



The Hashemite Kingdom of Jordan

Ministry of Agriculture

Agriculture Resilience, Value Chain Development and Innovation

Program (ARDI)

Investment Project Financing (IPF) Components

Environmental and Social Management Plan (ESMP)

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List of Acronyms

ACC	Agriculture Credit Corporation
a.s.l	Above Sea Level
b.s.l	Below Sea Level
CERC	Contingent Emergency Response Component
DU	Delivery Unit
E&S	Environmental and Social
EA	Environmental Audit
EHS	Environment, Health, and Safety
ES	Environmental and Social
ERP	Enterprise Resource Planning
ERP	Enterprise Resource Planning
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
GBV	Gender Based Violence
GCOFF	Global Concessional Financing Facility
HAZMAT	Hazardous Material
HR	Human Resources
IBA	Important Birds Area
IBRD	International Bank for Reconstruction and Development
IPF	Investment Project Financing
JAP	Jordan Agriculture Plan
JEDCO	Jordan Enterprise Development Corporation
LMP	Labor Management Procedure
LOTO	Lockout Tag-out
LTI	Lost Time Incidents
MoA	Ministry of Agriculture
MoEnv.	Ministry of Environment
MoL	Ministry of Labor
MoPIC	Ministry of Planning and International Cooperation
MWI	Ministry of Water and Irrigation
MSDS	Material Safety Data Sheet
NARC	National Agriculture Research Center
OHS	Occupational Health and Safety
PforR	Program for Results
PPE	Personal Protective Equipment
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SEP	Stakeholder Engagement Plan
SSC	Social Security Corporation (
TBT	Tool Box Talk
TF	Total Financing
TOC	Table of Content
TOR	Terms of Reference
WB	World Bank

0. Introduction

This Environmental and Social Management Plan (ESMP) has been prepared for the Jordanian Ministry of Agriculture (MOA), the Investment Project Financing (IPF) components of Agriculture Resilience, Value Chain Development and Innovation program (ARDI), pursuant to national regulations and the World Bank's Environmental and Social Framework.

The ESMP addresses all project components and has been prepared for the IPF project. The ESMP provides a description of institutional arrangements, environmental and social risks, health and safety risks, mitigation, monitoring, and the management of contractors. In addition, ESMP has a specific chapter on Labor Management Procedure (LMP) as an embedded environmental and social instrument with the ESMP.

Along with this ESMP, other environment and social instruments required have been prepared, the Stakeholder Engagement Plan (SEP), and Environmental and Social Commitment Plan.

All instruments have been disclosed on the Ministry of Finance website www.moa.gov.jo/Default/Ar

0.1 Project Background

Jordan's agri-food sector is facing three principal interlinked challenges: (i) ensuring food security in the context of increasing exogenous shocks, (ii) worsening water scarcity and drought risk due to climate change and (iii) loss of competitiveness and export markets. Increasing exogenous shocks - rising food prices, post-covid economic recovery, and structural endogenous constraints – in tandem with limited domestic agricultural production and population growth pose a risk to Jordan's food security. Climate change strongly impacts agriculture in Jordan through higher temperatures, decreased average precipitation, and increased variability in precipitation. This puts the productivity and resilience of both irrigated and rain-fed agriculture at risk. The potential of Jordan's agri-food sector has gone unrealized in recent years as a complex set of structural factors have driven declines in competitiveness for the local market and exports alike. Fresh fruit and vegetables offer major export opportunities but face challenges of (i) loss of key market access due to the Syrian and Iraqi civil wars and (ii) an inadequate enabling environment of public services.

0.2 Project Description

The implementation of the National Sustainable Agriculture Plan 2022–2025 (JAP) overall will require considerable, well-coordinated, timely, and focused technical support from the Ministry of Agriculture, particularly during the early stages of implementation.

The project component will provide technical assistance to MoA and other implementing agencies of JAP. This would be achieved through the establishment of a Delivery Unit (DU). DU capacity would be strengthened with a view toward a longer-term role in supporting the delivery of strategic plans for the agriculture sector and of partner initiatives in their support, such as by other development partners.

