is expected to take place weekly or upon reaching a certain agreed amount, whichever comes first. The full list of eligibility criteria will be publicly available, clearly and widely communicated through media, social media, local authorities, trade associations and others. The full procedure of selection and management of the suppliers is included in the Voucher Program Operations Manual.

ii. **Subcomponent 2. Vaccination programme (US\$1 million - funded by IBRD).**

Procurement of vaccines for animal diseases has also been approved as part of the farmer support programme, as provided by the Law No 186. The sub-component will support the annual animal vaccination program of the Directorate of Animal Resources under the MoA. Given that larger animal producers tend to procure vaccines themselves, the MoA's vaccination programs predominantly tend to reach small and medium-sized producers. The information on the types of vaccines and number of

vaccines to be procured in each category will be provided by the Directorate of Animal Resources in accordance with the annual vaccination program. Eligible vaccines in accordance with specifications developed and approved by the FAO and endorsed by the MoA, will be procured by the FAO using their own procedures, based on a list of certified/approved suppliers maintained by the MoA. The procured vaccines will be transferred to the Directorate of Animal Resources with the appropriate documentation for further application by the Directorate staff or transfer to veterinarians. The eligible expenditures under this sub-component will include vaccines, vaccination equipment to deliver the procured vaccines, and fuel necessary for the delivery of vaccines and the vaccination teams to the locations where the vaccines are necessary. As the Directorate of Animal Resources does not have sufficient staff to conduct the vaccination campaign, eligible expenditures will also include the recruitment by FAO of short-term technicians to participate in the vaccination campaign. All other costs related to the vaccination service will be handled by the Directorate. The Directorate of Animal Resources will provide detailed reports to the MoA and the Implementing Agency on the use of the vaccines, including the list of beneficiaries, the types and number of animals vaccinated, number of doses used per region, and other relevant information.

Table 2-2 below summarizes the activities, responsible parties for implementation, and the beneficiaries of Components 4.

Table 2-2 Brief Description of Component 4

Subcomponent	Brief Description	Responsible Party	Beneficiaries
<p>Subcomponent 1. Vouchers for crop and animal production inputs (US\$9 million - funded by IBRD).</p>	<p>Support to approximately 26,700 smaller crop and livestock producers in Lebanon will be extended by providing them with vouchers for the procurement of essential inputs to enable continued agricultural production following the past year’s COVID-19-related planting and harvesting delays. Two types of paper-based vouchers would be offered: one for crop production inputs, and another for animal production inputs, mostly feed. On the other hand, the vouchers will not finance the purchase of pesticides. The value of the voucher would be US\$300, which allows reaching around 26,700 farmers, or around 20 % of the approximate 140,000 farmers meeting the land area criterion under the support program. Given that most of the agricultural inputs in Lebanon are imported, both the transactions and accounting under the project will take place in US Dollars. The farmer support program will be demand driven, on first come, first served basis, which will be clearly communicated during the information campaign.</p>	<ul style="list-style-type: none"> • MoA • FAO 	<p>Smallholder farmers meeting the following criteria:</p> <ul style="list-style-type: none"> • Having a land area not exceeding 20 dunums (3.5 dunums in case of greenhouses); • Having a maximum of 10 dairy cows; • Having a maximum of 75 sheep or goats; • Having a maximum of 50 beehives; • Having a pond area limited to 200 m2 in case of fish producers; • Generating a substantial portion of their income – 40% minimum – from agricultural production.
<p>Subcomponent 2. Vaccination program (US\$1 million - funded by IBRD).</p>	<p>Procurement of vaccines for animal diseases has also been approved as part of the farmer support program, as provided by the Law No 186. The sub-component will support the annual animal vaccination program of the Directorate of Animal Resources under the MoA. The information on the types of vaccines and number of vaccines to be procured in each category will be provided by the Directorate of Animal Resources in accordance with the annual vaccination program. The procured vaccines will be transferred to the Directorate of Animal Resources with the appropriate documentation for further application by the Directorate staff or transfer to veterinarians. The eligible expenditures under this sub-component will include vaccines, vaccination equipment to deliver the procured vaccines, and fuel necessary for the delivery of vaccines to the locations where the vaccines are necessary.</p>		

2.2 PROJECT INFORMATION CAMPAIGN

The MoA and FAO will jointly announce the support program through awareness raising and media campaigns at the national level and across all the seven target governorates. The campaigns will provide information on the eligibility criteria for beneficiary selection, the agricultural inputs and animal feed that will be on offer, and the application procedures to be followed.

In order to ensure the effective implementation of the project in engaging the largest possible number of beneficiaries, as well as to ensure their access to relevant information, a communication and visibility plan has been developed by FAO. Moreover, the MoA will collaborate with the municipalities/local authorities to ensure wide dissemination of the call for applications through the municipalities/local authorities, MoA's General Directorate of Cooperatives, farmers' association, trade associations and other suitable channels via the relevant audio and visual media outlets as well as social media platforms.

The project's information campaign targeting potential beneficiaries all over the country shall aim to achieve the following objectives:

- Inform the beneficiaries of the support program;
- Raise awareness on the project's aim and activities using multiple media resources and developing appealing messages based on the project's objectives and beneficiaries' interests;
- Provide target beneficiaries with adequate and useful tools and information regarding eligibility criteria for receiving the support and the process to be followed to receive the support; and
- Inform the beneficiaries on the Complaints feedback mechanism (Grievance Redress Mechanism - GRM).

Several tools and communication channels shall be utilized from the beginning of the implementation phase of the project in order to ensure that all targeted beneficiaries are aware of the project. Table presents the communication activities to be undertaken as part of the information campaign of the project.

Most of the activities listed under the communication plan will not incur additional costs on the project as the services for developing and distributing them will be conducted internally by the FAO communication department. However, additional costs will be incurred for printing the vouchers and the vouchers-related printed material (such as posters). The estimated costs of the latter activities is estimated at 28,450 USD.

Table 2-3 Communication Plan for the Project Prepared by FAO

Activity	Tools	Estimated Budget
Signature of the agreement	Press release in English and Arabic announcing the signature of the project Press releases will be uploaded on FAO/WB and MoA websites and shared on respective social media platforms.	None
Launching event of the voucher programme	Event preparations depending on the nature of the event (whether it is in person or virtual): E-screens; Invitations/agendas/concept notes; Supporting audio-visual materials (infographics movies, presentations...); Related tweets/posts and social media platforms; and Speeches/talking points	Services provided by the FAO communications department.
Animated movie and brochures	Arabic brochures and an animated movie explaining the application process and eligibility criteria. Both the video and brochure will serve as a guide to farmers in this process. FAO production and visibility guidelines will be applied for the preparation of the movie. The movie will be broadcasted as a TV spot on all local TV stations, and will also be shared along with the brochure on social media platforms (Including Whatsapp). In addition, the movie will be shared on FAO Youtube page (after being cleared by the communications department), uploaded on FAO Lebanon website, FAO Lebanon Twitter Account, United Nations Lebanon website and twitter account, and shared on FAO in Near East and North Africa twitter account, as well as on the website/social media accounts of partner organizations including MoA's website and Social media platforms. These materials will also be disseminated by FAO to multiple agriculture oriented pages on Facebook.	Services provided by the FAO communications department. TV spot broadcasting on local TV stations pro-bono (duration to be agreed upon with them)
Mass emails: MoA email system as well as dissemination through LARI's application	MoA to send mass emails to its list of beneficiaries and farmers using its own email system targeting beneficiaries all over Lebanon; and through LARI's application that many farmers have on their mobile phones.	Free of charge
Media relations and ensuring interviews and media coverage	One-on-one interviews with FAO/MoA representatives and World Bank representatives on selected media outlets to highlight the project achievements and inform the audience about the program Specific attention to be given to radio interviews to reach out to farmers who might miss these interviews showcased on TVs.	FAO/ WB are currently negotiating with several local TV/radio stations to reach an agreement to promote the project for free.
Vouchers printing	Printing vouchers and info pack to farmers	USD 26,700

Activity	Tools	Estimated Budget
Vouchers-related printed materials	Printing posters and notices for distribution through MoA Regional Centers and certain commercial shops.	1,750 USD
General printed materials describing the World Bank support to the project	Electronic Facts sheet/ Project Brochure covering project information in both English and Arabic languages. These sheets will distributed to the media and the public in general. They will also be shared on FAO's publication directory (after being cleared by the communications department), uploaded on FAO Lebanon website, as well as on the website/social media accounts of partner organizations These will also be uploaded on MoA's website and social media platforms	Services provided by the FAO communications department.
Social media posting	Social media posts highlighting the project activities and achievements and sharing prepared materials such as the documentary, the animated infographics, and the brochures. The posts will be shared on FAO in Near East and North Africa twitter account, FAO Lebanon Twitter Account, and MoA and World Bank accounts.	None

In addition to the above-listed activities, FAO/MoA intend to produce a two-minute documentary compiling different stages of the project from the launch to the closure in English and Arabic, to be shared on FAO YouTube page, FAO Lebanon Twitter Account, UN in Lebanon website and Twitter account, and FAO in Near East and North Africa Twitter account, as well as on the website/social media accounts of partner organizations. The documentary will be produced internally by FAO, shot by FAO's Communication Officer, and edited by FAO's Visual communication officer.

3. INSTITUTIONAL, POLICY AND LEGAL FRAMEWORK

This section serves as guidance to the application of the legal and regulatory provisions to the Component 4 context.

3.1 INSTITUTIONAL FRAMEWORK

The institutional framework for the implementation of REP Component 4 is shared mainly between the Ministry of Agriculture (MoA) and the United Nations Agency including the Food and Agriculture Organization (FAO), in addition to the Council for Development and Reconstruction (CDR) and the Ministry of Environment (MoE).

Table 3-1 Main Institutions Concerned with Component 4 by order of engagement

Institution	Mandate	Role & Responsibilities under Component 4
Ministry of Agriculture (MoA)	MoA is the main governmental body responsible for Lebanon’s agricultural development and the regulation of fertilizers, and animal feed.	MoA’s role in Component 4 will consist of: (a) liaising with the World Bank on all issues related to the contract technical aspects of the program implementation; (b) technical approval of the overall farmer support program; (c) approval of the proposed Implementation Plan: work plan and human resource plan , submitted by FAO before the signing of the agreement; (d) approval of the Terms of Reference, application forms and other formats designed by FAO for the purposes of implementation of the farmer support component; (e) guidance and support of the information campaign; (f) review and approve the progress reports; (g) review the financial reports; and (h) overall active participation in the implementation of the program at the regional and central levels; i) The Directorate of Animal Resources at MoA will be responsible for ensuring the proper storage, collection and transportation of vaccination waste from the farms where vaccination occurs to the MoA regional centers (RCs) and (j) ensuring full compliance, adoption and implementation of the ESMF addendum and subsequent safeguard instrument outcomes, in a manner acceptable to the Bank, and in accordance with the World Bank Safeguard

Institution	Mandate	Role & Responsibilities under Component 4
<p>Food and Agriculture Organization (FAO)</p>	<p>FAO's role focuses on the promotion of sustainable development of the agriculture sector, in close collaboration with the Ministry of Agriculture and other relevant ministries. More recently, FAO has been supporting the coordination and planning mechanism for humanitarian and stabilization assistance to Lebanon in the context of the Syria crisis. FAO's support focuses on agricultural and rural development, resilience and sustainable natural resource management.</p>	<p>policies and requirements in close collaboration with FAO.</p> <p>FAO's role will consist of: (a) the responsibility for the implementation of the component including the financial management and procurement aspects; (b) recruit a Third Party Monitoring Agent to conduct validation of the voucher Programme; (c) identify and select the inputs suppliers, verify and validate that the input suppliers have distributed the supplies and submit the monitoring reports on a monthly basis; (d) submitting interim financial reports; (f) ensuring that no pesticides would be procured using the project funds; (g) implement and supervise the identified environmental and social mitigation measures germane to FAO's scope of work under this component, as outlined in the ESMF addendum); and (h) preparation of regular progress reports and other relevant aspects of the project implementation.</p>
<p>Council for Development and Reconstruction (CDR)</p>	<p>CDR prepares construction and development plans in the country. It also suggests the economic, financial, and social policies needed for the implementation of these plans and accordingly sets the priorities and presents them to the CoM for approval.</p>	<p>CDR's role in Component 4 will be as follows: (a) liaising with the World Bank on all issues related to the financial aspects of the Outputs Agreement signed between the GoL and FAO; (b) approval of the proposed Implementation Plan: work plan and resource plan (human, etc.), submitted by FAO before the signing of the agreement (subject to a prior approval of the MOA); (c) Withdrawal Application management and submission to the Bank; (d) recruit of a Third Party Monitoring Agency (TPMA) with TORs acceptable to the Bank within 3 months after the signature of the output agreement to conduct a review and verification of the vaccination and that the vaccines were delivered as per the procedures and plan specified in the manual and output agreement; (e) review and clearance of the financial reports, including the final statement of accounts within a specified period of the implementation completion and submission to</p>

Institution	Mandate	Role & Responsibilities under Component 4
		the World Bank for documentation; (a) review of the progress reports submitted by FAO; and (b) Preparation, disclosure, consultation ,adoption of the ESMF addendum.
Ministry of Environment (MOE)	<p>MOE is responsible for regulating, planning and monitoring of environmental issues in Lebanon.</p> <p>MOE is in charge of protecting the environment in general, setting regulations and standards, and advising on implementing projects and programs in a sustainable manner.</p> <p>Moreover, MOE is considered as the main institutional entity responsible for monitoring medical waste generation and management in Lebanon, as well as the establishment and operation of hazardous waste management facilities,</p>	<p>MoE is the national legal entity in charge of monitoring and enforcing national legislations. The management of veterinary waste generated from the vaccination campaign of Subcomponent 2 should abide by the environmental standards and regulations that are set by MoE.</p>

3.2 LEGISLATIVE FRAMEWORK

The implementation of Component 4 is affected by a number of legislations and regulations covering various sectors including environment, Health and Safety, agriculture, Solid Waste management, labor, and gender.

The most important environmental legislations are listed below:

- Decree 5605 of 2019 – Domestic Waste Sorting at Source;
- Decree 5606 of 2019 - Determination of the Fundamentals of Hazardous Waste Management;
- Law 80 of 2018 – Integrated Solid Waste Management;
- Decree 13389 of 2004 - Types and Management of Healthcare Waste;
- Law 444 of 2002 – Environment Protection Law;
- Decision 52/1 of 1996 - National Standards for Environmental Quality (NSEQ) and the Environmental Limit Values (ELVs) for air, water, and noise; and
- Law 64 of 1988 – Protection of the Environment against Pollution from Solid Waste and Hazardous Material.

As for the agricultural legislations, the Lebanese Government and MoA have issued many decisions between 1946 and 2020 in an effort to manage this sector, most notably:

- Law 158 of 2020 - Organization of the Organic Farming Sector;
- Decree 5706 of 2019 – Endorsement of LIBNOR standards related to fertilizers and soil conditioners;
- Decision 1102/1 of 2012 - Amendment of MoA Decision 507/1 with respect to the allowed concentration of chemicals in fertilizers, as well as to the labelling requirements of the fertilizers; and
- Law 68/6 of 1968 - Regulating the trade of fertilizers, agricultural medicines and fodder.

With regards to social legislations, the most prominent legal texts issued in Lebanon include:

- Law 205 of 2020 – Criminalizing sexual harassment and victims’ rehabilitation.
- Decree 3791 of 2016 – Official minimum wage for employees and workers subject to the Labor Law;
- Law 293 of 2014 - Law on the Protection of Women and Family Members from Domestic Violence;
- Decree 8987 of 2012 – Prohibition of the employment of adolescents and children under 18 years of age in jobs that pose a risk to their health, safety and behavior;
- Decree 11802 of 2004 – Occupational Health and Safety;
- Law 207 of 2000 – Prohibition of all forms of discrimination between men and women in the workplace; and
- Labor Law of 1946 and its amendments – Regulation of the framework in an employer-employee relationship. It is worth mentioning that the law protects vulnerable people such as women, includes the provisions against child labor, and defines the work conditions for children above the age of 13 in order to protect them from exploitation (minimum age of employment further increased to 18 years of age as per Decree 8987 of 2012).

For a more complete list of legislations and regulations related to Component 4, please refer to Appendix A in Volume 2.

3.3 RELEVANT NATIONAL STANDARDS

3.3.1 Relevant Environmental Standards

The main legislative text relevant to REP Component 4 that sets environmental standards for Lebanon is MOE Decision 52/1, as shown in Table 3-2.

Table 3-2 The Main Relevant Legislative Text Setting the Environmental Standards in Lebanon

Relevant Standards	Date	Relevant Provisions
Ministerial Decision No. 52/1, MOE	29/7/1996	Environmental Quality Standards & Criteria for Air, Noise, Water and Soil

The maximum allowable limits of water pollutants (Decision 52/1) are shown in Table 3-3.

Table 3-3 Maximum Allowable Limits for Water Pollutants (MOE Decision 52/1)

Parameter	Drinking Water	Water for Human Use
pH	9	-
Chloride (mg/l)	200	-
Sulfates (mg/l)	250	250
Sodium (mg/l)	150	-
Potassium (mg/l)	12	

Parameter	Drinking Water	Water for Human Use
Magnesium (mg/l)	50	
Nitrates (mg/l)	50	50
Nitrites (mg/l)	0	-
Ammonium (mg/l)	0.5	
Sum of Kjeldahl-N (mg/l)	1	
Aluminum (mg/l)	0.2	
Hydrocarbons (mg/l)	0.01	0.05
Phenols (mg/l)	0.0005	0.001
Iron (mg/l)	0.2	0.3
Manganese (mg/l)	0.05	
Copper (mg/l)	1	0.05
Zinc (mg/l)	5	3
Phosphorus (mg/l)	5	-
Silver (mg/l)	0.01	-
Fluorine (mg/l)	1.5 (8-12°C) 0.7 (25-30°C)	1.5
Barium (mg/l)	-	0.1
Arsenic (mg/l)	50	50
Cadmium (mg/l)	5	5
Cyanide (mg/l)	50	50
Chrome (mg/l)	50	50
Lead (mg/l)	50 (in flowing water)	50
Mercury (mg/l)	1	1
Nickel (mg/l)	50	
Selenium (mg/l)	10	10
Polycyclic aromatic hydrocarbons (PAHs) (mg/l)	0.2	0.2
Pesticides (Parathion HCH and Dieldrin) (mg/l)	-	1
Organochlorine pesticides (mg/l)	0.1	
Organophosphate pesticides (mg/l)	0.1	
Carbamates (mg/l)	0.1	
Herbicides (mg/l)	0.1	
Fungicides (mg/l)	0.1	
PCBs (mg/l)	0.1	
PCTs (mg/l)	0.1	
Aldrin (mg/l)	0.03	
Dialdrin (mg/l)	0.03	
Hexachloro-benzene (mg/l)	0.01	
Total coliforms (per 100 ml)	0	
Feacal coliforms (per 100 ml)	0	
Salmonella (per 5 liters)	0	

Parameter	Drinking Water	Water for Human Use
Streptococcus faecalis (per 5 liters)	0	
Enterovirus (per 100 ml)	0	

The maximum allowable limits of atmospheric ambient air pollutants (Decision 52/1) are shown in Table 3-4.

Table 3-4 Maximum Allowable Limits for Ambient Air Pollutants (MoE Decision 52/1)

Pollutant	Maximum Allowable Concentration (in µg/m ³)	Averaging Period
Sulfur Dioxide (SO ₂)	350	1 hour
	120	24 hours
	80	1 year
Nitrogen Dioxide (NO ₂)	200	1 hour
	150	24 hours
	100	1 year
Ozone (O ₃)	150	1 hour
	100	8 hours
Carbon Monoxide (CO)	30,000	1 hour
	10,000	8 hours
Total Suspended Particulate (TSP)	120	24 hours
Particulate Matter (PM-10)	80	24 hours
Lead	1.0	1 year
Benzene	5 ppb	1 year

3.3.2 Relevant Agricultural Standards

The Council of Ministers issued in 2019 Decree 5706 which endorsed the standards for fertilizers and soil conditioners issued by LIBNOR by granting them a legally binding status. The standards are available if purchased from LIBNOR only.