The Project would have five components as follows:

Component 1: JAP Systems Building and Implementation Support (US\$ 1.7 million, of which International Bank for Reconstruction and Development (IBRD) and Global Concessional Financing Facility (GCFF) US\$ 0.7 million; PROSPECTS Total Financing (TF) US\$ 1 million)

The DU would provide expertise and support to implementing agencies of the JAP in the development of appropriate systems underpinning JAP implementation in the following areas:

- A. Strategic activity planning: Working with directorates and agencies on improved strategic planning processes and the design of implementation plans for activities under JAP;
- B. Financial management: Strengthening the capacity of budget planning, and financial reporting;
- C. Environmental and social risk management and safeguards: Strengthening the capacity for environmental and social risk assessment, management, and monitoring including design, preparation and implementation of environmental and social safeguards screening tools, studies, plans and reporting to ensure environmental and social considerations are mainstreamed including inclusivity of all activities toward vulnerable populations including refugees;
- D. Procurement: Assisting with the preparation and updating of Program annual procurement plans, the execution of procurement transactions through Electronic Government Procurement System (JONEPS) and Systematic Tracking of Exchanges in Procurement (STEP) (for IPF), monitoring of procurement and contract implementation, and procurement reporting;
- E. *Monitoring and evaluation*: Assessing and, where necessary, improving the quality of monitoring and reporting systems deployed by MoA and other JAP implementing agencies;
- F. Decent work and Occupational health and safety (OHS): Providing targeted expertise and support on topics such as child and forced labor; decent working conditions and OHS in agricultural operations across JAP implementation;
- G. Digitalization and Ag Tech Innovation: Providing advisory and technical assistance to implementing agencies in the use of and collaboration with third parties related to leveraging the potential of digitalization and ag tech innovation across JAP implementation; and
- H. Independent Verification: Establishing and operationalizing the mechanism to review and verify the attainment of disbursement-linked indicators under the Program for Results (PforR).

This would be accomplished in the first year through the services of specialist consultants and through the procurement of an external service provider in subsequent years.

Under this component, specific gaps in implementing agencies' social safeguards capacities will be filled through the recruitment of specialized and adequately qualified technical staff to strengthen capacity in refugee inclusion in the short and medium term.

Component 2: Inter-Ministerial Coordination and Stakeholder Engagement (US\$ 0.3 million; of which IBRD and GCF US\$ 0.3 million)

This component will support MoA in establishing:

- (i) Mechanisms for inter-ministerial and agency coordination at technical level, including Ministry of Planning and International Cooperation (MoPIC), Ministry of Water and Irrigation (MWI), Ministry of Environment (MoEnv), Jordan Enterprise Development Corporation (JEDCO), Ministry of Labor (MoL), etc., and
- (ii) Stakeholder engagement mechanisms (private sector, civil society, producer, and farmer organizations).

Mechanisms will focus on selected strategic priority areas underpinning JAP, including *inter alia*: efficiency of water use in agriculture, opportunities for private sector engagement in extension, competitiveness of agriculture value chains and agricultural exports, and the enabling environment for better jobs for Jordanians as well as vulnerable workers such as women, youth, and refugees.

The DU will support improved coordination with other Government of Jordan (GoJ) entities as well as the organization of regular and adequately organized consultation meetings with representatives of civil society, development partners, and academia to advance existing programs already aimed at as well as further opportunities to improve livelihoods and working conditions of vulnerable workers including women, youth, and refugees across its programs and any particular issues arising as needed.

Component 3: Capacity Development for Implementing Agencies (US\$ 3.5 million; of which PROSPECTS TF US\$ 3.5 million)

The DU will mobilize on an as needed basis targeted technical assistance in support of skills development of staff of the implementing agencies of JAP, as well as other relevant parties. International and regional experts will be mobilized in response to specific requests and needs identified on themes directly related to the priority areas included in the PforR. Short- and medium-term training programs will be offered for key implementing agency staff. Assistance will also be provided in a more transversal manner on policy analysis and development as well as in support of the annual and multiyear budgetary programming process at MoA in order to ensure an effective process of mobilization of the budgetary resources necessary for the implementation of the PforR. Areas identified for capacity building include strategic planning, project management, digitalization and ag-tech, procurement and contract management, safeguards, inclusion of vulnerable groups, private sector collaboration as well as a range of technical aspects related to agricultural development and value chains.

Capacity building such as training courses and awareness raising activities will target the employees of MoA with a range of relevant topics including social dimensions in general as well as refugees' relevant topics in particular.

Component 4: Contingent Emergency Response Component (CERC) (Total: US\$ 0)

The IPF would provide support for the creation of a CERC. Following an eligible crisis or emergency, MoA may request the World Bank to reallocate funds to support emergency response and reconstruction. This component would draw from the uncommitted loan resources under the operation, including from either the PforR or IPF financing, to cover emergency response. Potential crisis events could include conflict and fragility in Jordan or the region as well as natural disasters such as droughts driven by climate change. These will be further elaborated in the operation manual.

Component 5: Fast-tracked enabling activities for PforR program delivery, (Total: US\$4.94 million)

This component would support the financing of upstream enabling activities to accelerate the PforR implementation and remove initial bottlenecks towards the achievement of Disbursement-Linked Indicators (DLIs). All proposed activities were included in the theory of change and results areas of the original PforR design and assessed technically, financially and from a safeguards point of view. The new Component would support the digital and physical operating environments (e.g., digital software, equipment) needed to achieve DLIs. In particular, these enabling activities will strengthen the operating environment of Sub-RA 1.2. "Building Institutional Adaptive Capacity for Innovation" (DLI 2) and Sub-RA 2.1. "Enabling Services for Value Chain Development and Export Promotion" (DLI 3). Below are the activities that will be performed under component 5 which may have environmental and social adverse impacts or risks, which will be mitigated through this ESMP.

1- Enterprise Resource Planning (ERP) System for the Agriculture Credit Corporation (ACC)

The bidding documents will include the purchase of software, related equipment (servers), and required licenses and include roll-out and training of staff. The system will be rolled out to support the Reimbursable Grant Instrument under the PforR and subsequently cover all services and management functions of ACC.

2- Upgrading veterinary service centers

Purchase of equipment for veterinary service centers in the south of Jordan, which was recently rehabilitated (facilities and furnishing), and in center of Jordan (currently being rehabilitated).

3- Automation and refurbishment of tree nurseries

Three nurseries operated by MoA would be refurbished (Jerash, Baqa'a, and Madaba). The MoA will purchase equipment to modernize operations and increase productivity. The target nurseries are the following:

- Faisal Nursery in Jerash:

These nurseries located at Zarqa River bank on east border of Jerash Governorate (Figure 1), with an area of 516,000 m². The nursery has 48 MOA permanent employees, in addition to 25-30 seasonal workers who work for 6 months a year. These workers are from local community and 25% of them are women.

The nurseries are located at semi natural landscape that includes aquatic habitats comprise of Zaqra River that is running around the year with the flow of treated wastewater from As Samra Wastewater Treatment Plant. The nurseries have dense planted vegetation with high canopy and dense planted seedlings. Bibbin nature reserve is around 4 km far from the nurseries location, however, the buffer zone is 2 km far (Figure 2).

The nearest community is about 3.5 km distance, but the surrounding area includes many private farms.

Refurbishment needs for the nursery includes damaged glasses of old green houses, old buildings plastering, painting, and maintenance. In addition to maintenance of control rooms with purchasing some equipment.