3.4 WORLD BANK POLICIES AND GUIDELINES

3.4.1 Safeguard Policies

As for the safeguards, the REP is classified under Category “B” project, with two safeguard policies triggered OP4.01 and OP4.12. An Environmental and Social Management Framework (ESMF)¹ and Resettlement Policy Framework (RPF)¹ were prepared, consulted, Bank-cleared and disclosed in 2018. The ESMF identified the potential environmental and social risks and impacts associated with the

¹ For the disclosed ESMF, please refer to this link:

<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/ESMF.pdf>

¹ For the disclosed RPF, please refer to this link:

<https://www.cdr.gov.lb/CDR/media/CDR/StudiesandReports/Roads%20and%20Employment/RPF.pdf>

Project and recommended respective mitigation measures. The RPF outlined the principles for resettlement impact mitigation as well as the organizational arrangements needed during project preparation and implementation and included the compensation measures that need to be implemented for all project affected persons (PAPs) for the loss of lands, properties and livelihoods. All site-specific safeguard instruments (development of ESMPs for 25 selected sites across Lebanon) were consulted, Bank-cleared and disclosed in 2020¹. These instruments assessed all site-specific Environmental and Social (E&S) risks and impacts, determined the appropriate mitigation measures and put in place E&S management plans to appropriately manage and monitor the implementation of the safeguard requirements.

With regards to Component 4, in addition to the Lebanese legislation, only one World Bank safeguard policy applies, the OP 4.01 Environmental Assessment.

Environmental Assessment (OP 4.01)

This ESMF Addendum for Component 4 should comply with the safeguard policy of the World Bank, specifically, the OP/BP 4.01 regarding Environmental Assessment. The OP 4.01 is triggered as the project could have impacts on the environment. Under the requirements of OP4.01, the proposed project is classified as Category B (impacts are localized, short-term, and reversible and have no severe effects on the environment). Simple and low/moderate cost mitigation measures will be sufficient to restore the potential damage or keep it to the lowest possible) since the environmental impacts are expected to be minimal, and can be mitigated via an environmental management plan.

3.4.2 Access to Information

This Policy governs the public accessibility to information in the Bank's possession. The World Bank allows access to any information in its possession that is not on a list of exceptions.

This Policy is based on five principles:

- Maximizing access to information;
- Setting out a clear list of exceptions;
- Safeguarding the deliberative process;
- Providing clear procedures for making information available; and
- Recognizing requesters' right to an appeals process.

3.4.3 Consultations and Disclosure Policy

According to OP/BP 4.01, a public consultation with project-affected people and local nongovernmental organizations (NGOs) must be conducted for all projects under Category A and Category B. The aim of the consultation is to present to the public the components of the proposed project along with potential environmental and social impacts and take their comments and concerns into consideration.

Accordingly, the Consultant organized a virtual stakeholder consultation (see more details in Section 8) due to COVID-19 public health restrictions on January 28, 2021 with representative stakeholders from the public and private sectors, international organizations, non-governmental organizations,

¹ For the disclosed ESMPs, please refer to this link: <https://www.cdr.gov.lb/en-US/Studies-and-reports/Roads-and-Employment.aspx>

cooperatives and syndicates. In addition, this Addendum to ESMF will be disclosed on the CDR website on the following link <https://www.cdr.gov.lb/en-US/Studies-and-reports/Roads-and-Employment.aspx>.

3.4.4 Guidelines and Manuals

In addition, due to the nature of the REP Component 4 activities, the following guidelines published by IFC should be used as appropriate² :

General and Industry Guidelines on Environmental, Health and Safety Guidelines (EHSGs);

- Guidelines for Annual Crop Production
- Guidelines for Mammalian Livestock Production
- Guidelines for Perennial Crop Production

3.4.5 Environmental Limit Values

Table 3-5 presents the World Bank Group emission levels for ambient air quality.

Table 3-5 Indicative limits for air quality (WB Requirements µg/m³)

Exposure period	Ambient air pollutants threshold			
	1-hour	8-hour	24-hour	1-year
Carbon monoxide CO µg/m ³	N/A	N/A	N/A	N/A
Sulfur dioxide SO ₂ µg/m ³	N/A	N/A	125	N/A
Nitrogen oxides NO _x µg/m ³	200	N/A	N/A	40
Particulates PM ₁₀ µg/m ³	N/A	N/A	150	70
Particulates PM _{2.5} µg/m ³	N/A	N/A	N/A	N/A
TSP µg/m ³	N/A	N/A	230	80
Ozone	N/A	160	100	N/A

3.4.6 Gap Analysis

Based on Table 3-6 below, the Lebanese ambient air quality standards are more stringent than World Bank standards for most of the parameters, thus in case of discrepancies, the most stringent requirements will apply. Accordingly, The Lebanese standards for ambient air quality is the most stringent and it will be adopted as a reference during the implementation of the REP Component 4.

Table 3-6 Comparison of Ambient Air Pollutants Permissible Levels between Lebanese and WB Standards

Pollutant	Maximum Allowable Concentration (in µg/m ³)		Averaging Period
	Lebanese standards	WB standards	
Sulfur Dioxide (SO ₂)	350	N/A	1 hour
	120	125	24 hours
	80	N/A	1 year

² See ifc.org/ehsguidelines

Pollutant	Maximum Allowable Concentration (in µg/m ³)		Averaging Period
	Lebanese standards	WB standards	
Nitrogen Dioxide (NO ₂)	200	200	1 hour
	150	N/A	24 hours
	100	40	1 year
Ozone (O ₃)	150	N/A	1 hour
	100	160	8 hours
	N/A	100	24 hours
Carbon Monoxide (CO)	30,000	N/A	1 hour
	10,000	N/A	8 hours
Total Suspended Particulate (TSP) Particulate Matter (PM-10)	120	230	24 hours
	N/A	80	1 year
	80	150	24 hours
	N/A	70	1 year
Lead	1.0	N/A	1 year
Benzene	5 ppb	N/A	1 year

Regarding requirements for consultation and disclosure, OP 4.01 that requires consultation for category B projects was adopted and a stakeholder consultation was conducted as described in Section 8; and the ESMF addendum for Component 4 will be disclosed upon clearance in line with OP 4.01 (which is not a requirement as per Lebanese legislation).

3.5 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS POLICIES AND STANDARDS

3.5.1 Environmental and Social Safeguard Standards

The Environmental and Social Safeguard (ESS) Standards are developed by FAO and adopted during all FAO projects. These standards are used as a reference to evaluate the potential risk of the activities implemented by FAO, and are in line with the World Bank's Safeguard Policies. In particular, the FAO ESS 1, explained below, is highly applicable to the REP Component 4. The Environmental and Social Safeguards also provide a list of requirements and boundaries for FAO programmes.

The ESS Standards are divided into nine chapters as follows:

- Environmental and Social Safeguard 1 (ESS 1) Natural resource management;
- Environmental and Social Safeguard 2 (ESS 2) Biodiversity, ecosystems and natural habitats;
- Environmental and Social Safeguard 3 (ESS 3) Plant Genetic Resources for Food and Agriculture;
- Environmental and Social Safeguard 4 (ESS 4) Animal – Livestock and Aquatic - Genetic Resources for Food and Agriculture;
- Environmental and Social Safeguard 5 (ESS 5) Pest and Pesticides Management;
- Environmental and Social Safeguard 6 (ESS 6) Involuntary Resettlement and Displacement;
- Environmental and Social Safeguard 7 (ESS 7) Decent Work;
- Environmental and Social Safeguard 8 (ESS 8) Gender Equality; and
- Environmental and Social Safeguard 9 (ESS 9) Indigenous People and Cultural Heritage.

ESS Standards that are relevant to the project are listed in Table 3-7, with a brief description of their objectives and scopes of application.

Table 3-7 FAO Environmental and Social Safeguards

Environmental and Social Safeguard	Objectives	Scope of Application
ESS 1 Natural resource management	<ul style="list-style-type: none"> Focus on sustainable agricultural practices. Promote the efficient use of abiotic natural resources. 	<ul style="list-style-type: none"> During the environmental and social risk screening; Applied to all FAO projects; and In order to meet ESS 1's requirements, activities are managed through incorporating environmental risk management measures into project design and ensuring and monitoring their application throughout project implementation
ESS 2 Biodiversity, ecosystems and natural habitats	<ul style="list-style-type: none"> Avoid any practice within the agricultural sector that may provoke negative impacts on biodiversity, ecosystems, ecosystem services or critical habitats. Provide a sustainable management to the ecosystems in order to keep the services and benefits they provide. Ensure that exchange of genetic resources conforms to access and benefit sharing measures in force in the country involved. 	<ul style="list-style-type: none"> During the environmental and social screening; Based on the risks and impacts identified, the requirements are applied to projects (i) located in modified, natural and critical habitats; and (ii) that potentially impact on ecosystem functions over which the project has direct or indirect effects; and Ecosystem functions and services that may be affected by the project
ESS 3 Plant Genetic Resources for Food and Agriculture (PGRFA)	<ul style="list-style-type: none"> Promote the conservation of PGRFA diversity to avoid activities that may induce their loss; Safeguard against actions resulting in unintended environmental and social consequences; Promote sustainable crop improvements and production and enhanced productivity; and Ensure that the transfer of PGRFA conforms with the measures relating to access and benefit sharing, IPR and farmers' rights which are in force in the country involved. 	<ul style="list-style-type: none"> During the environmental and social screening; and When whole plants and their propagules, i.e. botanical seeds and planting materials are needed during the project implementation
ESS 4 Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	<ul style="list-style-type: none"> Promote sustainable management of animal and aquatic genetic resources; Prevent loss of valuable livestock and aquatic genetic diversity; and Protect animal resources against actions resulting in unintended environmental and social consequences. 	<ul style="list-style-type: none"> During the environmental and social screening; The use of animal and aquatic genetic resources: whole organism, germplasm (e.g. gametes, eggs, embryos or seeds) and other genetic material (e.g. DNA samples); and Accessions of live and frozen gene-banks (ex-situ collections), wild species found in nature (in situ), stocks and varieties maintained at aquaculture facilities in both marine and inland environments; breeding

Environmental and Social Safeguard	Objectives	Scope of Application
		<p>materials in improvement programs; and improved varieties registered and/or released for cultivation.</p>
ESS 7 Decent Work	<ul style="list-style-type: none"> • Promote direct action to foster decent rural employment; • Promote fair treatment, and equal opportunity for all workers without any discrimination; • Protect and support workers, particularly disadvantaged and vulnerable categories of workers; and • Promote the application of international labour standards in the rural economy, including the prevention and elimination of child labour in agriculture 	<ul style="list-style-type: none"> • During the environmental and social screening; • Applied to all FAO projects that potentially have either positive or negative employment effects; and • Any activity, occupation, work, business or service performed by women and men, adults and youth. ESS 7 applies to direct beneficiaries of FAO projects (including those administered by sub-contracted organizations).
ESS 8 Gender Equality	<ul style="list-style-type: none"> • Provide equal access to and control over productive resources, services and markets; • Strengthen all genders' participation in decision-making in rural institutions and policy processes; and • Ensure that all stakeholders benefit equally from development interventions and that inequality is not reinforced or perpetuated. 	<ul style="list-style-type: none"> • Applied to all projects supported by FAO and the scope of applicability is determined during the environmental and social screening.

3.5.2 *Quality Declared Seed System*

Within the scope of this project, seeds will be procured from abroad to be later distributed to eligible smallholder farmers through the agricultural inputs voucher programme. The “Quality Declared Seed System”² is developed, updated, and adopted by FAO when procuring seeds in emergency projects (similar to the REP Component 4). The “Seed quality standards for emergency” are used as a minimum threshold for any procured seed.

3.6 WORLD ORGANIZATION FOR ANIMAL HEALTH (OIE)

The OIE issued the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual) with an objective to prevent and control animal diseases. In addition to the general standards listed in this manual regarding the management of veterinary diagnostic laboratories and vaccine manufacturing facilities, the manual also includes specific standards tackling veterinary diseases and vaccines.

It is important to note that all the vaccines to be procured under Component 4 targeting the following diseases: Foot-and-Mouth Disease (FMD), Lumpy Skin Disease (LSD), Sheep and Goat Pox (SGP), and Peste des Petits Ruminants (PPR) are included in the Terrestrial Manual. All four have been classified as having no risk of being transmitted to humans (OIE, 2019).

3.7 INTERNATIONAL CONVENTIONS AND TREATIES

The main treaties and conventions ratified by Lebanon which are relevant to the proposed component are summarized in Table 3-8.

² FAO (2006). Quality Declared Seed System. FAO Plant Production and Protection Paper 185. <http://www.fao.org/3/a0503e/a0503e.pdf>

Table 3-8 International Treaties and Conventions Relevant to the REP Component 4 that are Ratified by Lebanon

Treaty, Convention or Protocol	Relevance to Project Activities	Objective and Brief Description of Relevant Articles
<p>United Nations Framework Convention on Climate Change (UNFCCC) treaty, Rio de Janeiro Ratified via Law No. 359/1994</p>	<p>Transportation of agricultural inputs and vaccines, implementation of the animal vaccination campaign, and transportation of the generated veterinary waste</p>	<p>The objective of the United Nations Framework Convention on Climate Change (UNFCCC) treaty is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The treaty itself set no binding limits on greenhouse gas emissions for individual countries and contains no enforcement mechanisms. In that sense, the treaty is considered legally non-binding. Instead, the treaty provides a framework for negotiating specific international treaties (called "protocols") that may set binding limits on greenhouse gases. In 1997, the Kyoto Protocol was concluded and established legally binding obligations for developed countries to reduce their greenhouse gas emissions (ratified by Lebanon via Law No 738/2006, See Item 1.2.24).</p>
<p>The Kyoto Protocol of the United Nations Framework Convention on Climate Change Ratified via Law No. 738/2006</p>	<p>Transportation of agricultural inputs and vaccines, implementation of the animal vaccination campaign, and transportation of the generated veterinary waste</p>	<p>In 1997, the Kyoto Protocol was concluded and established legally binding obligations for developed countries to reduce their greenhouse gas emissions.</p> <p>Being a Non-Annex 1 party of the United Nations Framework Convention on Climate Change, Lebanon is required to periodically prepare GHG inventories as part of its National Report/ Communication to the UNFCCC and must report on the steps it is taking or envisage undertaking to implement the Convention.</p>
<p>Paris Agreement - Paris Climate Conference (COP21)-2015 Signed in 2016</p>	<p>Transportation of agricultural inputs and vaccines, implementation of</p>	<p>It is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gas emissions mitigation, adaptation, and finance starting in the year 2020. The Agreement aims to respond to the global climate change threat by keeping a global temperature rise this century well below 2 degrees</p>

Treaty, Convention or Protocol	Relevance to Project Activities	Objective and Brief Description of Relevant Articles
	the animal vaccination campaign, and transportation of the generated veterinary waste	Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
Convention on Biological Diversity (CBD) Ratified via Law No. 360/1994	Application of fertilizers by the famers	The Convention has three main goals: 1) conservation of biological diversity; 2) sustainable use of its components; and 3) fair and equitable sharing of benefits arising from genetic resources. The Convention is legally binding; countries that join it ('Parties') are obliged to implement its provisions.
The Convention on wetlands of international importance – (Ramsar) Ratified via Law No. 23/1999	Application of fertilizers by the famers	Ramsar Convention is an international treaty for the conservation and sustainable utilization of wetlands, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific, and recreational value. There are four Ramsar Sites in Lebanon: 1) Tyre Coast Nature Reserve; 2) Ammiq wetland; 3) Raas El Chaqaa; and 4) Palm Islands Nature Reserve.

4. BASELINE CONDITIONS

This chapter presents the environmental and social baseline and settings related to Component 4 only. However, since this Component will cover the whole Lebanese territory (except Beirut), this Chapter will present general background information about the different regions in Lebanon. The below sections are general updated description about the state of the environment and social context in Lebanon. It should be noted that baseline information on climate, air quality and noise, as well as other sections are documented in the parent REP and ESMF² ; while the following sections provide the baseline for other sectors targeting Component.

4.1 ENVIRONMENTAL BASELINE

4.1.1 Water Resources

4.1.1.1 Surface Hydrology

More than thirteen (13) rivers cut through Lebanon as shown in Figure 4-1. The main rivers with recognizable flow rates are the Litani River, Orontes (Assi) River, El Kebir River and Hasbani River. With the exception of the Litani River, which flows entirely within the country borders, all other main rivers are Transboundary Rivers.

The Litani River originates from Baalbek Caza and flows south towards Zahle and West Bekaa where it is trapped by Qaraoun Dam. From Qaraoun Dam it flows toward South Lebanon and Nabatyeh governorates before discharging into the Mediterranean Sea. Its total length reaches about 170 Km. The estimated average annual flow volume of the Litani River at Qillaya Gauging Station is around 51 Million Cubic Meters (MCM). It is worth noting that the upper watershed of the Litani River is heavily polluted, more than the lower basin.

The Orontes River, also named as Al Assi River, is a transboundary river that originates in Lebanon, and flows into Syria to discharge into the sea in Antakya, Turkey. It initiates in Lebanon and is mainly fed by two major springs; Al Assi and Ain Ez Zarqa Springs. It also receives surface runoff from areas located at both sides of its course. Its average flow rate, estimated from the flow record collected between 2001 and 2013, is about 11 m³/s.

El Kebir River is a permanent river that flows along the Lebanese-Syrian country border in a west-northwest direction and discharges into the Mediterranean Sea. El Kebir River is gauged at the sea mouth, having an estimated yearly average flow of 474 Million Cubic Meters (MCM).

The Hasbani River is a permanent river that flows south for about 40.2 km from its starting point before exiting the country and crossing into bordering nations. The Wazzani Spring emerges on the side of the Hasbani River and discharges into it. The estimated average annual flow volume of the Hasbani River (segment within Lebanon) is around 149 Million Cubic Meters (MCM).

Besides the main rivers, several small scale rivers (such as Damour River, El Bared River, Ibrahim River, Nahr el Kalb, etc...) are present in Lebanon (Figure 4-1). All those rivers tend to flow towards the west, eventually discharging into the Mediterranean Sea.

² Available on the CDR website on the following link <https://www.cdr.gov.lb/en-US/Studies-and-reports/Roads-and-Employment.aspx>

It is worth noting that inland wetlands are also present in Lebanon. The wetlands are located in Ammiq and Kfarzabad villages and are considered as Himas (protected areas) with high ecological value.