Figure 1: Location of Jerash Trees Nursery

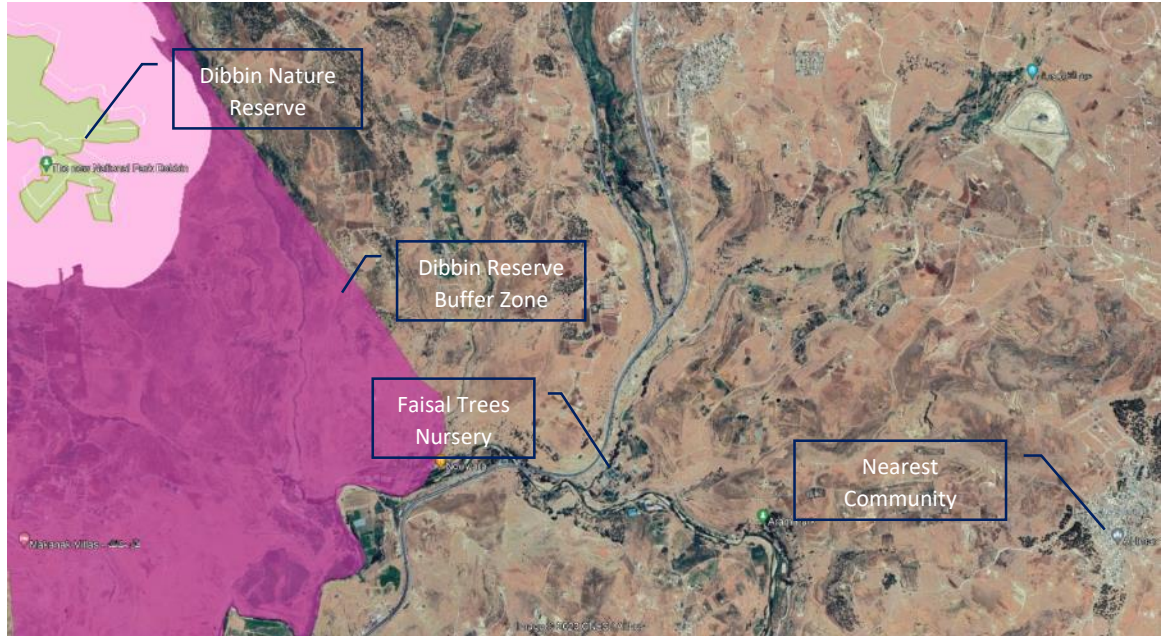


Figure 2: Location of Jerash Nursery to nearest community and Dibbin Protected Area



Figure 3: Sample of Jerash Nursery buildings require refurbishment

- Alwalah Nursery in Madaba:
This nursery locates at the bank of Wadi Al Walah in Madaba and around 5 km downstream of Al Walaha Dam to the west (Figures 4&5). The nursery surrounded by mix natural and planted areas with private farms (Figure 6). The nursery locates at edge of the buffer zone of

Mujib nature reserve, where the boundary of Mujib Nature Reserve is about 10 km west south of the nursery. (Figure 4). The refurbishment activities will include repair of old buildings and purchase of equipment



Figure 4: Al Walah Nursery Location



Figure 5: Al Walah Nursery & Al Walah Dam

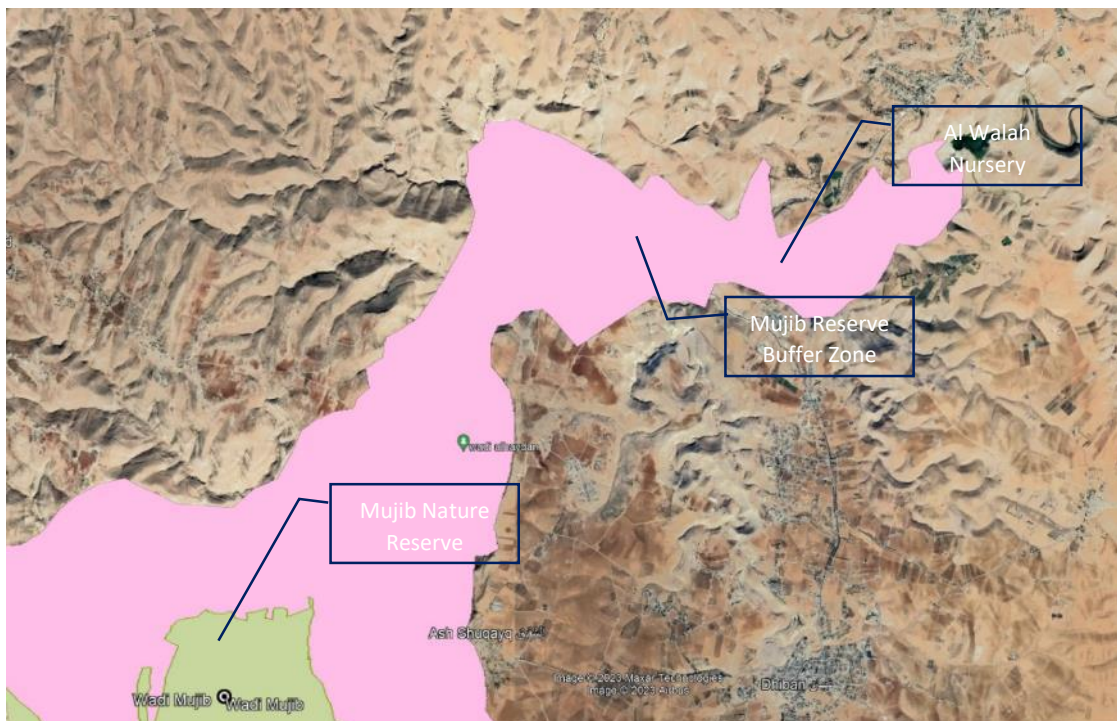


Figure 6: Al Walah Nursery within buffer zone of Mujib Nature Reserve



Figure 7: Picture of Al Walah Nursery

- Al Hussien Nursery in Al Balqa:
Al Hussien Nursery locates near National Agriculture Research Center (NARC), and close to Al Baq'a Palestinian Refugees Camp in Al Balqa Governorate. The surrounding area is of mix

residential and agricultural use (Figure 8). The surrounding habitats are mainly man developed, where natural landscape has been changed by the existing human activities. The nearest important natural landscape is Dibbin Forest Important Birds Area (IBA) that locates around 12 km to the north of the nursery (Figure 9)



Figure 8: Location of Al Hussien Nursery in Al Balqa

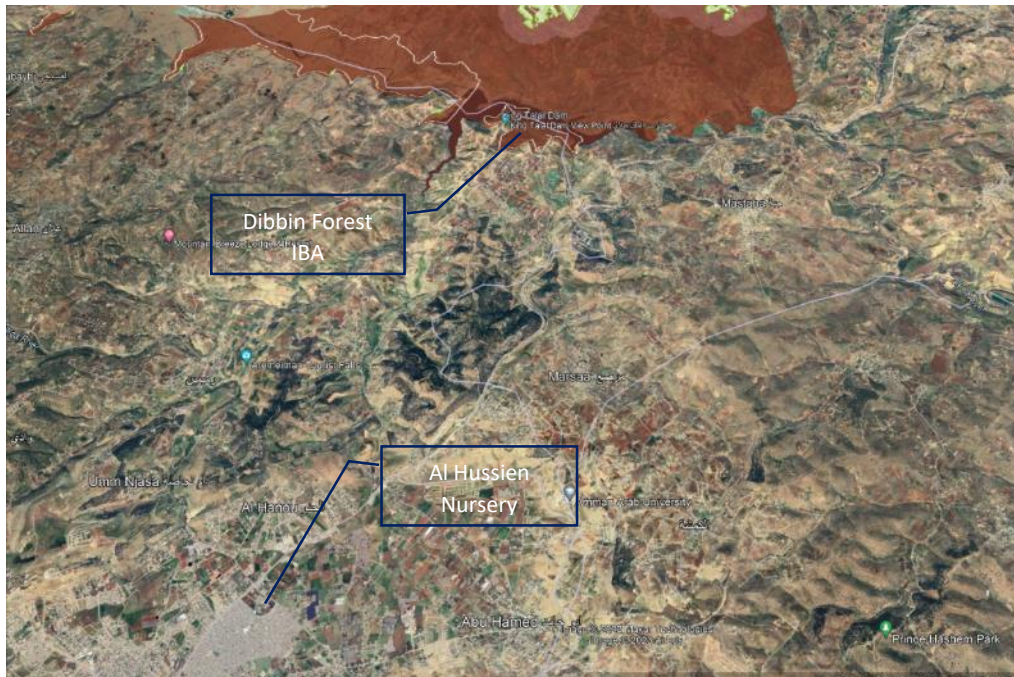


Figure 9: Nearest Important Natural Landscape – Dibbin Forest IBA

In addition the following equipment’s will purchased and installed under this sub-component as presented in table 1 below.