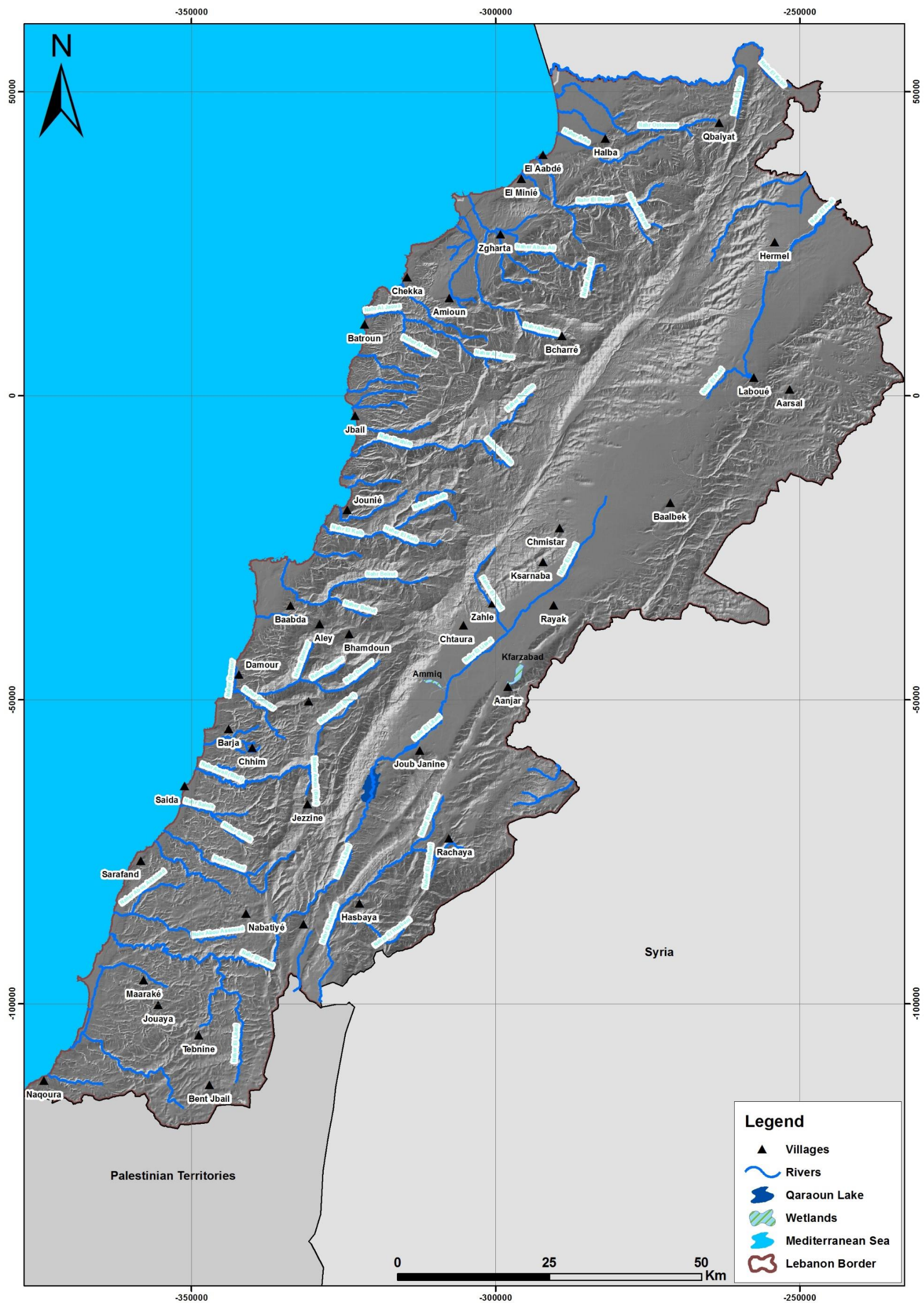


Figure 4-1 Map Showing the Major Surface Water Bodies in Lebanon (mainly Rivers and Wetlands)

(Stereographic Coordinates Projection)

4.1.1.2 Geology and Hydrogeology

Stratigraphy and Hydrostratigraphy

In Lebanon, there are nineteen (19) exposed geological formations and deposits. The hydrostratigraphic units of the country are classified into three (3) main groups: aquifers, semi-aquifers and aquicludes. A simplified stratigraphy and hydrostratigraphy of the formations are shown in Appendix B in Volume 2. A simplified geological map of the geology of Lebanon is shown in Figure 4-2.

A total of three (3) hydrostratigraphic units are considered as karstic aquifers in Lebanon, two (2) of which are considered the main aquifers of the country (the Kesrouane aquifer J4 aquifer) and the Sannine-Maameltein aquifer (C4-C5 aquifer). The third aquifer is the Upper Eocene Formation (e2b). Given their highly karstified nature and extent that favor a high storage and recharge capacity, all three aquifer were considered to be karstic. The recharge of the aquifers in Lebanon mainly occurs through rainfall, snow and sometimes through losing streams. Infiltration in karstic aquifers is usually highest along high altitudes where precipitation increases. Groundwater tends to flow along preferential pathways enhanced by fractures and cavities in karstic limestone such as the e2b, C4-C5 and J4 aquifers making them highly vulnerable to groundwater pollution. Moreover, the presence of the Yammouneh Fault System and Roum Fault System along with other fault systems in Lebanon (Figure 4-2), helps in enhancing the fractures and cavities in karstic aquifers.

Besides aquifers, several semi-aquifers are present in Lebanon. The semi-aquifers usually have medium vulnerability to surface water pollution. This is because some semi-aquifers such as the Chouf Sandstone (C1) and Quaternary/Neogene (Q/n including mcg and mL) have the tendency to filter the percolating water. However, some semi-aquifers (mainly Mdairej C2b) are considered as a highly karstified, especially in the presence of nearby faults.

Aquicludes are considered to have very low vulnerability to surface water pollution. This is mainly due to the lithostratigraphic characteristics of an aquiclude that limits the groundwater interaction between the overlying and underlying geological formations.

Appendix B in Volume 2 provides a Simplified Stratigraphy and Hydrostratigraphy of Lebanon (adapted from Walley 1995; Abbud & Aker, 1986).

Springs and Wells

Springs

A total of about 5,050 springs are depicted in the 1:20,000 topographic maps of Lebanon. The major springs in Lebanon are fed by either the Sannine-Maameltein (C4-C5) Aquifer such as Afqa Spring, Keserouane Aquifer (J4) such as Ain El Delbi, or both, which is the case in the Wazzani Spring.

Wells

The UNDP, 2014 study revealed the presence of 841 public wells in Lebanon. The survey showed that the operational public wells are exploiting the various aquifers at an estimated rate of about 248.7 million m³/year. The water of the wells is mainly used for domestic purposes. As for private licensed wells, the UNDP, 2014 study revealed the presence of 20,537 wells. More than 50% of the private licensed wells are located in Beirut and Mount Lebanon areas. The estimated number of unlicensed private wells is almost three (3) times higher than the number of licensed private wells (about 55,000 to 60,000 wells). The water extracted from private wells is being used for agricultural, domestic, industrial and commercial purposes.

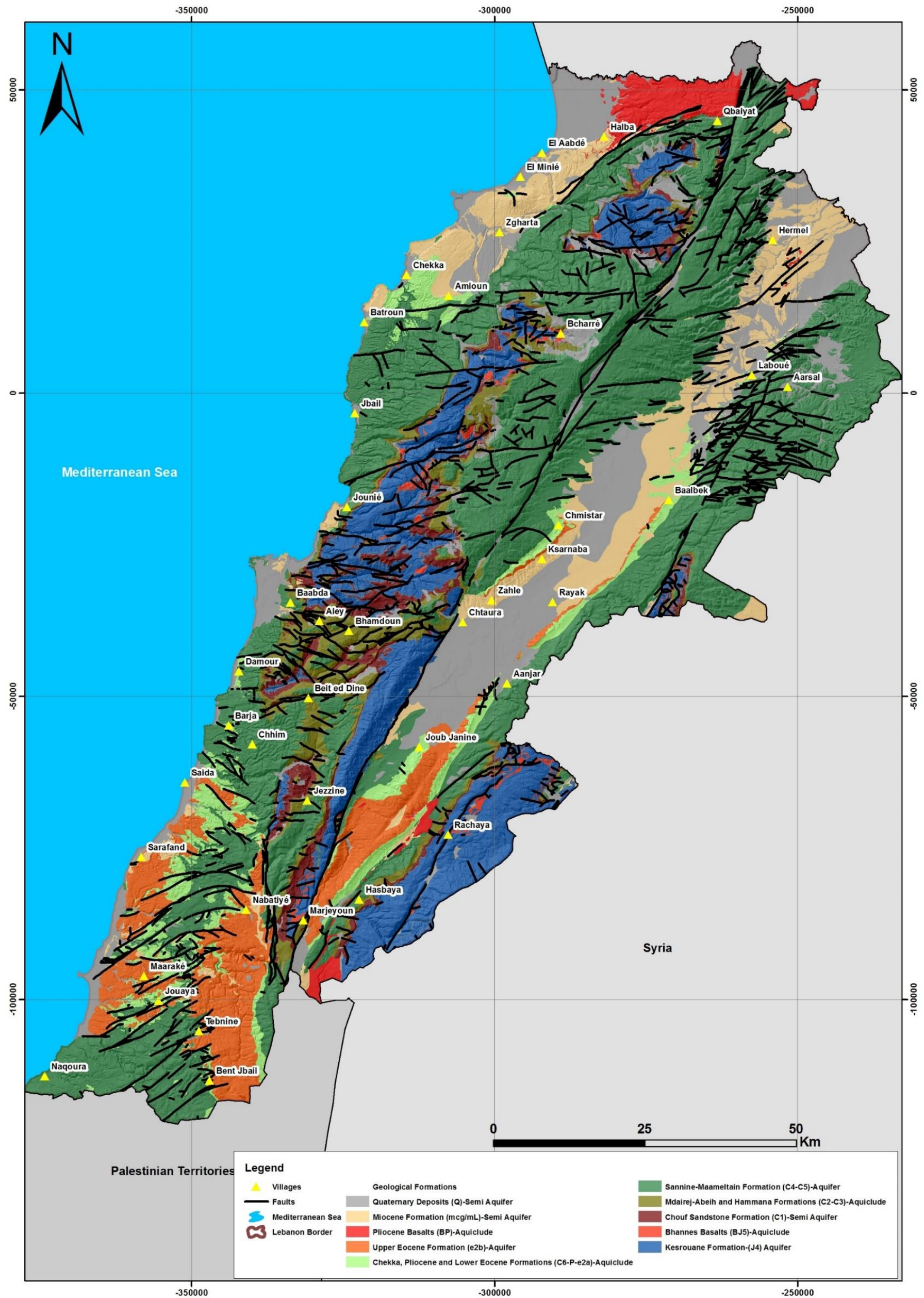


Figure 4-2 Simplified Geological Map of Lebanon.

Source: Dubertret, 1953

4.1.2 Soil

Based on the soil map of Lebanon, there are twelve (12) soil types in Lebanon. The extent of the soil cover layer is shown in Figure 4-3. Leptosols tend to cover the largest surface area out of the twelve soil types. Soil cover characteristics are described in the paragraphs below.

- Cambisols are developed in medium and fine-textured materials (mostly colluvial and onalluvial deposits) which justifies their presence in the Bekaa valley. Cambisols are considered to be good for agricultural usage and can be one of the most productive soils in terms of agriculture if the climate is appropriate (Encyclopedia Britannica, FAO soil group).
- Leptosols are shallow soils overlying calcareous rocks. Leptosols are unattractive for rainfed agricultures because of their inability to hold water. They however allow shrubs and small trees to grow over the rocky terrain, which gives them their importance in sustaining such terrestrial ecosystems (Encyclopedia Britannica, FAO soil group).
- Fluvisols are mainly composed of river sediments and are genetically young soils within the alluvial deposits (Encyclopedia Britannica, FAO soil group). Those soils can be found around water courses.
- Gleysols are wetland soil that is saturated by groundwater. They are usually found in depression areas and low landscape positions (Encyclopedia Britannica, FAO soil group). Within Lebanon, they are mainly found at Ammiq and Kfarzabad Wetlands.
- Luvisols are present usually in forested regions. Such soils are characterized by their high content of clay minerals; thus, they do not bear water (Encyclopedia Britannica, FAO soil group).
- Regosols are shallow soils with low-humus surface horizon overlying directly the weathering rock in an actively eroding landscape. Such soils allow orchards to grow and thus are important in sustaining such terrestrial ecosystem (Encyclopedia Britannica, FAO soil group).
- Anthrosols are formed from heavily modified soils due to long term human activities related to irrigation and cultivation (Encyclopedia Britannica, FAO soil group).
- Arenosols are sandy-textured soils that lack any significant soil profile development. Such soils have high permeability and low nutrient content, making their agricultural usage problematic (Encyclopedia Britannica, FAO soil group).
- Calcisols are characterized by a layer of calcium carbonate. They are well drained soils and relatively fertile soils given their high calcium content (Encyclopedia Britannica, FAO soil group).
- Andosols are dark colored soils of volcanic origin (ash, tuff...). Such soils tend to form good agricultural soils given their richness in nutrients and their water-bearing characteristics (Encyclopedia Britannica, FAO soil group).
- Lixisols are soils with “low levels of plant nutrients and a high erodibility, making agriculture possible only with frequent fertilizer applications, minimum tillage, and careful erosion control” (Encyclopedia Britannica, FAO soil group).

- Vestisols contain high levels of plant with high clay content. Hence, they are not well suited to cultivation without careful management (Encyclopedia Britannica, FAO soil group).



Figure 4-3 Soil Types in the Study Area

Source: CNRS-L, 2005

4.1.3 *Land Use/Cover*

Land usage in Lebanon can be classified into four main categories: agricultural areas, urban areas, natural areas and mixed rural areas. Natural and agricultural areas with the latter expanding mostly over the Bekaa Valley, the South, Nabatiyeh, Akkar, Zgharta, Koura, and Minieh-Dannieh as shown in Figure 4-4 are the most prominent land use/cover in Lebanon. The main agricultural crops comprise fruit trees, vineyards, olives, bananas, citrus fruits and field crops. Most of the agriculture in Lebanon is subject to fertilizers and pesticides (agrochemicals). It is generally known that many farmers do not abide by the correct dosage of fertilizers and pesticides usage, which find their way into the soil and into groundwater by leaching down due to irrigation. On the other hand, the highest concentrations of urban areas are found in Tripoli, Beirut and the coastal line of Mount Lebanon to the North of Beirut, Saida, Nabatiyeh, Tyre, Zahle and Baalbek (CDR, 2005).

4.1.4 *Waste Management*

4.1.4.1 *Solid Waste Management*

The yearly municipal solid waste (MSW) generation in Lebanon is approximately 2 million tons/year. Daily MSW generation is 1.05 kg/capita/day. Composition analysis shows that approximately 52.5% of this is organic, while the remaining is comprised of recyclables like paper and cardboard, plastic, glass, textiles, metals, demolition/construction waste and others (SWEEP Net, 2014).

The majority of this waste is collected and disposed of by landfilling/ dumping. The main service providers are CityBlu which is responsible for collection and treatment of waste generated from the Baabda, Aley, and Chouf regions, while RAMCO is responsible for Beirut, Metn and Kesrouan regions. Currently, there are Costa Brava and Bourj Hammoud Landfill sites where these collected wastes are disposed of. Many of the remaining rural areas collect municipal solid waste and dispose of it by open dumping and burning; with some waste sorting, composting and landfilling complexes having been constructed in various regions lately, namely in the Bekaa region in the context of Law 63/2016.

For instance, in the Bekaa region, municipal waste management facilities that include sorting, composting, and landfilling are available in Zahle, Bar Elias, Joub Janine, and Baalbek (UNDP/MoE, unpublished). In Akkar Governorate, a private contractor provides waste collection services, alongside municipalities in rural areas that are in charge to collect the generated waste. Some of the collected waste is then disposed of in SWM facilities such as the Srar ISWM complex comprising a sorting and composting facility and a landfill, or other smaller facilities such as those of Michmich and Fneideq; some uncontrolled dumping in illegal dumpsites might still be practiced in unserved areas. In the governorates of Nabatieh and South Lebanon, municipal solid waste is mostly being disposed of in 127 dumpsites, as of 2016 (MoE/UNDP, 2017) besides the Saida IBC sorting and composting (anaerobic digester) facility and some small-scale initiatives such as in Khirbet Selem, Arab Salim, Bqosta, etc. (sorting and/or composting).

The authorities in charge of solid waste management at the national scale include the Council for Development and Reconstruction (CDR), MOE, OMSAR and the concerned municipalities.

Waste incineration for municipal waste is considered as worth pursuing based on the latest studies; however, a waste incineration plant does not exist so far.

4.1.4.2 *Veterinary Waste Management*

Healthcare waste management has been slowly improving in the country as several healthcare facilities are appropriately treating their healthcare waste; furthermore, several facilities are now available in the country for the treatment of healthcare infectious waste such as arcenciel's five autoclaving facilities across Lebanon and the Municipality of Abbassieh's autoclaving facility serving the South and Nabatiyeh governorates (that are not fully covered by arcenciel). According to the most recent studies available, around 13.8 tons of healthcare risk waste are generated daily in Lebanon; however, a significant portion of it is still disposed of along with regular municipal waste or incinerated via unlicensed facilities throughout the country (SWEEP Net, 2014).

Currently in Lebanon, the MoA Directorate of Animal Resources (MoA-DAR) carries out yearly animal vaccination campaigns that are administered to the animals at the farms using livestock injection guns,

as informed by MoA-DAR. The empty vaccine vials and used needles are returned back by the veterinarians and technicians to the MoA RCs. Unless specifically recommended by the vaccine manufacturer, MoA-DAR usually does not treat generated animal vaccination waste via specialized medical waste treatment facilities since the empty vaccine vials contain inactive or dead pathogens and the vaccines in question are for animal diseases non-infectious to humans. In such cases, the empty vials are not refrigerated and are disposed of along with regular domestic waste. On the other hand, the used needles are boiled to sterilize them before being disposed of or reused again in the vaccination campaign if needed.

4.1.5 For more details about the management of veterinary waste generated from the Vaccination programme (Subcomponent 2), please refer to Appendix D in Volume II. Ecology and Habitats

Due to its location, Lebanon has a rich biodiversity and is considered to be a biodiversity “hotspot” due to its situation in the Mediterranean area. The country hosts around 9,116 known species distributed over its different geomorphologies. Given its diversity and significant ecological profile, 4 Ramsar sites, 5 UNESCO World Heritage Sites, 15 Important Bird Areas (IBAs) (under Birdlife International), 24 Important Plant Areas (IPAs), and 20 Key Biodiversity Areas (KBAs) have been designated in Lebanon so far as shown in Figure 4-5 (MOE/UNEP/GEF, 2016).

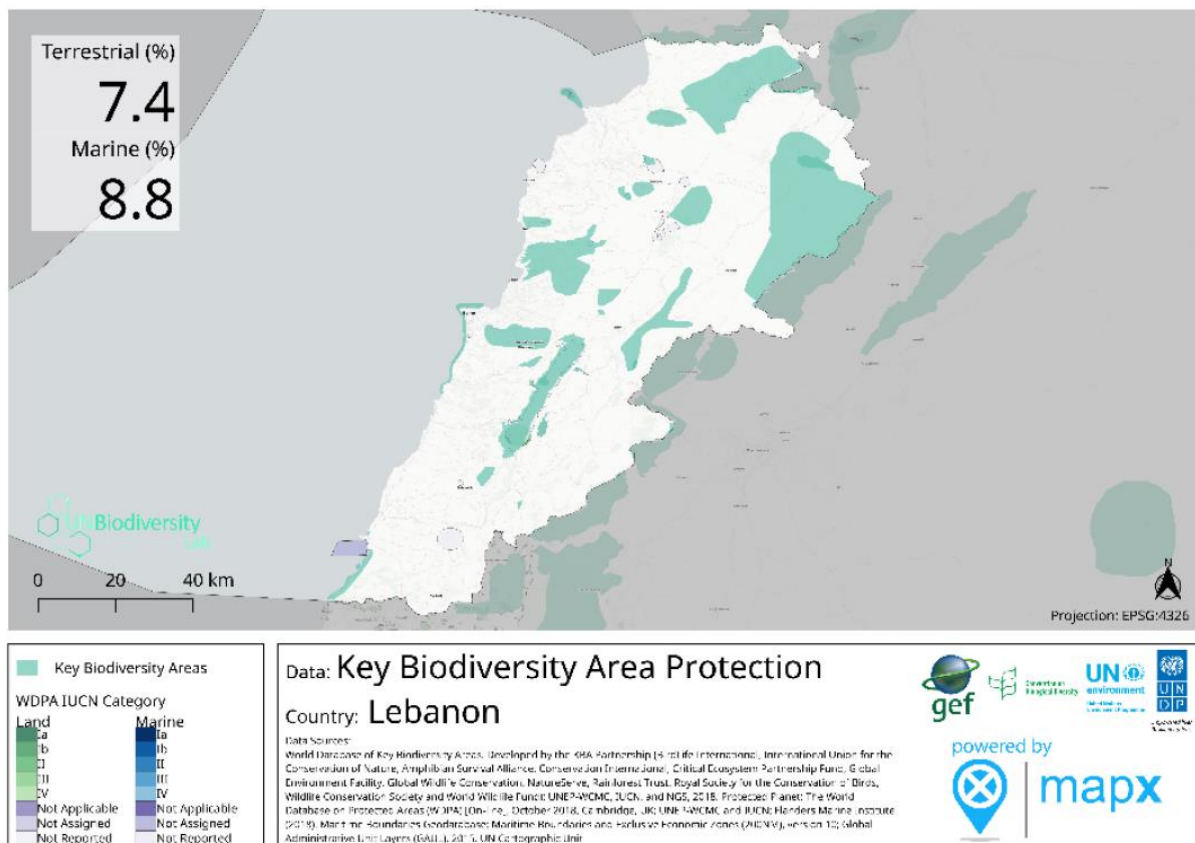


Figure 4-5 Key Biodiversity Areas (KBAs) in Lebanon

In addition, the Government of Lebanon has designated 17 sites across the country as nature reserves under the responsibility of MOE. Most recently was the designation of Mount Hermon as a nature reserve in December 2020; and the Abbassiyeh coast, South Lebanon nature reserve in May 2020.

Table 4-1 List of Nature Reserves in Lebanon (adapted from MOE/UNEP/GEF, 2016)

Nature Reserve	International Designation
Horsh Ehden	Important Bird Area
Palm Islands	Ramsar Site, Important Bird Area
Karm Chbat	None
Shouf Cedars	Biosphere Reserve, Important Bird Area
Tyre Coast	Ramsar Site
Bentaël	Important Bird Area
Yammouni	None
Tannourine Cedars Forest	Important Bird Area
Wadi Al Houjeir	None
Mashaa Chnaniir	None
Kafra	None
Ramya	None
Debl	None
Beit Leef	None
Jaj Cedars	None
Abbassiyeh Coast	Key Biodiversity Area
Mt. Hermon	Key Biodiversity Area

Moreover, Lebanon hosts a variety of unprotected natural important ecological areas such as grottos, mountain tops, natural bridges, forests, valleys, rivers, and holes. These areas are however threatened by anthropogenic and natural threats such as fragmentation, unsustainable exploitation of natural resources, pollution, and climate change.

Local communities in Lebanon have also implemented initiatives for community-based approaches for the protection and conservation of ecologically important sites across the country, such as those established in Anjar-Kfar Zabad (Bekaa) and Jdeidet el Fekha (Baalbek) (UNDP/MOE, 2019).

Site of Natural and/or Ecological Importance in Need for Protection	
<p><u>Wetlands:</u></p> <ol style="list-style-type: none"> 1. Ammiq wetland 2. Cheikh Zennad wetland 	<p><u>Natural Bridges and Rocks:</u></p> <ol style="list-style-type: none"> 1. Al Laqlouq Natural Bridge 2. Sites with Calcerous- Karstic rocks ex. Faytroun and Rayfoun in Kesrouan; Douma in Batroun
<p><u>Grottos:</u></p> <ol style="list-style-type: none"> 1. Al Rwaess grotto 2. Afqa grotto 3. Ain Labne grotto 4. Salem grotto 5. Al Tarash grotto 6. Kfarhim grotto 7. Dahr El Ain grotto 8. Al Rahwa Spring grotto 9. Zoud grotto 10. Al Motran grotto 11. Al Hawa grotto 12. AlShatawi spring grotto 13. Al Rihan grotto 14. Deir Amess grotto 15. Haris grotto 16. Debl grotto 17. Jeita grotto 	<p><u>Trees, Forests, and Valleys:</u></p> <ol style="list-style-type: none"> 1. Al Qellé Forest (Akkar) 2. Al Azer Forest (Fneidek) 3. Bshaalé Olives 4. Sir Doniyeh Valley
	<p><u>Rivers, coastal and marine areas:</u></p> <ol style="list-style-type: none"> 1. Sandy beach between Al Abassiyé and Al Mansouri (South of Litani) 2. Litani Stream
<p><u>Mountain Tops:</u></p> <ol style="list-style-type: none"> 1. Al Sheikh Mountain – Hermoun 2. Al Rihan Mountain 3. Al Kneisse Mountain (Sinkholes and dollines) 4. Sanine Mountain 5. Black Summit 	<p><u>Holes:</u></p> <ol style="list-style-type: none"> 1. Kateen Azar Hole (Tarshish) 2. Fawar Dara Hole (Tarshish) 3. Meshemshiyit Hole (Tarshish) 4. Al Badwiyi Hole 5. Katmeen Sinkhole (Rmeich) 6. Al Abed Hole (Tannourine) 7. Al Kadaha Hole (Tannourine) 8. Osman AlRamhi Hole 9. Smokhaya Sinkhole (Rmeich)

Figure 4-6 List of Important Ecological Areas in Lebanon (MOE/UNEP/GEF, 2016)

4.2 SOCIAL BASELINE

The following sections present the socio-economic baseline of the Lebanese territory and an overview of the crisis incurred by war refugees, namely an updated demographic profile, employment and income-generating activities, an overview of the agricultural sector in Lebanon, and war refugees. Baseline information relating to educational attainment can be found in the original ESMF report prepared for REP.

4.2.1 Demographic Profile

The latest surveys conducted by the Central Administration of Statistics show that the population of Lebanon in 2019 is 4,842,500, whereby 79.8% are Lebanese and 20.2% are non-Lebanese (CAS, 2020). The rural population represents 12.69% of the population, while the remaining 87.31% choose to reside in urban areas (WHO/GLAAS, 2014). Given the recent economic and financial crises in the country, it is estimated that almost 45% of the Lebanese population now lives in poverty due to currency depreciation and hyperinflation (The World Bank, 2020).

Appendix C in Volume 2 shows the number of resident Lebanese population by Governorate and Caza in 2019.

The gender distribution among the Lebanese resident population indicates that 48.4% of the population consists of males, compared to 51.6% of females. Furthermore, the highest percentage of residents are between the ages of 15-24 with a combined percentage of 17.5% of the population as shown in Appendix C in Volume 2.

4.2.2 Employment and Income Generating Activities

The Lebanese market is encountering significant challenges. Currently, the labor force in Lebanon is estimated at 1.79 million, out of which 37% (ILO, 2020) are unemployed. Unemployment rates are particularly high among women (26%) (UN Women, 2020). and youth (41%) (ILO, 2020). In addition, unemployment rates rise to over 40% in some governorates (FAO, 2020). The labor market in Lebanon has been greatly affected by:

- Loss of employment opportunities due to the COVID-19 pandemic
- Loss of employment opportunities due to the current economic and financial crises
- Low levels of job creation, resulting in shortage of available jobs;
- Important in-migration and forced displacement from other parts of the Arab region, particularly from Syria;
- Out-migration of young Lebanese skilled workers; and
- Strong occupational segregation and mismatch.

The active population of Lebanon is estimated to be around 1.23 million, 15.7% of those employed are working in the public sector, whereas the remaining 84.3% have found jobs in the private sector (CAS, 2011).

Figure 4-7 shows the distribution of the employed work force by sector before the economic crisis.

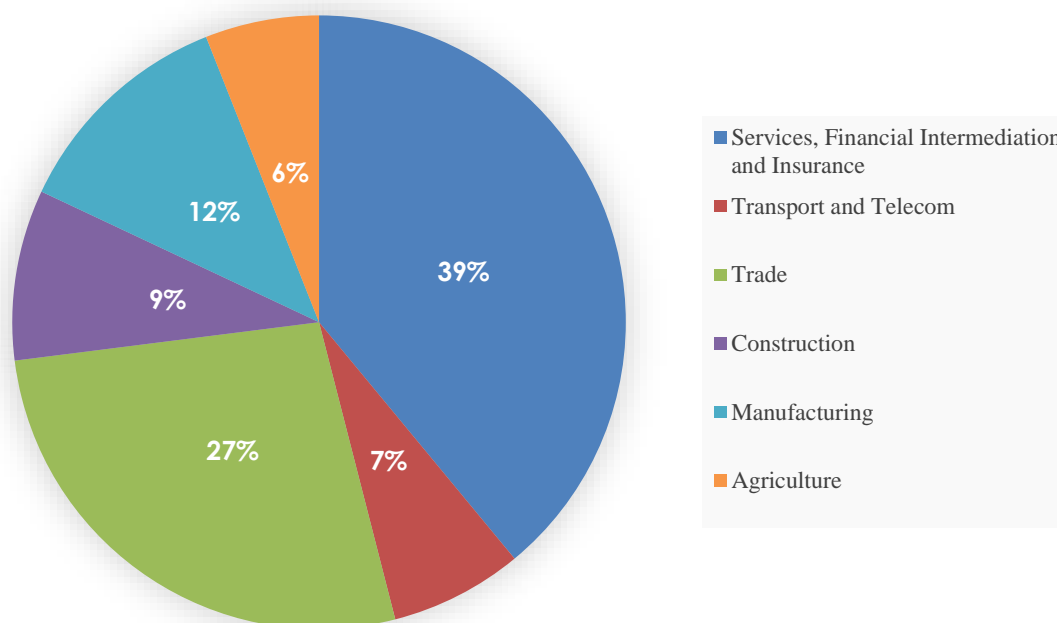


Figure 4-7 Distribution of the Employed Workforce by Sector

4.2.3 Agricultural Sector

The agricultural sector in Lebanon accounts for only 5% of the Gross Domestic Product (GDP) in Lebanon (MOET, 2018). A total of approximately 140,000 farmers or landholders work in the agriculture sector, out of which 9% are women. It is also estimated that 50% of the farmers in the country depend solely on farming for their livelihoods (MoA/FAO/AISC, 2010).

Out of the total population engaged in the agricultural sector, only 12% reside in rural areas, accounting for around 817,000 persons with an average household size of five persons as of 2010. On the other hand, one-third of farmers in Lebanon are based in North Lebanon and Akkar Governorates, and 20% reside in the Bekaa and Baalbeck-Hermel Governorates. Although the agricultural sector contributes up to 5% only of the total national GDP, the sector contributes to up to 80% of the local GDP in those areas (FAO, 2020). In terms of contribution of displaced people in the agricultural workforce, around 45% of the young population are engaged in agricultural and construction jobs as daily or seasonal workers. Displaced females within the age group of 15-19 years, currently predominate available jobs within the agricultural sector in Lebanon (FAO, 2021).

Most of the smallholder farmers in those areas live below the upper poverty line (i.e. four US Dollars per day), and more than 20% of the heads of households engaged in the sector fall in extreme poverty (i.e. living on less than USD 2.40 per day). The agricultural sector has been facing tough challenges since the 1990s, and the farmers' resilience has been quite tested ever since. Nowadays, with the current COVID-19 pandemic and the financial crisis in Lebanon, the entire sector (farmers, retailers, and importers) has been affected; food security at the national scale is threatened leading to an increase in the number of individuals living below the poverty line. In October 2019, the Centre de Recherches et d'Etudes Agricoles Libanais (CREAL, 2020) estimated that farmers owed about USD 80 million to retailers, who in turn owed USD 60 million to the banks and importers. The preliminary discussions with importers of agricultural inputs indicate that their volume of business would decline by 40-60% in 2020. As mentioned in Section **Error! Reference source not found.**, CREAL expected that agricultural

production and GDP will decrease by 38% as a result of reduced use of inputs due to absence of credit facilities, devaluation of currency and reliance on imported inputs. The UN ESCWA (2020a) estimates in their recent food security assessment on the other hand, that over 50 % of the population in Lebanon might be at risk of accessing basic food needs by the end of 2020.

The total agricultural land area in Lebanon is estimated at 332,000 ha, of which 231,000 ha are cultivated (almost half of the area is irrigated), with an average rain-fed landholding size of 1.36 ha and irrigated holding size of 1.23 ha. More than two-third of smallholder farmers have an average landholding size of less than one hectare (ha). Recent studies have shown that the irrigation of the lands relies mostly on groundwater from driven wells (FAO, 2020; MEDRESET, 2018), and water from the rivers (World Bank, 2018).

Permanent crops cover 54% of the total cropland, followed by temporary crops at 44%, while protected agriculture (greenhouses) accounts to only 2% of the total cropland in Lebanon (FAO, 2020). Moreover, the production per hectare has increased due to a shift in the type of cultivated crops, with a focus on high-value fruits and vegetables (MEDRESET, 2018).

Perennial fruit trees and nut trees are cultivated on roughly 56,000 ha, and olives are grown on 54,000 ha, while the total area of grown cereals is 45,000 ha, and 20,000 ha are cultivated with potatoes. Animal feed and fodder crops account to 2% of the temporary crops, and cover an area of roughly 4,500 ha (FAO, 2020).

In addition, cattle, sheep, goat, and poultry are reared in Lebanon. Goats and sheep account to the largest livestock flocks, with 500,000 and 428,000 heads respectively. The largest herds of sheep are located in the Bekaa and Baalbek-Hermel governorates, each accounting for over 140,000 heads.

Simultaneously, more than 100,000 goats are reared in the Bekaa, Baalbek-Hermel and Nabatiyeh governorates. In terms of cattle heads, they are estimated at around 86,000 heads in total, out of which 53,000 heads are dairy cows. Cattle is mainly present in the Bekaa (25,000 heads), Akkar (17,000 heads) and Baalbek-Hermel (16,000 heads) governorates. About 30% of the total local fresh dairy is supplied by only two farms, each owning between 2,500 and 3,000 dairy cows (FAO, 2020).

With regards to poultry, 65 million broilers and 2.7 million laying hens are produced annually. The largest broiler operations are in the North Lebanon (23 million birds), Mount Lebanon (16 million birds) and Baalbek-Hermel (10 million birds) governorates, while almost 75 % of the laying hens are concentrated in Akkar and Baalbek-Hermel governorates. Four to five large poultry companies dominate the market. In addition to operating in their own farms, these companies also take part in “satellite farms” (i.e. contract farming). Almost all the inputs needed for poultry production are imported. The annual import costs (maize, soybean, vaccines, breeding stock) are estimated at USD 175 million, from broiler to layer operations (FAO, 2020).

Beekeeping is also practiced in Lebanon, whereby 300,000 beehives are available generating around 2,000 tons of locally produced honey. Beekeeping is present in all governorates, predominantly in the North Lebanon (88,000), Mount Lebanon (77,000), and South Lebanon (53,000) governorates. It is noteworthy to mention that pest outbreaks and the misuse of pesticides are having a negative impact on beehives nationwide (FAO, 2020).

Aquaculture is also practiced in Lebanon where two species of trout (brown trout and rainbow trout) are farmed. Currently, more than 90% of aquaculture production consists of rainbow trout. Trout farms are

semi-intensive growing systems, and their annual average trout production is around 1,200 tons. In 2005, the FAO estimated that 220 fish farms are operational in the country; however, no recent data is available. Tilapia is the second most farmed fish. Three farms that grow tilapia have been recorded, one of which practices intensive farming. Moreover, other species produced in freshwater aquaculture are some common carp, bighead carp, silver carp, grass carp and leather carp which are being grown in some of the trout farms. Some farms also grow catfish. Currently, freshwater fisheries have become less common due to many factors that include the lack of expertise and freshwater pollution which has led to a drastic decline in trout population in the rivers of Lebanon.

4.2.4 Displaced People

The Syrian conflict has caused a significant influx of displaced Syrians into Lebanon, which affected the demographic and labor market figures in different Lebanese regions. The 2019 CAS Labour Force and Household Living Conditions Survey showed that the Lebanese population is estimated to be around 3,864,315 (excluding displaced Syrians and Palestinians). The number of registered displaced Syrians is estimated to be around 865,531 in January 2021 (UNHCR registration of Syrian refugees in Lebanon has been suspended since May 2015 through a decision by the Government of Lebanon. The Government estimates there are 1.5 million Syrians in Lebanon) (UNHCR, 2019). The distribution of the registered displaced Syrians across Lebanon is listed in Table 4-2.

Moreover, the International Labour Organization’s Assessment of the Impact of Displaced Syrians in Lebanon and their Employment Profile published in 2013 showed that the employment rate of Syrian refugees in Lebanon is estimated to be 70% (ILO, 2013). On the other hand, the European Training Federation (ETF) reported that only 43.6% of Lebanese are employed in 2009 (ETF, 2015). Additionally, unemployment figures in Lebanon vary according to different sources from 11.4% (CAS, 2020) to 20-25%, leading to controversy (NEO, 2011), and most recently at 37% (ILO, 2020).

Table 4-2 Distribution of Registered Displaced Syrians across Lebanon (UNHCR, 2021)

	Bekaa	North	South	Beirut	Total
Displaced Syrians	336,266	233,042	94,198	202,025	865,531

Prior to the onset of the Syrian conflict and the inflow of large numbers of Syrians, poverty in Lebanon was significant and regional disparities in living conditions were acute. The 2011-12 Household Budget Survey shows that poverty in Lebanon was 27% (pre-Syrian crisis), which implies that about one million people had levels of consumption below the annual poverty line set at 4,729 thousand LBP per capita per year. Poverty is the lowest in Beirut (16%), followed by Mount Lebanon (22%) and Nabatiyeh (25%). The poorest regions are North Lebanon (36%) and the Beqaa (38%) (CAS and World Bank, 2015).

The Syrian conflict is estimated to have increased poverty in Lebanon, pushing an additional 170,000 people into poverty in 2014 and making those already poor even poorer. According to the 2015-16 Lebanon Crisis Response Plan (LCRP), the total vulnerable population in Lebanon today is approximately 3.3 million, of which 1.5 million Lebanese, 1.5 million Syrians and 300,000 Palestinians. According to a joint Feb 2016 report from Saferworld and Conciliation Resources, lack of authorization for the opening of official refugee camps has meant that Syrians have settled mostly in urban areas with host communities who already face acute socio-economic challenges, thereby putting excessive strains on existing infrastructure and services within these communities.

The Syrian conflict has also exacerbated the labor market situation in Lebanon. Since the refugee influx, the labor force in Lebanon increased by as much as 35%.

Due to the fact that 87% of working age refugees have less than a secondary level education, the refugee crisis has also led to an oversupply of low skilled workers and to an increase in informal workers and child labor (almost 27% of the children engaged in child labor work in the agricultural sector according to the UNHCR). Almost all Syrian refugees are working informally. The agricultural sector has the highest share at 32%, followed by construction works (24%), and other services (15%). Figure 4-8 gives insights about the percentage of Syrian refugees who work in the agricultural sector, by governorate. Around one third of male-headed households are engaged in agriculture, compared to 46% of female-headed households. However, only 8% of Syrian households rely on agriculture as a main source of income (UNHCR, UNICEF, and WFP, 2020).

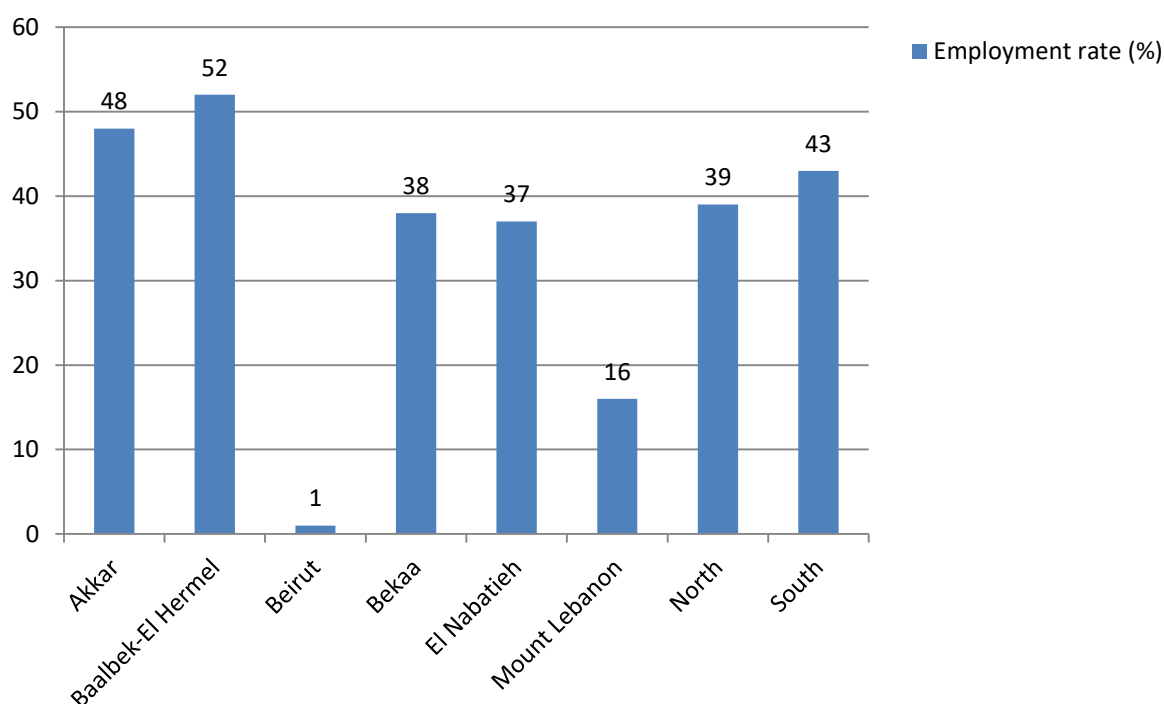


Figure 4-8 Syrian Refugees employment rate in the agricultural sector by governorate (UNHCR, 2020)

A 2016 study showed that 2.3% of the total Palestine Refugees in Lebanon (PRL) are skilled agricultural and fisheries workers. Men are more engaged in agricultural activities than women, with 2.6% and 0.6% of the total labour force, respectively. Almost half of the Palestine Refugees from Syria (PRS) work in elementary agriculture (47.3%). This is mainly related to their low educational level, and hence, narrow job opportunities in Lebanon (Chaaban et al., 2016).