Equipment	Quantity	Target Department / Institution	Purpose
GCMS/MS	1	Plant Production Labs Directorate	To expedite tests and analysis results
HPLC	2	Pesticide Residue Analysis Lab	
FTIR	1	Pesticide Analysis Lab	
LCMS/MS	1	Jordan Valley Agriculture Directorate / Pesticide Residue Analysis Lab	To operate Jordan Valley Pesticide Residue Analysis Lab
Services Automation Software	1	Plant Production Labs Directorate	Services upgrade and enhancement
Installation of Solar Panels	Lump Sum	Plant Production Labs Directorate	Energy Conservation

Table 1: Equipment to be purchased under sub-component automation and refurbishment of tree nurseries

4- Automation and modernization of public food testing laboratories

Automation and modernization of food safety testing laboratories. The surrounding area is a mix of residential and agricultural use, in addition to the presence of Al Baq’a Palestinian Refugees Camp.



Figure 10: Nearest Important Natural Landscape – Dibbin Forest IBA

The purchased equipment will be mainly operated by kits (no chemicals needed). The proposed equipment include:

The following equipment will be purchased and installed under this sub-component as presented in table 1 below.

Equipment	Quantity	Target Department / Institution	Purpose	
GCMS/MS	1	Plant Production Labs Directorate	To expedite tests and analysis results	
HPLC	2	Pesticide Residue Analysis Lab		
FTIR	1	Pesticide Analysis Lab		
LCMS/MS	1	Jordan Valley Agriculture Directorate / Pesticide Residue Analysis Lab	To operate Jordan Valley Pesticide Residue Analysis Lab	
Services Automation Software	1	Plant Production Labs Directorate	Services upgrade and enhancement	
Installation of Solar Panels	Lump Sum	Plant Production Labs Directorate	Energy Conservation	

Table 2: Equipment to be purchased under sub-component automation and refurbishment of tree nurseries

5- Digital Farmer Extension Services Platform

Development and procurement of a prototype for a digital farmer extension service platform.

6- Refurbishment of Seed Testing Laboratories (MoA/NARC)

This involves the refurbishment of an existing seed testing lab including testing equipment, maintenance, and furnishing. The equipment that will be purchased under this sub-component are below

Item	Unit	Quantity
Incubators and instruments	Instrument	4
Calibration of equipment	Calibration certificate	Lump sum
Coding System	Software	1
Microscopes and imaging	Instrument with software	1
PC and Printers	Instrument	2
UPS	Instrument	1
Germination paper and consumables for the lab	Consumables	Lump sum

Table 3: Equipment to be purchased under sub-component refurbishment of Seed Testing Laboratories

0.3 Project Implementation Arrangement

MoA has the overall responsibility for the implementation of the Project. A Delivery Unit (DU) will be established at MoA under the Assistant Secretary General Assistant for Projects and Rural Development to provide technical assistance (TA) for the implementation of Program for Results (PforR) and the IPF.

The DU will support the Directorate of Projects Management, the other Directorates involved in Program implementation and the overall implementation of the Jordan Agriculture Plan ("JAP") in the following functions: (i) provision of implementation support for the JAP; (ii) coordination

with other government entities and stakeholders; and (iii) capacity development for implementing agencies of the JAP.

Table 3 below illustrates the implementing agencies and their responsible component(s) for implementation under the Project.