The lack of opportunities for unskilled and low-skilled Lebanese and refugee workers is important, given that unemployment that affects specific social groups more than others (in this case refugees and lower-skilled Lebanese males, and youth within both groups, particularly women) can lead to inter-group grievances that in turn fuel tensions and conflict.

The lack of legal frameworks for Syrians in Lebanon’s labor market makes them particularly vulnerable to exploitation through irregular working arrangements, driving down wages and contributing to social

tensions with host communities. As noted above, in most cases, many Syrian refugees are working in informal, low-paid work, and while this has generated a degree of economic growth, it has also had negative effects on the formal labor market, driving down wages and creating tensions with host communities. In addition, given the current economic and financial crises in Lebanon, farmers are coping with the challenges through employing cheaper informal labour, which involves child labour and exploitation of vulnerable communities (Government of Lebanon and United Nations, 2021).

5. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

This chapter maps out potential impacts of the Component 4 expected activities and investments to ensure that they remain sensitized to local baseline challenges and remain focused towards their solution.

5.1 THE GENERIC IMPACTS OF THE PROJECT

The support provided to the farmers in Lebanon under Component 4 of the REP will include several activities that entail impacts on the natural and social environment; these include:

- The procurement of essential inputs for continued crop and livestock production, such as fertilizers, seeds, seedlings, animal vaccines, and animal feed;
- The animal vaccination campaign will entail transportation of technicians and veterinarians in addition to the vaccines in order to carry out the vaccination; as well as collection and transportation of veterinary vaccination waste to MoA regional centers, their storage, treatment and disposal;
- Use of fertilizers by the farmers, which might be over-applied in some instances.

Each of these activities will be assessed for general impacts. The magnitude, significance, and acceptability of predicted impacts are evaluated with a view to determining whether observed adverse impacts are significant enough to warrant mitigation. To achieve this, predicted impacts are analyzed against parameters such as nature, persistence, potential for reversibility, and severity and then finally weighted on a scale that ranges from “Strongly Positive” to “Strongly Negative” as presented in Table 5-1.

Table 5-1 Impact Weighting Analysis and Methodology

Nature	Duration	Reversibility	Severity	Impact Weight
<ul style="list-style-type: none"> • Direct • Indirect 	<ul style="list-style-type: none"> • Short term • Medium term • Long term 	<ul style="list-style-type: none"> • Reversible • Irreversible 	<ul style="list-style-type: none"> • Low • Medium • High 	<ul style="list-style-type: none"> • 2P: Strongly Positive • P: Positive • 0: Neutral • N: Negative • 2N: Strongly Negative

5.2 POTENTIAL POSITIVE ENVIRONMENTAL AND SOCIAL IMPACTS DURING IMPLEMENTATION OF COMPONENT 4

Component 4 of the proposed project and its subcomponents are expected to have major positive social benefits. The following is a list of key economic and social benefits which will result from Component 4 activities.

Restoration of production and enhancement of productivity and business opportunities in the agricultural sector: the agricultural input materials that will be provided in the context of Component 4 will restore agricultural production and enhance its productivity following the impacts of the economic and financial crisis and the successive lockdowns incurred by the Covid-19 pandemic, which threatened agricultural production and affected its prices during the past year. The project activities will also enhance business opportunities among agricultural suppliers and providers through the supply of

agricultural input materials and provision of animal feed and vaccines to farmers. Efforts shall be made to include and target women farmers in the project activities.

Enhancement of food security and alleviation of poverty: the economic and financial crisis have led to a sharp increase in the price of agricultural input materials in 2020, especially that these are mostly imported. This has constrained the importation of capital and final goods, and thus induced disruptions all along the supply chain. The food security situation which was already declining is now being further exacerbated due to movement restrictions, loss of income and food and non-food price inflation. The project activities will provide much needed support to mitigate this threat and restore food security. Component 4 targets small-scale farmers in order to enable them to face the difficult economic situation as well as the COVID–19 pandemic repercussions by providing them with agricultural fertilizers, seeds, seedlings and animal feeds and vaccines through the Ministry of Agriculture, which will restore their agricultural production potential.

5.3 POTENTIAL NEGATIVE IMPACTS DURING IMPLEMENTATION OF COMPONENT 4

Negative impacts that might arise from the activities funded by the Component 4 are presented in the following subsections.

5.3.1 Negative Environmental Impacts

The potential negative environmental impacts, as well as the health and safety risks, that can be generated during the implementation of Component 4 are listed in Table 5-2 below.

Table 5-2 Preliminary Identification of Potential Negative Environmental Impacts during Implementation

Receptor	Related Potential Environmental Impacts
Air	This will emanate from the emission of pollutants from increased traffic and mobility of vehicles for providing veterinary services as part of the animal vaccination program.
Soil, subsoil and land	Over-application of fertilizers, their improper storage (accidental spills), and their unsafe transportation (road accidents) can potentially lead to soils contamination/land degradation, as well as pollution of subsurface waters, especially in hydro geologically susceptible locations in Lebanon. However, as the quantities of fertilizers to be procured are negligible compared to the amount used annually, these impacts are considered negligible. Similarly, the storage and transportation of animal vaccines might lead to spills and/ or accidents, which in turn might lead to soil contamination.
Non-hazardous solid waste	The procurement of animal vaccines will generate solid waste that will have to be managed properly in a manner that does not end up in haphazardly disposing them. Such waste can include the packaging material of the procured vaccination supplies and equipment such as plastic/nylon covers, nylon bags, and carton boxes and boiled empty vaccine vials.
Veterinary Medical waste	Activities under Component 4 will include the procurement of animal vaccines along with the related veterinary supplies needed for their application (syringes, needles...). Mismanagement in the disposal of the used vaccination supplies might ultimately lead to a public health hazard (e.g., spread of animal diseases) as well as soil/subsoil pollution and contamination of water resources in the area via soil seepage and/or runoff during the rainy season. MoA DAR considers that used needles and syringes fall under sharp hazardous substances, and thus need special treatment/disposal procedures. However, as all the vaccines to be funded by Sub-Component 2 are for non-

Receptor	Related Potential Environmental Impacts
	zoonotic diseases (Foot-and-Mouth Disease (FMD), Lumpy Skin Disease (LSD), Sheep and Goat Pox (SGP), and Peste des Petits Ruminants (PPR)) that cannot be transmitted to humans according to the OIE Terrestrial Manual (OIE, 2019), the MoA DAR considers the vaccine vials as not infectious to humans and not falling under bio-hazardous substances, provided that the vaccines procured conform to the standards of OIE (Appendix D, Volume 2).
Water resources	Over-application of fertilizers, improper storage of vaccines (accidental spills), and their unsafe transportation (road accidents leading to un-containment of transported vaccines), as well as the improper disposal of solid waste from vaccination, can potentially lead to the contamination of surface and groundwater resources and constitute a risk to public health and the environment.
Biodiversity and sensitive habitats	<p>Pollution of rivers or waterways with fertilizers (through runoff) may also negatively affect aquatic ecosystems and local fisheries nearby.</p> <p>However, as the quantities of fertilizer to be applied are expected to be negligible compared to the usual annual input, the risk is relatively low. The main risk will be posed by waste generation from the animal vaccination campaign.</p> <p>The procurement of seeds is associated with the potential risk of introducing new pests in case improperly treated plant seeds were procured and distributed amongst the farmers.</p>
Health and Safety	
Workers Health and Safety	<p>The implementation of Component 4 of this project will include the handling of veterinary waste generated from the animal vaccination program. If not handled while taking the proper precautionary measures and using suitable PPEs, it might lead to adverse health effects on the technicians and veterinarians handling these materials.</p> <p>On the other hand, traffic road accidents are a potential impact that could affect the veterinarians/ technicians delivering the vaccines to farms and returning the veterinary hazardous waste for storage at the regional MoA centers.</p> <p>Furthermore, farmers claiming their vouchers might be exposed to the risk of transmission of COVID-19 while claiming their vouchers.</p>
Community Health and Safety	<p>In case veterinary waste generated from the animal vaccination program is not managed in an environmentally sound manner, it will constitute a public health and environmental hazard to communities where it is generated and disposed of.</p> <p>In addition, negative health effects can prevail among the general public consuming the crops to which high doses of fertilizers were applied. However, given that the quantities of fertilizers to be provided under REP Component 4 is insignificant compared to total annual use, the impact from fertilizers on public health is expected to be negligible.</p> <p>On the other hand, traffic road accidents are a potential impact that could affect the health and safety of the community during the delivery of the vaccines to the farmers, and when transporting the veterinary waste from vaccination for storage, treatment, and disposal.</p>

5.3.2 Negative Socio-economic Impacts

The potential negative socio-economic impacts that can be generated during the implementation of Component 4 are listed in Table 5-3.

Table 5-3 Preliminary Identification of Potential Negative Socio-economic Impacts during Project Implementation

Receptor	Related Potential Socio-economic Impacts
<p>General Working Conditions and tensions on vouchers distribution</p>	<p>FAO will only recruit technicians to support with the vaccination campaign, and these will follow FAO recruitment and HR policies. No laborers will be recruited by FAO during implementation of Component 4, which is not financing any labor recruitment for farming activities, and thus the impact from this component on general work conditions is not applicable. The project proponents cannot have control over the potential worker exploitation and other non-decent work conditions that might indirectly result from the intervention.. On the other hand, negative impacts might be associated with the mistrust of government (especially given the current country context), nepotism, unequal access to project information, a weak communications strategy and transparency and weak grievance redress mechanism that is not widely distributed, resulting in increased tensions and potential for reputational risks</p>
<p>Potential Risk of Gender-Based Violence, Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH)</p>	<p>Women may be subject to sexual exploitation and abuse, and to the potential exchange for sexual favors during voucher distribution in the event of limited oversight at the Regional Centers of the MoA in all the Lebanese regions.</p>
<p>Potential Labor Influx and Labor Induced Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH)</p>	<p>Potential labor influx will increase the risk of labor induced SEA and SH towards women in the surrounding communities. Due to the provision of agricultural inputs and support to the farmers, their agricultural activities throughout the country is expected to increase, thus increasing their labor needs. The influx of workers is anticipated to be low given the fact that agricultural production was slowed down by the economic and financial crisis and the successive lockdowns. Thus, the slight increase in agricultural production following its drastic decrease over the past year can be catered for by previous (existing) workers, or by local citizens given the increasing unemployment rate and poverty in the country. Moreover, REP Component 4 is not financing any recruitment of labor for cultivation activities that might result from the intervention, and thus the impact from this component on labor influx is negligible and beyond control by the project proponents. On the other hand, the project might entail potential risk of Sexual Harassment (SH), Sexual Exploitation and Abuse (SEA) and Gender-Based Violence (GBV) from project actors' employees/ consultants.</p>
<p>Potential social tensions and conflict over: job-sharing and eligibility to the voucher programme</p>	<p>Since vouchers will be provided on a first-come first-served basis, tension might arise between beneficiaries over the obtainment of support, especially given the aggravating economic and financial crisis. Dissatisfaction or disappointment with the support provided by the project in specific areas might also arise and lead to social tensions between communities or farmers. Social tension might also arise due to perception of exclusion of vulnerable farmer groups, especially in poor, remote rural areas such as Akkar; or the inability for potential beneficiaries to meet the selection eligibility criteria by providing the necessary and complete set of paperwork and evidence to be eligible for the program (especially those who are not very familiar with electronic devices and social media).</p>
<p>Potential Risk of Child Labor</p>	<p>FAO will not employ child labors, and this risk remains beyond the scope of FAO and MoA control in case it happens as an indirect impact of the project. Thus, child labor is not an applicable expected impact of the intervention. The project proponents cannot have control over the potential indirect employment of child labor that might result from the intervention.</p>
<p>Risk of under-participation/ underemployment of women</p>	<p>The proportion of women working in agriculture is lower than that of men; based on the Agricultural Census of 2010 (MoA/FAO/AICS, 2010), only 9% of the total number of farms in Lebanon are women-led. Thus, women risk reduced benefits from the project overall. On the other hand, the project aims to target a specific percentage of females as direct beneficiaries (at least 10%) but, as the bulk of the work is either manual labor, or indirect employment for suppliers of agricultural inputs and on farms, it is not clear to what extent women will be able to benefit from these jobs, which is beyond the control of the project proponents anyway.</p>

Receptor	Related Potential Socio-economic Impacts
Potential risk of transmission of viral diseases	The risk of transmission of COVID-19 might be increased by specific project activities if the necessary precautionary and protective measures are not properly taken and enforced; examples of such situation include the collection of vouchers by farmers at MoA regional centers where crowding might occur; procurement of agricultural inputs from stores that might become crowded as an indirect result of the project assistance, which is beyond the control of the project proponents anyway
Accountability and inadequate transparency risks	Lack of transparency in the project processes could exacerbate existing conflict dynamics and could also lead to reduced confidence in the state. Hence the importance of clear, transparent, objective eligibility criteria and selection processes.
Gender-based violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)	Women might be subject to sexual exploitation and abuse, and to the potential exchange for sexual favors during distribution of vouchers.

5.4 SUMMARY OF SOCIAL AND ENVIRONMENTAL IMPACTS BEFORE MITIGATION

Based on the potential impacts above, the net social and environmental impact of Component 4 of the REP project is as follows:

Component 4 is likely to confer an overwhelmingly net positive socioeconomic impact if immediate and long-term risks are well managed. Support provision to the farmers will trigger numerous positive socio-economic impacts; several of which are deemed to be long-term in prevalence.

During the implementation phase of Component 4, activities are expected to have several low to medium severe negative environmental impacts since Component 4 will not include any construction activities or the operation of major emission sources. On the contrary, Component 4 will only finance the procurement of small quantities of fertilizers (compared to the annual consumption of fertilizers in Lebanon) and will not finance the procurement of any pesticides. The vaccination program under Component 4 does pose potential environmental impacts due to the generation of sharp hazardous waste; however, the implementation of the waste management framework included in this addendum (Appendix D in Volume 2) can mitigate such impacts since it constitutes a guide for the safe management of sharp hazardous waste.

On the other hand, social risks that might arise from Component 4 are substantial. These impacts can however be systematically mitigated through specific actions and measures to be implemented.

A generic Environmental and Social Management and Monitoring Framework (ESMMF) is provided in the following chapter with general guidelines.

Table 5-4 below presents a summary of the main primary and secondary impacts of the project activities, their expected duration, reversibility and severity.

Table 5-4 Prediction of potential adverse social and environmental impacts from the REP Component 4

Media	Potential Impact	Nature	Duration	Reversibility	Severity	Impact weight (+/-)
Environmental Impacts						
Air Quality	Generation of air pollutants from increased traffic and mobility of vehicles implementing the vaccination campaign	Direct	Short term	Reversible	Low	0
Solid Waste	Generation of solid wastes such as packaging materials that include plastic/nylon covers, nylon bags, carton boxes, boiled empty vaccine vials, etc.	Direct	Short term	Reversible	Low to Medium	N
Veterinary Medical Waste	Mismanagement and haphazard disposal of used veterinary animal vaccination supplies.	Direct	Short term	Reversible	Medium to High	2N
Soil, ground and surface water quality	Over-application of fertilizers (negligible contribution of Component 4 (5 million USD) compared to the annual volume of inputs (seeds and fertilizers) applied by farmers (80 million USD)); Unsafe transportation of vaccines that could result in road accidents leading to un-containment of transported material; and Improper disposal of solid waste, in particular hazardous solid waste from animal vaccination.	Direct	Short to medium term	Reversible	Low to Medium	N
Biodiversity	Inadequate disposal of waste from the vaccination campaign, and Contamination of rivers or waterways with fertilizers that may negatively affect aquatic ecosystems and local fisheries nearby. Potential risk of introducing new pests in case improperly treated plant seeds were procured and distributed amongst the farmers.	Direct	Medium term	Reversible	Low	0
Workers Health and safety	Adverse health effects on the veterinarians and technicians handling vaccines from handling of veterinary waste generated from the animal vaccination program. Traffic road accidents by the vehicles assigned to transport vaccinations from the suppliers to the farmers; as well as when transporting the vaccination veterinary waste from the farms for storage, treatment, and disposal,	Direct	Long term	Reversible/ irreversible	Medium	N
Community Health and safety	Negative health effects can prevail on the general public consuming crops with high doses of fertilizers (negligible). Traffic road accidents by the vehicles assigned to transport the vaccinations from the suppliers to the farmers; as well as when transporting the vaccination veterinary waste from the farms for storage, treatment, and disposal,	Direct	Long term	Reversible/ irreversible	Low to Medium	N
Socio-economic impacts						

Media	Potential Impact	Nature	Duration	Reversibility	Severity	Impact weight (+/-)
General impacts	Mistrust of government, nepotism, unequal access to project information, weak communications strategy and transparency, and weak grievance redress mechanism that is not widely distributed	Indirect	Short term	Reversible	Low to Medium	N
Risk of child labor	No children will be recruited by FAO during implementation of Component 4. which is not financing any labor recruitment for farming either, and thus the impact from this component on child labor is not applicable. The project proponents cannot have control over the potential indirect employment of child labor that might result from the intervention	-	-	-	-	Not applicable-
Influx of labors	The likelihood of labor influx is low and beyond control by the project proponents. Potential for labor induced SEA and SH and GBV from project actors' employees/ consultants.	Indirect	Short term	Reversible	Low	0
Potential risk of transmission of viral diseases	Potential COVID-19 transmission among farmers while procuring vouchers and/or agricultural inputs. Safety concerns for girls and women living around the farms or working along with men at the farms	Indirect	Medium term	Reversible (other diseases)	Medium	N
Social conflict/ tension	Dissatisfaction with the allocation of vouchers and other forms of support Perception of exclusion of vulnerable farmer groups Inability to provide the necessary and complete set of paperwork and evidence to be eligible for the program	Direct	Short term	Reversible	Medium to High	N
Gender inequality	Inability of women to access and benefit equally to men from the assistance provided	Indirect	Short term	Reversible	Low	N
GBV, SEA, and SH	Potential for women to be subject to sexual exploitation and abuse, and to the potential exchange for sexual favors during voucher distribution.	Indirect	Short term	Reversible	Low	N

0=low impact, N=moderate adverse impact, 2N severe adverse impact

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING FRAMEWORK

6.1 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

This section comprises a list of measures the project proponents should adopt to ensure a practical, cost-effective and appropriate approach to mitigate adverse impacts of the proposed subprojects.

Table 6-1 summarizes the proposed mitigation measures during the implementation of Component 4 of the REP.

Table 6-1 Proposed mitigation measures for the identified social and environmental impacts from the REP Component 4

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
Environment						
Air Quality	Generation of air pollutants from increased traffic and mobility of vehicles for implementing the vaccination campaign	0	<ul style="list-style-type: none"> Avoid idling vehicles that are left running unnecessarily; Ensuring adequate maintenance and repair of the vehicles assigned to transport the animal vaccines and implement the animal vaccination programme; Maximize the efficiency of the transport and delivery of vaccines through proper planning. 	0	MoA field and veterinary staff	Part of operations activities cost
Non-hazardous Solid Waste	Generation of solid wastes such as packaging materials that include plastic/nylon covers and carton boxes, etc. from the vaccination campaign ²	N	<ul style="list-style-type: none"> Domestic waste generated should be disposed of in municipal waste bins to be collected by the responsible waste collection parties. The generated waste should be sorted at the source and transported to municipal solid waste management facilities. Domestic waste should be separated from any types of hazardous waste generated. Good housekeeping practices should be maintained 	0	FAO Recruited Environmental and Social Safeguards Specialist in coordination with MoA.	No added cost imposed
Veterinary medical waste	Mismanagement and haphazard disposal of the used veterinary animal vaccination supplies.	2N	<ul style="list-style-type: none"> Good housekeeping practices should be maintained during the application of vaccines; All needles and syringes must be stored in hard durable plastic sharps boxes, returned to MoA RCs, disinfected by boiling for 10 minutes) and shredded at treatment facilities approved by MoE (arcenciel or Abbassiyeh facility). During transportation, place the sharps boxes in plastic bags to avoid any leakages. The detailed veterinary waste management framework can be found in Appendix D in Volume 2. Ensure the provision of tight, thick plastic boxes to dispose of the empty vaccine vials. Boxes should be closed when they are three quarters full, and should be disinfected before reuse. During transportation, place the hard boxes in plastic bags to avoid any leakages. Empty vials made of glass or recyclable plastics can be disinfected using chlorine or by boiling them in water for 10 minutes as a precautionary principle. They can then be sent for recycling after they have been disinfected, or disposed off. If during project implementation the MOA/DAR requests to add vaccines for animal diseases currently not funded by Sub-Component 2, especially vaccines for animal diseases that could be considered potentially infectious to humans, such a request should be assessed and approved by the World Bank before the additional vaccines can be procured using funding from Component 1. In the event such vaccines are approved by the Bank, the empty vials will be considered as hazardous waste and must be treated either by boiling or autoclaving in accordance with the recommendations of the vaccine manufacturer. 	0	MoA in coordination with FAO. MoA/FAO shall liaise with Arcenciel and Abbassiyeh for Medical Waste to arrange the institutional procedure for collecting and treating the vaccination waste. FAO Environmental and Social Safeguards Specialist to ensure the proper implementation of the MWMF	Estimated costs for implementing the veterinary waste management plan: Waste treatment cost: US\$ 1.5/kg (arcenciel) or US\$ 0.8/kg (Abbassiyeh Facility) Sharps boxes: US\$ 20/box

² Non-hazardous solid waste will also be generated from the agricultural inputs to be provided; however, such waste management falls under the responsibility of the suppliers who will be providing these inputs to farmers, and the farmers who will be using these inputs. Management of this waste falls outside the control of the project proponents (MoA/FAO) given the emergency aspect of the project and its scope.

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
Soil, ground and surface water quality	<ul style="list-style-type: none"> Over application of fertilizers (negligible contribution of Component 4 (5 million USD) compared to the annual volume of inputs (seeds and fertilizers) applied by farmers (80 million USD); Unsafe transportation of vaccines that could result in road accidents leading to un-containment of transported material; and Improper disposal of solid waste, in particular waste from animal vaccination. <p>It should be noted that approximately USD 5 million out of the USD 10 million will support agricultural inputs for famers; which is negligible compared to the total annual agricultural inputs purchased in Lebanon: in 2019: the imported agricultural inputs are estimated at USD 80 million (seeds and fertilizers).</p>	<ul style="list-style-type: none"> 0 N N 	<ul style="list-style-type: none"> Ensure that input suppliers provide farmers with general instructions for the proper application of fertilizers upon delivery of the inputs,. Ensure that suppliers store fertilizers in proper conditions as specified by the manufacturer. Implement the mitigation measures relating to safe driving (under workers health and safety). Implementation of the veterinary waste management framework figuring in Appendix D in Volume 2. 	0	FAO in coordination with MoA	No added cost imposed Costs incurred as part of the veterinary waste management plan: see previous row.
Biodiversity	<ul style="list-style-type: none"> Inadequate disposal of waste from the vaccination campaign; Contamination of rivers or waterways with fertilizers that may negatively affect aquatic ecosystems and local fisheries nearby (although the amount of fertilizers contribution by the intervention is negligible compared to the total annual input); and Potential risk of introducing new pests in case improperly treated plant seeds were procured and distributed amongst the farmers. 	<ul style="list-style-type: none"> 0 	<ul style="list-style-type: none"> Implement the veterinary waste management framework figuring in Appendix D in Volume 2 Require input suppliers to provide general instructions for use Abide by and adopt FAO's "Quality Declared Seed System" in order to ensure that poor quality seeds are not procured throughout the project implementation phase. All seeds to be included in the voucher scheme should be technically cleared by FAO. 	0	FAO in coordination with MoA	No added cost imposed
Health and Safety						
Workers Health and safety	<ul style="list-style-type: none"> Handling of veterinary waste generated from the animal vaccination program. Traffic road accidents by the vehicles assigned to transport vaccines from the MOA-HQ to MOA regional centers. Potential risk of transmission of COVID-19 among farmers claiming their vouchers is possible). 	<ul style="list-style-type: none"> N 	<ul style="list-style-type: none"> Ensure the use of applicable PPEs when administering the animal vaccines (face masks and gloves) All needles and syringes must be stored in hard durable plastic sharps boxes, returned to MoA RCs and shredded at facilities approved by MoE (arcenciel or Abbassiyeh facility). During transportation, place the sharps boxes in plastic bags to avoid any leakages. The detailed veterinary waste management framework can be found in Appendix D in Volume 2. Ensure the provision of tight, thick plastic boxes to dispose of the empty vaccine vials. Boxes should be closed when they are three quarters full, and should be disinfected before reuse. During transportation, place the hard boxes in plastic bags to avoid any leakages. Empty vials made of glass or recyclable plastics will be disinfected using chlorine or by boiling them in water for 10 minutes. They can then be sent for recycling after they have been disinfected. MoA to ensure the vehicles and drivers assigned to transport the vaccines to the farmers and the veterinary waste take into consideration the following measures in order to protect the safety of the drivers and the general public: <p>Ensure the health fitness of the MoA drivers assigned for transportation tasks;</p>	0	MoA in coordination with FAO for implementation FAO for monitoring the implementation of the mitigation measures	<p>PPEs Prices/ person:</p> <p>PVC Gloves ~2 USD</p> <p>Face Mask ~1 USD</p> <p>Goggles ~ 3 USD</p> <p>In addition to the costs incurred as part of the veterinary waste management plan (see above).</p>

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
			Ensure drivers are trained on defensive driving practices; Ensure all drivers have a valid driving license Prepare driver rosters to be filled accordingly Prohibit night trips to avoid drivers fatigue; Provide the drivers with directions on the safest routes ahead of any trips; Enforce speed limits on the drivers; Assign and place a number on each vehicle used and provide a clear phone number to file complaints in case of poor driving behavior. Ensure the vehicles used are well maintained and equipped with all the required formal documentations.			
Community Health and Safety	<ul style="list-style-type: none"> Traffic road accidents by the vehicles assigned to transport vaccines from the importers to MoA regional centers and then to the farms. Negative health effects can prevail on the general public consuming the crops with high doses of fertilizer. However, the impact from the current intervention in this respect is negligible since it is contributing approximately USD 5 million as agricultural inputs, while the total yearly imported agricultural inputs (both seeds and fertilizers) in 2019 are estimated at USD 80 million. Potential risk of transmission of viral diseases (COVID-19 transmission among farmers claiming their vouchers is possible). 	<ul style="list-style-type: none"> N 0 N 	<ul style="list-style-type: none"> MoA to ensure the vehicles and drivers assigned to transport the vaccines to the farmers and the veterinary waste take into consideration the following measures in order to protect the safety of the drivers and the general public: <ul style="list-style-type: none"> Ensure the health fitness of the MoA drivers assigned for transportation tasks; Ensure drivers are trained on defensive driving practices; Ensure all drivers have a valid driving license Prepare driver rosters to be filled accordingly Prohibit night trips to avoid drivers fatigue; Provide the drivers with directions on the safest routes ahead of any trips; Enforce speed limits on the drivers; Assign and place a number on each vehicle used and provide a clear phone number to file complaints in case of poor driving behavior. Ensure the vehicles used are well maintained and equipped with all the required formal documentations. Ensure the proper transportation of empty vials and hazardous sharp veterinary waste in line with the veterinary waste management framework (Appendix D, Volume 2). Raising awareness about the transmission of COVID-19 and related prevention measures (wearing masks, social distancing, washing hands), especially when collecting vouchers from MoA centers. 	0	MoA for implementation	Costs incurred as part of the veterinary waste management plan: see relevant row above.
Socio-economic context						
Restoration of production and enhancement of productivity and business opportunities in	<ul style="list-style-type: none"> Provision of agricultural input material will restore agricultural production and enhance productivity. Enhanced business opportunities among agricultural suppliers and providers through the supply of agricultural input materials and provision of animal feed to farmers. 	<ul style="list-style-type: none"> P 	-	-	-	-

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
the agricultural sector						
Enhancement of food security and alleviation of poverty	<ul style="list-style-type: none"> Small-scale farmers targeted under Component 4 will be enabled to face the difficult economic situation as well as the COVID-19 pandemic repercussions by providing them with agricultural fertilizers, seeds, seedlings and animal feeds and vaccines, restoring their agricultural production potential, and thus alleviating poverty and enhancing food security in the country. 	<ul style="list-style-type: none"> P 	-	-	-	-
General Work Conditions and tensions on vouchers distribution	<ul style="list-style-type: none"> No laborers will be recruited by FAO during implementation of Component 4. which is not financing any labor recruitment, and thus the impact from this component on general work conditions is not applicable. The project proponents cannot have control over the potential worker exploitation and other non-decent work conditions that might indirectly result from the intervention. Nepotism, mistrust of government, unequal access to project information, weak communications strategy and transparency, and weak grievance redress mechanism that is not widely distributed 	<ul style="list-style-type: none"> Not applicable N 	<ul style="list-style-type: none"> Beneficiaries should be informed of the exact timing and procedures related to the activities prior to the commencement of Program. Ensure maximum transparency, clear and transparent communication of the project components, eligibility criteria, and beneficiary selection process, using various channels (media, social media, local authorities, trade associations and others). Ensure comprehensive coverage of the project information campaign through social media, TV and radio channels, newspapers, advertisements billboards, farmer cooperatives and municipalities; use these channels to announce and widely disseminate the GRM details and procedure to reach all potential citizens, beneficiaries and vulnerable groups. 	0	FAO in coordination with MoA	No added cost imposed as project information campaign is part of project implementation
Child labor	<ul style="list-style-type: none"> No children will be recruited by FAO during implementation of Component 4, which is not financing any labor recruitment either, and thus the impact from this component on child labor is not applicable. The project proponents cannot have control over the potential indirect employment of child labor that might result from the intervention. 	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> The eligibility criteria for benefiting from the voucher system comprise a minimum age. Ensure enforcement of this criterion during the distribution process. 	Not applicable	Not applicable	No added cost imposed
Labor	<ul style="list-style-type: none"> Potential Risk of Labor Influx and Labor-induced Sexual Harassment (SH) and Sexual Exploitation and Abuse (SEA) and Gender-Based Violence (GBV) <p>The likelihood of labor influx is low: the slight increase in agricultural production can be catered for by previous (existing) workers, by local citizens given the increasing unemployment rate and poverty in the country, or by existing Syrian refugees. In all cases, REP Component 4 is not financing any recruitment, and thus the impact from this component on labor influx is negligible and beyond control by the project proponents.</p> <ul style="list-style-type: none"> Potential risk of Sexual Harassment (SH), Sexual Exploitation and Abuse (SEA) and Gender-Based Violence (GBV) from project actors' employees/ consultants, particularly in relation to the distribution of vouchers,. 	0	<ul style="list-style-type: none"> MoA field and veterinary staff should be trained on SEA/SH and GBV PMU staff / consultants or others associated with the project – including FAO and MoA staff working on Component 4 - Ensure that there is an efficient GRM (grievance redress mechanism) established for the project that is sensitive to SEA/SH, with clear and known referral pathways and capacitated staff in this regard Enable the community to report cases of GBV through the GRM while respecting the principles of confidentiality and anonymity. Verifying that the GRM is adequately implemented with capacitated staff to record complaints from the surrounding communities, to find adequate resolutions and implement corrective actions. Conduct awareness trainings and campaign on GBV, SEA, and SH with information on referral pathways in case of grievances; and clearly communicate such risks during the workshops and consultation sessions and through the dissemination campaign relating to the project support. 	0	FAO in coordination with MoA	No added cost imposed

Media	Potential Impact	Impact weight before mitigation (+/-)	Proposed Mitigation Measures	Impact weight after mitigation (+/-)	Responsibility	Estimated Cost
			<i>All PIU staff that will be recruited by FAO as project staff will abide by standard FAO HR procedures (as per the terms set forth in the Output Agreement). All such staff will sign a standard FAO contract, which already includes a clause on Code of Conduct on SEA/SH. All staff are also required to take mandatory training on SEA/SH upon the start of their contract.</i>			
Social conflict	<ul style="list-style-type: none"> Dissatisfaction with the allocation of vouchers and other forms of support Perception of exclusion of vulnerable farmer groups Unequal access, limitation faced by potential beneficiaries to provide the necessary and complete set of paperwork and evidence to be eligible for the program, resulting in increased tensions 	N	<ul style="list-style-type: none"> Communicate the criteria for beneficiary selection to the community, ensure transparency of the process, and maximize the outreach and information campaign to reduce the likelihood of tension Provide support through the MoA centers to farmers who are not capable of providing the necessary and complete set of paperwork and evidence to be eligible for the program Prepare, publicize and widely and effectively disseminate to citizens, beneficiaries, and vulnerable groups the GRM for handling complaints and obtaining redress in case of social tension issues or complaints with a clear referral pathway for SEA/SH complaints. 	0	FAO in coordination with MoA	No added cost imposed
Gender inequality	<ul style="list-style-type: none"> Inability of women to access and benefit equally to men from the assistance provided 	N	<ul style="list-style-type: none"> Clear criteria for allocation should be adopted accounting for the ratio imposed and monitor adherence to the minimum percentage of women beneficiaries from the provided input vouchers (10%) Conducting widespread communication and additional consultations where needed with women groups Consider and support: (i) a complaints feedback mechanism sensitive to Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) and (ii) women's equal participation in and benefit from the Programme where it is anticipated that approximately 2,670 rural women (i.e. 10% of total beneficiaries) will participate in and benefit from the agricultural inputs' voucher and distribution scheme. 	0	FAO in coordination with MoA	No added cost imposed
Gender-based violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)	<ul style="list-style-type: none"> Potential for women to be subject to sexual exploitation and abuse, and to the potential exchange for sexual favors during voucher distribution. 	N	<ul style="list-style-type: none"> Promote awareness of female beneficiaries regarding organizations to contact in case of exposure to GBV/ SEA/ SH Verifying that the GRM is adequately implemented with capacitated staff to record complaints from the surrounding communities, to find adequate resolutions and implement corrective actions, and with a clear referral pathway for SEA/SH complaints. Conduct awareness trainings on GBV, SEA, and SH with information on referral pathways in case of grievances, and clearly communicate such risks during consultation sessions and through information campaigns. 	0	FAO in coordination with MoA	No added cost imposed

6.2 ENVIRONMENTAL AND SOCIAL MONITORING FRAMEWORK

Table 6-2 presents the proposed environmental and social monitoring framework for the REP Component 4.

Table 6-2 Environmental and Social Monitoring Framework

Impact	Parameters to Monitor	Frequency	Monitoring Location	Standards/Guidelines National/International	Institutional Responsibility
Environmental Impacts					
Air Pollution	<ul style="list-style-type: none"> Visual inspection of color of fumes from vehicles used for implementing the vaccination campaign. Vehicles Registration License and their expiry date. 	<ul style="list-style-type: none"> Daily (for fume color)/ Upon complaint reception or ticket issued by traffic police Yearly (upon license renewal) 	<ul style="list-style-type: none"> Vehicle exhaust systems 	-	MoA and FAO
Sharp-hazardous Waste	<ul style="list-style-type: none"> Visual inspection of the collected veterinary waste at the source to ensure compliance with the veterinary waste management framework. Visual inspection of the collected veterinary waste at the storage locations to ensure compliance. Record keeping (quantities, types, sources, dates) upon generation, storage at MoA Regional Centers, collection of waste by Arcenciel as stipulated in the Waste Management Framework, and waste transfer notes and documentation provided by arcenciel as a proof of shredding . 	<ul style="list-style-type: none"> Upon veterinary waste generation at the farms Upon veterinary waste delivery at the MoA Regional Centers. Upon veterinary waste collection and shredding by arcenciel. 	<ul style="list-style-type: none"> Waste generation locations (farms) Waste storage locations (MoA Regional Centers) 	<ul style="list-style-type: none"> MoE Decision 13389/2004 	MoA and FAO
Health and Safety impacts					
Workers Health and Safety	<ul style="list-style-type: none"> Number of risk identification and assessment training and awareness sessions Risks identified and assessed Proper Use of PPE by staff Number, type and cause of accidents and injuries Number of briefings addressing COVID-19 prevention, and number of COVID-19 cases reported 	<ul style="list-style-type: none"> Continuous 	<ul style="list-style-type: none"> Farms MoA regional centers 	-	MoA and FAO

Impact	Parameters to Monitor	Frequency	Monitoring Location	Standards/Guidelines National/International	Institutional Responsibility
	<ul style="list-style-type: none"> Number of complaints received from workers. 				
Community Health and Safety	<ul style="list-style-type: none"> Number, type and cause of accidents and injuries 	<ul style="list-style-type: none"> Continuous 	-	-	MoA and FAO
Socio-economic impacts					
Transmission of disease	<ul style="list-style-type: none"> Number of trainings addressing COVID-19 	<ul style="list-style-type: none"> Continuous 	Training records and reports	WB OP 4.01	MoA and FAO
Social Conflict	<ul style="list-style-type: none"> Number of grievances submitted/resolved per month and the duration for resolving these complaints (including nepotism related grievances) 	<ul style="list-style-type: none"> Monthly 	GRM log	WB OP 4.01	MoA and FAO
Gender Inequality, GBV, SEA-SH	<ul style="list-style-type: none"> Number of sexual abuse, exploitation/harassment, and Gender-based violence cases/ grievances reported (while ensuring principles of confidentiality and anonymity), Number of information leaflets on Sexual abuse and exploitation/harassment and on Gender-Based Violence (GBV) distributed to female beneficiaries. 	<ul style="list-style-type: none"> Continuous 	<ul style="list-style-type: none"> GRM log Training records and reports 	WB OP 4.01	MoA and FAO

6.3 INSTITUTIONAL ARRANGEMENTS AND REPORTING

6.3.1 Institutional Arrangements

In accordance with the Outputs Agreement that will be signed between FAO and the Government of Lebanon (represented by MoA and CDR), FAO will be the Implementing Agency for the farmer support program, under the technical leadership of the MoA. The MoA Regional Centers (MOARC) will be the contact points for the submission of applications and primarily the approval of applications will take place through the Regional Approval Committees (RACs) based at the MOARCs. The RACs will have a mixed membership of the MoA regional staff and Implementing Agency staff. A Central Review Committee in Beirut will ensure resolution of disputes, organize validations of 15% of applications, as well as ensure verification of the results achieved in the ground in around 10 % of cases of the provided support. The actual field validations and verifications will be conducted by a Third-Party Monitoring Agent (TPMA) with terms of references acceptable to the World Bank, that will be recruited by FAO. Detailed procedures for implementation of the voucher program, selection of input suppliers, as well as the eligibility criteria for beneficiaries and input suppliers have been developed in collaboration with the MoA and FAO, based on the lessons learnt from a similar project implemented by FAO with the MoA and CDR.

As mentioned above, 15% of the approved applications for vouchers will be subject to a field validation of the pre-approved applications. The 15% of applications will be randomly selected, and the ratio is applied equally to all regions across the country. A field team consisting of two staff of the TPMA will visit the randomly selected farmers in their villages and validate the critical information declared in the application and record their findings in a report that will be submitted to the Central Review Committee.

Similarly, field inspection teams, consisting of the representatives of the TPMA will randomly select and visit 10 % of the program beneficiaries for verification. The field committee will verify that the beneficiary has: (i) received the full amount of the vouchers under the support program; (ii) was not requested to pay any money or other forms of payment to receive the vouchers; (iii) used the voucher for the intended purpose; (iv) the quality, quantity and agreed prices of the inputs received; and (v) overall satisfaction with the support program.

Any cases identified as ineligible during either the field validation of application or verification of results will have to be refunded by the beneficiaries to the Implementing Agency.

The enforcement of mitigation measures in this ESMF addendum is the responsibility of FAO in close coordination with MoA. Deviations from standards where applicable, or from mitigation measure implementation shall be flagged by the FAO PIU, and farmers/ agricultural inputs providers/suppliers (as applicable) shall be informed of the non-compliance and requested to take corrective action as needed within a specified timeline. Periodic verification of compliance shall be checked by FAO PIU, and the results and actions taken shall be reported by the FAO PIU to the CDR, MoA and the World Bank as part of the project reporting requirements. With respect to the management of sharp veterinary waste from the vaccination sub-component, arcenciel and the treatment facility of the Abbassieh Municipality shall send the following reports to CDR, in line with MoE Decision 1295 of 2018 and Decision 11/1 of 2011, and CDR shall in turn channel the received reports to MoE.

- Yearly report regarding the collected and treated veterinary waste by the end of the year.

Figure 6-1 illustrates the roles, responsibilities and relationships between the various project parties.

6.3.2 *Reporting Requirements*

FAO PIU safeguards specialist through the project manager will be responsible for the preparation and submission to MOA and CDR quarterly reports, including safeguards, the GRM log, and other relevant aspects of the project implementation phase. In the event of emergencies or severe incidents, FAO shall prepare immediate reports and submit to MOA and CDR within 24-48 hours.

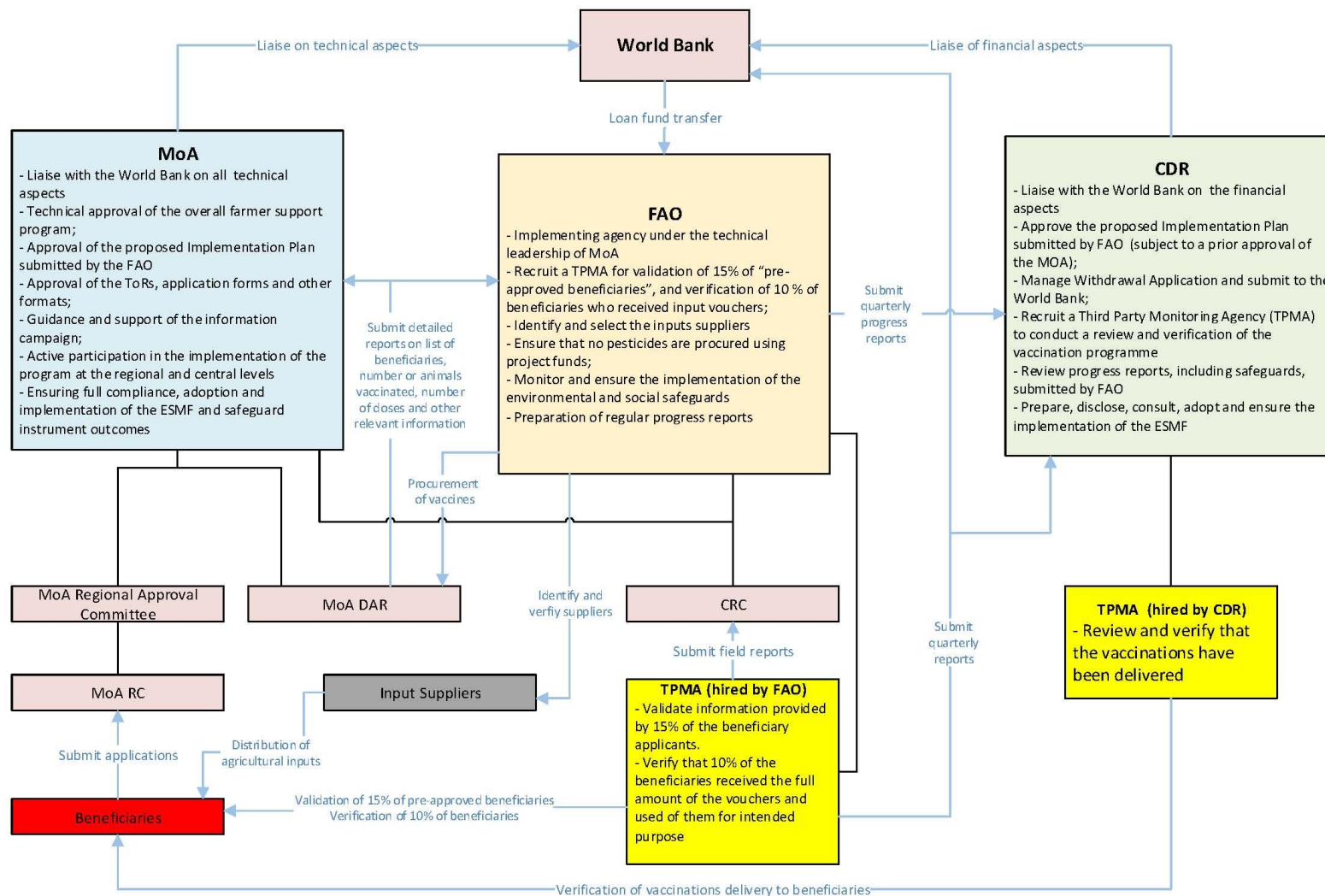


Figure 6-1 Institutional Arrangements for REP Component 4

7. GRIEVANCE REDRESS MECHANISM

Component 4 will include a Grievance Redress Mechanism (GRM) that will register and address grievances and complaints from individuals who are affected by the implementation of its activities. Anonymous grievances will be addressed in the GRMs. The maximum anticipated time needed to close a GRM case is 30 days

The key objectives of the GRM are:

- Record, categorize and prioritize the grievances;
- Resolve the grievances via consultation with all stakeholders (and notify those stakeholders of the resolutions)
- Relay any unresolved cases to the relevant authority.

The purpose of the GRM will be to provide clear and accountable means for project beneficiaries and affected persons to raise concerns of possible tensions and feelings of exclusion and complaints and seek solutions when they believe they have been harmed by the project. The GRM will also be sensitive to potential complaints related to sexual exploitation and abuse and sexual harassment (SEA/SH). Staff will be enabled to handle SEA/SH related complaints with anonymity and confidentiality as the key principles to be implemented upon receiving such complaints.

As such, the GRM will allow citizens to directly voice concerns or grievances to the implementing agency (i.e. FAO) and ensure that these concerns are responded to and addressed in a timely manner.

FAO is committed to ensuring that its programmes are implemented in accordance with the Organization's environmental and social obligations. Thus, FAO will facilitate the resolution of concerns of beneficiaries of the Support Programme regarding alleged or potential violations of FAO's social and environmental commitments.

The fourth expected outcome of Component 4 (Output 4) stipulates that "an efficient and effective monitoring, verification and grievance redress mechanism is implemented to ensure that the targeting of beneficiaries and the application and approval procedures are appropriate and equitable, the "agricultural inputs' voucher and distribution scheme" perform correctly, and disputes are resolved amicably". A provisional application, approval and grievance redress mechanism is provided accordingly.

At the beginning of the Support Programme's agricultural inputs' voucher and input distribution scheme, and when the selected beneficiaries of the Programme show up at the Agricultural Centres to receive their vouchers, the MoA's appointed field staff will brief them on the Programme's grievance redress mechanism for failings in the agricultural inputs' voucher scheme, resolving disputes, etc. This mechanism will include a dedicated telephone/WhatsApp hotline and email address, set up to receive feedbacks, comments and complaints from all stakeholders, including farming applicants, beneficiary farmers, agricultural input suppliers and agricultural communities concerned with the Programme's agricultural inputs' voucher and distribution scheme on the implementation of the agricultural inputs' voucher and distribution scheme. Posters and notices will be placed at key locations (e.g. supply outlets and MoA's central administration, regional centres and district offices). Contact information and information on the process to file a complaint will be disclosed in all meetings, workshops and other related events throughout the life of the Programme. In addition, it is expected that all awareness raising material to be distributed will include the necessary information regarding the contacts and the process

for filing grievances. The programme-level grievance mechanism will be supported by a rigorous M&E system for the distribution of vouchers essential inputs to ensure that agricultural inputs, animal feed, animal vaccines, etc. are distributed to and redeemed by the intended beneficiaries. The Programme will also be responsible for documenting and reporting as part of the safeguards performance monitoring on any grievances received and how they were addressed.

MoA and FAO's PIU will implement the feedback and grievance redress mechanism designed. The mechanism will be operated by a full-time grievance focal point as an integral part of the FAO/PIU's management functions. FAO will ensure that all collected feedbacks and complaints will be kept confidential because beneficiaries, communities and suppliers reserve the right to remain anonymous. However, other information relating to locations or details of incidents must be collected in order to enable MoA and FAO to take any necessary preventive or corrective actions. All the actions taken to address the collected feedbacks/complaints must be informed directly to the complainant if they are known.

Concerns must be addressed at the closest appropriate level, i.e. at the programme management/technical level, and, if necessary, at the Lebanon Representation level. If a concern or grievance cannot be resolved through consultations and measures at the programme management level, a complaint requesting a Compliance Review may be filed with the Office of the Inspector-General (OIG) of FAO Headquarters in accordance with the Guidelines. FAO's Programme Manager will have the responsibility to address concerns brought to the attention of the PIU's grievance focal point.

The principles to be followed during the complaint resolution process include: impartiality; respect for human rights; compliance with national norms; coherence with the norms; equality; transparency; honesty; and mutual respect.

The mechanism includes the following stages:

1. In the instance in which the claimant has the means to directly file the claim related to the programme inception or implementation, related to fraud or corruption, related to misconduct, sexual harassment or sexual exploitation and abuse, he/she has the right to do so, presenting it directly to the Programme's Complaints Feedback Focal Point through Hotline, phone, SMS, WhatsApp or e-mail of FAO in Lebanon (refer to Table 7-1 for details of the uptake channels at FAO). The process of filing a complaint will duly consider anonymity as well as any existing traditional or indigenous dispute resolution mechanisms and it will not interfere with the community's self-governance system.
2. The complainant files a complaint (programmatic, fraud, corruption, misconduct) through one of the channels of the CFM.
3. Eligible complaints will be addressed by the CFM Committee, composed of the FAO Ethics/PSEA Focal Point, the CFM Focal Point and the Assistant FAOR Programme. The CFM Committee will be responsible for recording the complaint and how it has been addressed if a resolution was agreed.
4. For every complaint received, a written proof will be sent within ten working days; afterwards, a resolution proposal will be made within thirty working days from the grievance registration date.

5. In compliance with the resolution, the person in charge of dealing with the complaint, may interact with the complainant, or may call for interviews and meetings, to better understand the reasons.
6. All complaints received, their responses and resolutions, must be duly registered by the Assistant FAO Representative (Programme) in Lebanon (AFAOR).

Complaints could relate to non-satisfaction with the selection process and results of beneficiaries, the quality of the agricultural inputs provided, GBV/SEA/SH, etc. The internal process followed by any incoming grievance can be summarized as per the below steps:

1. The complaint could come in writing or orally to the CFM focal point. At this level, received complaints will be registered by the CFM focal point. .
2. The CFM focal point will assess the complaints. The programmatic ones will be sent to the Programme Manager, who will assess whether the complaint is eligible. The complaints of fraud and misconduct will be assessed by the CFM Committee.
3. The assistance of the FAO Representative (FAOR) is requested if a resolution was not agreed in Levels 1 and 2.
4. The FAOR will request, if necessary, the advice of FAO's Regional Office in Cairo (RNE) to resolve a grievance, or will transfer the resolution of the grievance entirely to the Regional Office, if the problem is highly complex.
5. The FAO Regional Representative will request only on very specific situations or complex problems the assistance on the FAO Inspector General who pursues its own procedures to solve the problem. FAO's Office of the Inspector General also includes a confidential telephone hotline.

Upon acceptance a solution by the complainer, a document with the agreement should be signed with the agreement.

The GRM is illustrated in Figure 7-1.

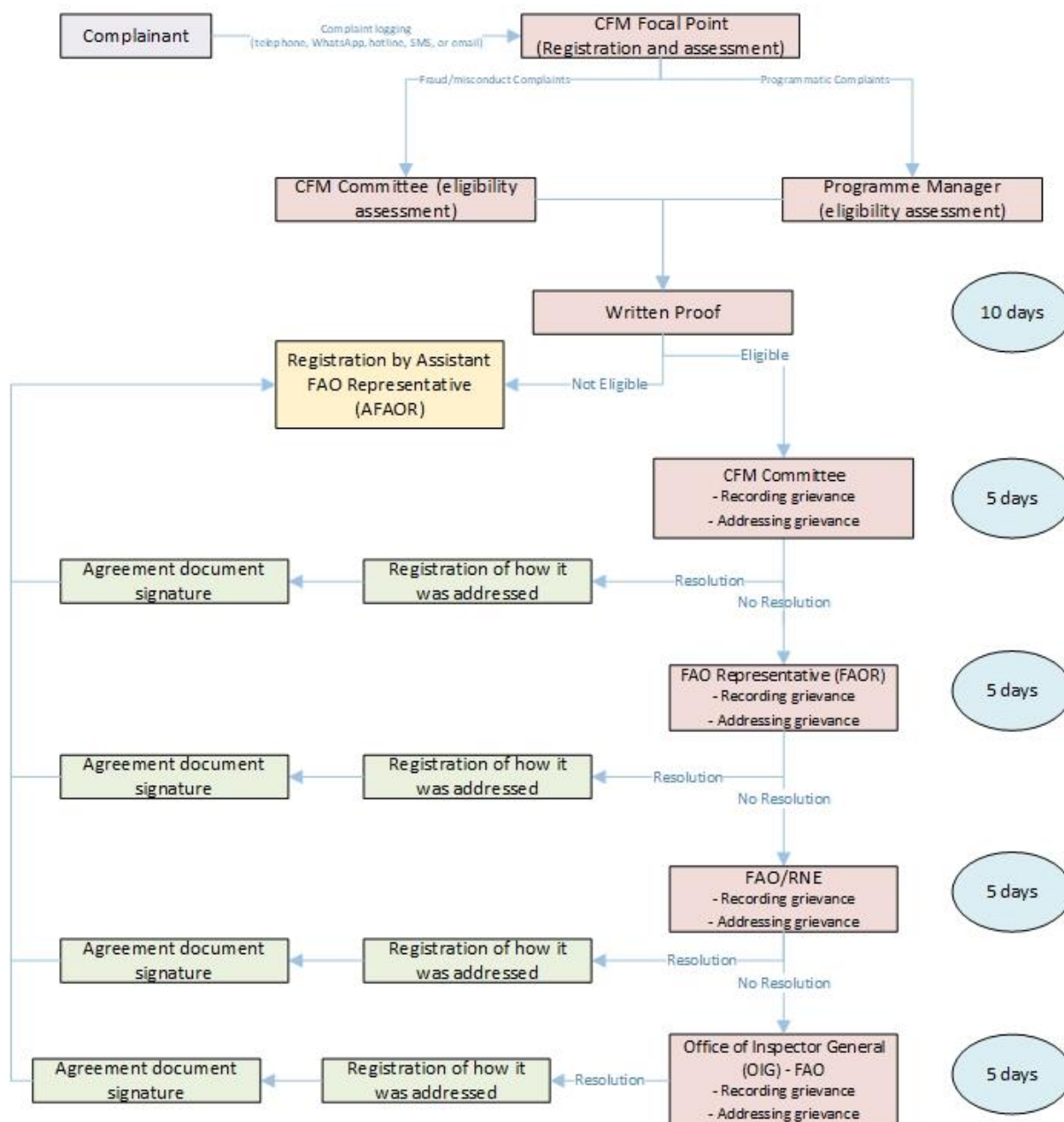


Figure 7-1 Proposed GRM

As for the review levels and the relevant contact details, they are presented in Table 7-1.

Table 7-1 Contact Details and Deadlines for the Resolution of a Grievance at Different Levels

Review Level	Contact Details
Programme Manager	Must respond within five working days. Dany Lichaa-El Khoury Programme Manager FAO-LB@fao.org; Dany.LichaaElKhoury@fao.org Tel. + 961 (0)5 951447
AFAOR	Must respond within five working days. Solange Matta-Saade, Solange Assistant FAOR-Programmes

Review Level	Contact Details
	FAO-LB@fao.org; Solange.MattaSaade@fao.org Tel. + 961 (0)5 951447
Complaints Feedback Mechanism (CFM) Committee	Anyone in the team may receive a complaint and must provide proof of receipt. If the case is accepted, the Programme Manager must send the information to all PSC members and call for a meeting to find a solution. The response must be sent within five working days after the meeting of the CFM Committee. The CFM Committee will be composed of the FAO Ethics/PSEA Focal Point, the CFM Focal Point and the Assistant FAOR Programme. The FAO Ethics/PSEA Focal Point is: Etienne Careme, Resilience and Liaison Officer FAO-LB@fao.org; Etienne.Careme@fao.org Tel. + 961 (0)5 951447 The CFM Focal Point will be recruited once the project is operational.
FAOR	Must respond within five working days in consultation with FAO's Representation in Lebanon. Maurice Saade FAO Representative in Lebanon FAO-LB@fao.org; Maurine.Saade@fao.org Tel. + 961 (0)5 951447
FAO/RNE	Must respond within five working days in consultation with FAO's Representation. Abdelhakim ElWaer i ADG, Regional Representative FAO Regional Office for the Near East and North Africa FAO-RNE@fao.org; Serge.Nakouzi@fao.org Tel: +20-2-33316000 to 33316007
Office of the Inspector General (OIG)	To report possible fraud and bad behaviour: By confidential e-mail: Investigations-hotline@fao.org By confidential hotline: + 39-06-57052333 By confidential fax: +39-06-57055550

In order to achieve these goals, and to ensure that beneficiaries of FAO programmes have access to an effective and timely mechanism to address their concerns about non-compliance with these obligations, the Organization, in order to supplement measures for receiving, reviewing and acting as appropriate on these concerns at the programme management level, has entrusted the Office of the Inspector-General with the mandate to independently review the complaints that cannot be resolved at that level. During the virtual stakeholder consultation meeting, stakeholders were informed that the GRM will be disseminated widely before project implementation once all the relevant information and contacts are available.

Finally, the GRM does not exclude the formal legal process of the national law. If a grievance remains unresolved following application of the project GRM process, the affected person can initiate legal proceedings in accordance with national legislation.

Another platform to register complaints from Component 4 is the REP GRM that was developed by the CDR for the initial Project components (1, 2 & 3) and existing on its website (<http://www.cdr.gov.lb/study/RoadsEmp/RoadsEmp.htm>). This platform will also allow individuals (they can be anonymous) who have any complaint, concerns or suggestions regarding the implementation of Component 4 to send grievances from Monday to Friday between 9:00AM and 3:00PM through the following means of communication:

- e-mail to GRM.REP@cdr.gov.lb;
- Phone call on 01980096 ext:317; and/or
- Record an official letter by hand at the CDR registrar (Address: Tallet Al Serail – Riad El Solh, Beirut – Lebanon).

However, the CDR REP GRM unit will directly forward any complaint, concern or suggestion received at the addresses mentioned above to the FAO GRM unit to take the necessary actions.

8. STAKEHOLDER CONSULTATION

Under the Bank's OP 4.01 Policy, all Category B projects must consult the concerned stakeholders about the project's environmental aspects and take their views into account. As part of this addendum to ESMF, a virtual stakeholder consultation was held on the 28th of January 2021, between 10 AM and 12 PM, i.e., before MoA and FAO took the decision to cancel all types of pesticides from the list of agricultural inputs to be financed under Component 4. It was presented virtually using GoToMeeting Platform in accordance with the suggested alternative channels of communication in the "Technical Note: Public Consultation and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings" (Appendix F in Volume 2). The general situation caused by the outbreak of COVID-19 in Lebanon restricts public gatherings, meetings and people's movement, and others advising against public group events.

Invitations were sent out via emails by ELARD to the concerned ministries, public authorities, international agencies operating in Lebanon, NGOs, and the private sector on Friday January 22, 2021. Invitations were also sent out to, the agricultural syndicates and cooperatives across Lebanon on Saturday January 23, 2021. In addition, several stakeholders were reached out to and informed about the consultation via phone since they do not use their emails.

A list of the invitees is provided in Appendix E1 in Volume 2. The invitation letters sent by ELARD in Arabic and in English and the project summary sent out are available in Appendix E2 in Volume 2. The project summary was sent after the invitation letter, one to two days prior to the consultation date, and the Consultant reminded invitees of the event date and time and obtained confirmations of participation.

Overall, 26 participants were consulted, 11 of which were women (46% excluding the Consultant). A total of 24 agricultural cooperatives, syndicates, and farmers associations were invited to the consultation meeting, 5 of which participated in the meeting (Cooperative for raising cows and production of their products- Bekaa; Cooperative for beekeeping production in Rachaya; Cooperative for the development of the olives sector, Akkar; United Cooperative of Joumeh; and the Cooperative for the production of olives, Akkar),. Moreover, representatives of local and international NGOs such as Arcenciel, Abaad, Kafa, Kunhadi and YASA were also among the list of invitees. The NGOs that participated in the consultation session include SPNL, LINQ, and Georges Frem Foundation.

A list of the participants is attached in Appendix E4 in Volume 2.

The project details, potential impacts and mitigation measures were presented in a 45-minute online presentation (Appendix E3 in Volume 2), and opened the floor for one (1) hour of open discussions with the participants. During the questions and answers sessions, various issues of environmental, safety as well as social concerns were raised by the participants. These were all addressed and discussed by the Consultant and FAO representatives. The main issues of concern raised during these public consultation sessions are outlined in Table 8-1 below. It is worth noting that some of the discussions were related to pesticides as the decision to cancel the provision of pesticides under the voucher program was taken by MoA and FAO after the virtual consultation session which was held on January 28, 2021.

Appendix E5 in Volume 2 provides the main concerns raised during the consultation session for the REP Component 4. Table 8-1 below summarizes the main concerns raised during the virtual consultation session held on January 28, 2021.

Table 8-1 Summary of main concerns raised during the virtual consultation session

Topic of concern	Detailed description of concern by public participants	Answer
Mitigation and monitoring measures	<p>Several participants raised their concerns regarding the applicability and monetary needs to implement the mitigation and monitoring measures presented during the consultation meeting, namely the potential impacts on soil and water resources due to the use of bio-pesticides and fertilizers by the farmers.</p> <p>Some of the participants also stressed on the need to have realistic and applicable mitigation and monitoring measures that reflect the emergency aspect of the intervention.</p>	<p>The participants were advised that the mitigation measures are set based on the World Bank guidelines and environmental and social safeguards. Although the implementation of such measures is not widely respected in Lebanon, but the guidelines of the WB have to be adhered to a minimal extent. In addition, it was clarified during the meeting that Component 4 will finance the procurement of small quantities of bio-pesticides only, hence there will be no significant impact on public health.</p>
Criteria for the selection of beneficiaries	<p>Some of the participants inquired about the criteria and procedure followed for the selection of beneficiaries under Component 4.</p>	<p>It was explained to the participants that Component 4 will target only smallholder farmers, and the eligibility criteria for their selection were provided. In addition, the participants were told that a verification and validation process will be put in place in order to verify the information provided by each farmer</p>
Transparency and equitable implementation	<p>One of the participants raised a concern for nepotism occurring in some municipalities and agricultural cooperatives, hindering the fair distribution of the vouchers amongst the farmers.</p>	<p>It was ensured to the participant that all the information regarding the implementation of Component 4 will be communicated when the project is launched. In addition, all the participants were informed about the GRM process that will be implemented as part of Component 4.</p>

In addition, following the stakeholder consultation event, several clarifications were sent to the Consultant relating to components 1, 2 and 3 of the REP project, and to Component 4. These clarifications were shared with MoA and FAO, and the answers shared with the persons who raised these clarifications are presented in Appendix E6 in Volume 2.

A follow-up virtual consultation session was held on February 10, 2021 at 4:00 p.m. in order to properly receive and address the latter comments and concerns. Overall, 7 persons (excluding the Consultant) participated in meeting who represented FAO, MoA, CDR, and the two concerned stakeholders who raised comments (Mr. Raja Noujeim and Mr. Antoine Hoayek). A list of the participants is attached in Appendix E7 in Volume 2.

The consultation session lasted for around 1 hour, during which an open discussion among the participants tackled the various comments and concerns raised by the stakeholders that were addressed by FAO representative, MoA, the Consultant, and CDR.

The main issues of concern raised during these public consultation sessions are outlined in Table 8-2 below.

Appendix E8 in Volume 2 provides the detailed concerns raised during the second consultation session.

Table 8-2 Summary of main concerns raised during the second virtual consultation session

Topic of concern	Detailed description of concern by public participants	Answer
Further support to the farmers	The need to allocate additional funds to support smallholder farmers in Lebanon.	It was explained that MoA and FAO are working closely to secure more funds (similar emergency interventions from other funding sources such as WFP) to implement similar Programmes and thus increase the value of support provided to farmers and the number of beneficiaries. It was also noted that the Component 4 under the REP project is not to boost the production of the smallholder farmers, but to help them sustain themselves and continue working in the agricultural sector during the current crises Lebanon is passing through at the moment.
Criteria for the selection of beneficiaries	The criteria of holding size should be reconsidered as 50 dunums ² is considered as a significantly large agricultural land. In addition, the percentage of income from agricultural activities among eligible farmers should be raised from 40% to 80%.	The eligibility criteria were decided based on the Agriculture Census of 2010. The participants were told that a verification and validation process will be put in place as per best international practice in order to make sure that the information provided by each farmer is correct.
Communication of the Programme launching	Since the applicants will be chosen on a first come first served basis, there is a concern that the process might be inequitable. There should be a transparent way of communication to reach all farmers and avoid discrimination amongst them or favoring some on biased grounds.	Awareness campaigns will be conducted to inform all farmers about the programme and the eligibility criteria in details. The first come first served basis applies to the application process mainly. It will not favor ineligible applicants over eligible ones. The selection process will be transparent and based on the criteria set.
Transparency and equitable implementation	Mr. Noujeim raised a concern for nepotism occurring based on political affiliations, hindering the fair distribution of the vouchers amongst the farmers.	It was ensured to the participant that all the information regarding the implementation of Component 4 will be communicated when the project is launched. In addition, all the participants were informed about the GRM process that will be implemented as part of Component 4 and that can be used to submit any complaint.
Establishment of the National Agricultural Register	Mr. Hoayek emphasized the importance of the farmers' register in solving all issues of concern during this meeting, and the efforts that have been spent for years in order to have the relevant draft law approved and passed, in vain, as a result of political interferences.	Mrs. Dikah-Hamze acknowledged the need for the farmers' register, and mentioned that MoA is putting it on track again.

Following up on the second virtual consultation session that was held on February 10, 2021, MoA provided to the concerned stakeholders the Agricultural Survey Report of 2017 as requested. Subsequently, the Consultant received a set of inquiries by the concerned stakeholders regarding the Agricultural Survey Report of 2017. The inquiries were forwarded to MoA, and the answers provided are presented in Table 8-3 below.

² The eligibility criterion of 50 dunums was later reduced to 20 dunums.

Table 8-3 Stakeholders' Concerns and MoA Response Received

Question	Answer
<p>How come in the 2017 report the total cultivated area is 261,394 or 261,503 Hectares (page V ملخص) corresponding to 25% of the total area of Lebanese territory?</p>	<p>In 2017, the total Utilized Agricultural Area or UAA (المساحة الزراعية المستغلة) was estimated at 261,394 hectares. The UAA includes the cultivated area under temporary crops (without accounting for successive cropping), the cultivated area under permanent crops, and fallow land. Whereas the total Cropland Area (مساحة المحاصيل الزراعية) was estimated at 261,503 hectares. The Cropland Area includes the cultivated area under temporary crops (after accounting for successive cropping) and the cultivated area under permanent crops.</p> <p>The above definitions of UAA vs. Cropland area are explained in the first few pages of the 2017 Report (please refer to the page on تعريفات وملاحظات توجيهية)</p>
<p>In 2010 / 2012 reports, this same total area was equivalent to around 2,500,000 Hectares.</p>	<p>In the 2010/2012 census reports, the UAA and the Cropland Areas were published in square meters and /or dunums and not in hectares. In 2010/2012, the UAA was 230,995 hectares and the total cropland area was 232,200 hectares. The units of the UAA or Cropland areas are clearly referred to in all tables titles of the Census Report.</p>
<p>Accordingly are all the other figures in the tables calculated based on the above (around 261,394 or 261,503)?</p>	<p>In the 2017 report, all the detailed tables under chapter 2 on "Crop production" (from table 3 onwards) are based on the total Cropland area i.e. 261,503 hectares.</p>

In response to the clarifications provided by MoA to the inquiries raised, the concerned stakeholders provided the consultant with their point of views and concerns regarding the implementation of the REP Component 4, as presented in Appendix E9 in Volume 2.

9. CONCLUSION

The addition of Component 4 under the REP will restructure and redistribute US\$10 million as part of the US\$200 million loan to support smallholder farmers engaged in crop and animal production in Lebanon, given the current situation of the country struggling with burdens of the economic and financial crises, impacts of the COVID-19 pandemic, and the aftermath of the Port of Beirut Explosion. Component 4 comprises two subcomponents, the first will provide US\$300 vouchers for 26,700 smallholder farmers for the procurement of essential inputs, and the second subcomponent will implement a nation-wide animal vaccination programme.

As part of this ESMF addendum that aims to provide an environmental and social management framework for the design and implementation of Component 4, the activities to be undertaken during the implementation phases were scoped and evaluated.

Component 4 is likely to confer an overwhelmingly net positive socioeconomic impact if immediate and long-term risks are well managed. Support provision to the farmers will trigger numerous positive socioeconomic impacts; several of which are deemed to be long-term in prevalence. Some of the most significant positive impacts of Component 4 include the restoration of food production and enhancement of productivity and business opportunities in the agricultural sector, as well as the enhancement of food security and the alleviation of poverty.

On the other hand, the environmental impacts are not expected to be major. Component 4 will have several low to moderately severe negative impacts since Component 4 will not include any construction activities or the operation of major emission sources. On the contrary, Component 4 will only finance the procurement of small quantities of fertilizers (compared to the annual consumption of fertilizers in Lebanon) and will not finance the procurement of any pesticides. The vaccination program under Component 4 does pose potential environmental impacts due to the generation of sharp hazardous waste; however, the implementation of the waste management plan included in this addendum can mitigate such impacts since it constitutes a guide for the safe management of veterinary waste.

Social risks that might arise from Component 4 are substantial on the other hand. These impacts can however be systematically mitigated through specific actions and measures to be implemented, as per the proposed ESMMF. In addition, Component 4 will include a Grievance Redress Mechanism (GRM) handled by capacitated staff who will register and address grievances and complaints to provide clear and accountable means for project beneficiaries and affected persons to raise concerns of possible tensions and feelings of exclusion and complaints, and seek solutions when they believe they have been harmed or unfairly treated by the project.

Under the Bank's OP 4.01 Policy, a virtual stakeholder consultation was held on January 28, 2021 to inform concerned stakeholders and take their views into account. In general, the addition of Component 4 to the REP was highly praised by the participants as it will improve and enhance the struggling agricultural sector in Lebanon. However, the participants raised some comments mainly relating to the environmental monitoring strategy to be adopted during the implementation phase, as well as to concerns relating to the criteria for selection of farmers and fears of nepotism and lack of transparency.

REFERENCES

CAS (2011). The Labour Market in Lebanon. Retrieved from:

http://www.cas.gov.lb/images/PDFs/SIF/CAS_Labour_Market_In_Lebanon_SIF1.pdf

CAS (2020). Labour Force and Household Living Conditions Survey 2018-2019 in Beirut. Retrieved from:

<http://www.cas.gov.lb/images/Publications/Labour%20Force%20and%20Household%20Living%20Conditions%20Survey%202018-2019.pdf>

CAS and World Bank (2015). Lebanon Household Budget Survey (HBS) 2011/2012. Retrieved from:

<http://www.cas.gov.lb/index.php/all-publications-en#households-budget-survey-2012>

Centre de Recherches & d'Etudes Agricoles Libanais (CREAL). (2020). Diagnosis of the Lebanese agriculture in light of the latest financial crisis. Retrieved from:

<https://www.aub.edu.lb/fafs/news/Documents/2020News/DIAGNOSIS%20OF%20LEBANESE%20AGRICULTURE.pdf>

CDR (2005). National Physical Master Plan for the Lebanese Territory.

Chaaban, J., Salti, N., Ghattas, H., Irani, A., Ismail, T., Batlouni, L. (2016). "Survey on the Socioeconomic Status of Palestine Refugees in Lebanon 2015", Report published by the American University of Beirut (AUB) and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). Retrieved from:

https://www.unrwa.org/sites/default/files/content/resources/survey_on_the_economic_status_of_palestine_refugees_in_lebanon_2015.pdf

El Feki, S., Heilman, B., & Barker, G. (2017). Understanding Masculinities: Results from the international men and gender equality survey (IMAGES)-Middle East and North Africa. UN Women. Retrieved from:

https://imagesmena.org/wp-content/uploads/sites/5/2017/12/IMAGES_Leb_Report_Final_Web_Dec13.pdf

ETF (2015). Labour market and employment policy in Lebanon. Retrieved from:

[http://www.etf.europa.eu/webatt.nsf/0/33A1850E6A358308C1257DFF005942FE/\\$file/Employment%20policies_Lebanon.pdf](http://www.etf.europa.eu/webatt.nsf/0/33A1850E6A358308C1257DFF005942FE/$file/Employment%20policies_Lebanon.pdf)

FAO (2020). Special Report – FAO Mission to Assess the Impact of the Financial Crisis on Agriculture in the Republic of Lebanon. Retrieved from: <http://www.fao.org/3/cb1164en/cb1164en.pdf>

[FAO \(2021\). Country Gender Assessment of the Agriculture and Rural Sector – Lebanon. Beirut.](https://doi.org/10.4060/cb3025en)

Retrieved from: <https://doi.org/10.4060/cb3025en>

International Finance Corporation (IFC) (2016). Environmental, Health and Safety Guidelines for Annual Crop Production. Retrieved from:

https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_ehs_annual_crop_production

Government of Lebanon and United Nations (2021).). Lebanon Crisis Response Plan 2017 – 2021 (2021 update). Retrieved from:

<https://data2.unhcr.org/en/documents/details/85374#:~:text=1%2C428->

[,2021%20Update%20of%20the%20Lebanon%20Crisis,%2D%20\(LCRP%202017%2D2021\)&text=The%20Lebanon%20Crisis%20Response%20Plan%20brings%20together%20more%20than%2012,affected%20people%20living%20in%20Lebanon.&text=Since%202011%2C%20US%248.807%20billio n,the%20Lebanon%20Crisis%20Response%20Plan.](#)

ILO (2013). Assessment of the impact of Syrian refugees in Lebanon and their employment profile. Retrieved from: http://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_240134.pdf

ILO (2020). Facing Multiple Crises: Rapid assessment of the impact of COVID-19 on vulnerable workers and small-scale enterprises in Lebanon. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_747070.pdf

MoA/FAO (2010). Agriculture Census 2010 – Lebanon. <http://www.agriculture.gov.lb/Statistics-and-Studies/Comprehensive-Agricultural-Statistics/statistics-2010>

MOE/UNEP/GEF (2016). Lebanon's third national communication to the UNFCCC. Retrieved from: <http://climatechange.moe.gov.lb/viewfile.aspx?id=239>

MoE/UNDP. (2017). Updated Master Plan for the Closure and Rehabilitation of Uncontrolled Dumpsites Throughout the Country of Lebanon. Retrieved from: https://www.lb.undp.org/content/lebanon/en/home/library/environment_energy/MASTER-PLAN-FOR-THE-CLOSURE-AND-REHABILITATION.html

NEO (2011). Employment needs assessment for the hospitality sector: Hotels and Restaurants in Lebanon, 2011.

SWEEP-Net (2014). Country Report on the Solid Waste Management in Lebanon.

UN ESCWA (2020a). Is Food Security in Lebanon under Threat? Retrieved from: <https://publications.unescwa.org/projects/afsd/sdgs/pdf/covid-19/en/15-covid-19-food-security-lebanon-under-threat-english.pdf>

UN ESCWA (2020b). Poverty in Lebanon: Solidarity is vital to address the impact of multiple overlapping shocks. Retrieved from: https://www.unescwa.org/sites/www.unescwa.org/files/20-00268_pb15_beirut-explosion-rising-poverty-en.pdf

UNDP/MoE. (2019). Sixth National Report of Lebanon to the Convention of Biological Diversity. Retrieved from: <https://www.cbd.int/doc/nr/nr-06/lb-nr-06-en.pdf>

UNDP/MoE. (unpublished). National Comprehensive Environmental Management Program: Phase 1 - Litani River Basin. Regional Environmental and Social Assessment (RESA) including an Environmental and Social Management Framework (ESMF) Report.

UNHCR (2019). 2019 Vulnerability Assessment for Syrian Refugees in Lebanon (VASyR). Retrieved from: <https://data2.unhcr.org/en/documents/details/73118>

UNHCR, UNICEF, and WFP (2020). Vulnerability Assessment of Syrian Refugees in Lebanon (VASyR). Retrieved from: <http://ialebanon.unhcr.org/vasyr/#/>

UNHCR (2021). Syria Regional Refugee Response – Lebanon. Retrieved from:
<http://data2.unhcr.org/en/situations/syria/location/71>

UN Women. (2021). Gender Alert on COVID-19 Lebanon: Gendered Implications of the 2021 Nationwide Total Lockdown, February 10, 2021. Issue No. 5. Retrieved from:
<https://www2.unwomen.org/-/media/field%20office%20arab%20states/attachments/publications/2021/02/gender%20alert%20on%20covidlebanon%20issue%205%20final.pdf?la=en&vs=5122>

UN Women (2020, October 14). Press release: Women’s Unemployment in Lebanon Reaches an Estimated 26% Due to Compounded Crises but Recovery Plans Provide Opportunities to Reduce Structural Inequalities and Ensure Growth for All. *UN Women Arab States*. Retrieved from:
<https://arabstates.unwomen.org/en/news/stories/2020/10/press-release-women-unemployment-in-lebanon-increases-due-to-compounded-crises>

WHO (no date). Management of Wastes from Immunization Campaign Activities – Practical Guidelines for Planners and Managers. WHO.

WHO (2004). Immunization in Practice: A Practical Guide for Health Staff – Chapter 3: Ensuring Safe Injections. Retrieved from: https://www.who.int/immunization/documents/IIP2015_Module3.pdf?ua=1 .

WHO/GLAAS (2014). UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water – Lebanon Country Highlights. Retrieved from:
https://www.who.int/water_sanitation_health/monitoring/investments/lebanon-10-nov.pdf

The World Bank. (2020). Targeting Poor Households in Lebanon. Retrieved from:
<https://www.worldbank.org/en/news/factsheet/2020/04/21/targeting-poor-households-in-lebanon>

World Organization for Animal Health (OIE). (2019). Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2019. Retrieved from: <https://www.oie.int/en/what-we-do/standards/codes-and-manuals/terrestrial-manual-online-access/>

Yaacoub. N. & Badre. L. (2011). The Labour Market in Lebanon. Central Administration of Statistics (CAS). Lebanon

APPENDICES

Kindly refer to Volume 2 to view the below appendices.

Appendix A – List of Legislations and Regulations relevant to REP Component 4

Appendix B – Stratigraphy and Hydrostratigraphy of Lebanon

Appendix C – Demographic Profile of Lebanon

Appendix D – Veterinary Waste Management Framework

Appendix E – Stakeholder Consultation

Appendix E1 – List of Invitees

Appendix E2 – Invitations Letters and Project Summary

Appendix E3 – Public Consultation Presentation

Appendix E4 – List of Participants

Appendix E5 – Questions and Comments Raised during the Consultation Session

Appendix E6 – Questions Raised after the Stakeholder Consultation and Answers Provided by MoA/ FAO

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Appendix E9 – Stakeholders' Concerns Received

Appendix F - Technical Note: Public Consultation and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings

Appendix G – Sample Code of Conduct (CoC) to be Signed by FAO and MoA Staff Working on the Project