No.	Project Component	Implementing Agency
1	Component 1: JAP Systems Building and Implementation Support	MoA / DU
2	Component 2: Inter-Ministerial Coordination and Stakeholder Engagement	MoA / DU
3	Component 3: Capacity Development for Implementing Agencies	MoA / DU
4	Component 4: Contingent Emergency Response Component	MoA
5	Component 5: Fast-tracked enabling activities for PforR program delivery: 1- Enterprise Resource Planning (ERP) System 2- Upgrading veterinary service centers 3- Automation and refurbishment of tree nurseries 4- Automation and modernization of public food testing laboratories 5- Digital Farmer Extension Services Platform 6- Refurbishment of Seed Testing Laboratories	1- MoA 2- MoA 3- MoA 4- MoA 5- MoA / Extension Service Directorate 6- MoA / NARC

Table 4: Project Implementing Agencies

1. Regulatory Framework

This section defines the relevant environmental, social, health and safety local regulation and World Bank environmental and social (ES) standards that are applied for the project. According to the project description, components 1-4 are mainly focus on building the capacity and support the implementation of PforR that will be executed by MoA. Component 5 is the only component that has sub-components / activities include physical works that consider local regulations and World Bank ES standards. Table 4 presents key local regulations and World Bank ES standards, along with and their relevant sub-components / activity (s)

Sub-Component / Activity	Relevant Local Regulation	Relevant World Bank ES Standard ¹
Upgrading veterinary service centers	<p>The Environment Protection Law No. 6 of year 2017</p> <p>This law promotes sustainable development and environment protection where all projects or activities have to consider environmental protection, and to eliminate potential adverse impacts through applying adequate management measures and controls.</p>	<p>ESS1: Assessment and Management of Environmental and Social Risks and Impacts</p> <p>ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment One of the assessment methods is to develop ESMP that is an instrument details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures.</p>
	<p>Agriculture Law No.13 of year 205 and its amendments</p> <p>This law is the legal umbrella to regulate the agriculture sector. The law also prohibits wood cutting and collection at governmental and private forestry without a permit. The law also prohibit hunting of wild animals and birds without a license and according to relevant regulations and instructions that will be issued accordingly</p>	<p>ESS2: Labor and Working Conditions.</p> <p>ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.</p>
	<p>Labor Law No. 8 for the year 1996 and its amendments</p> <p>The law defines work obligations and rights for employees as well as the obligations of the employer in terms of providing safe</p>	<p>ESS3: Resource Efficiency and Pollution Prevention and Management.</p> <p>ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may</p>

¹ <https://thedocs.worldbank.org/en/doc/837721522762050108-0290022018/original/ESFFramework.pdf>

	<p>work environment, wages, working hours, paid annual and sick leaves, adequate code of conduct and suitable welfare for employees. The Jordanian Labor Law protects women from discrimination with additional maternity rights</p>	<p>threaten people, ecosystem services and the environment at the local, regional, and global levels. This standard is also aim to avoid or minimize generation of hazardous and non-hazardous waste</p>
	<p>Social Security Law No. 1 of 2014 and its amendments This law regulates the national insurance system for all labor in Jordan who must be above 16 years old regardless of nationality and gender. This law provisions the types of insurance that laborers and their inheritors are entitled to, for work injuries, retirement, disabilities, death, maternity, unemployment and health</p>	<p>ESS10: Stakeholder Engagement and Information Disclosure This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.</p>
	<p>Waste Management Framework Law no. 16 for the year 2020 This law governs solid waste management in Jordan, the law consider the waste generator is the ultimate responsible for waste handling and disposal (extended responsibility principal), specifies pollution prevention measures which might occur by or due to waste management, and detail the inspection frameworks and penalties for non-compliance.</p>	
	<p>Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment This regulation obligates the employers to protect employees from mechanical, electrical and chemical hazards by applying</p>	

	proper mitigation and control measures. The regulation sets the definitions for these hazards and the required warning and informative signs and materials that must be disclosed to employees.	
\Automation and refurbishment of tree nurseries	<p>The Environment Protection Law No. 6 of 2017</p> <p>This law promotes sustainable development and environment protection where all projects or activities have to consider environmental protection, and to eliminate potential adverse impacts through applying adequate management measures and controls.</p>	<p>ESS1: Assessment and Management of Environmental and Social Risks and Impacts</p> <p>ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment One of the assessment methods is to develop ESMP that is an instrument details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures.</p>
	<p>Agriculture Law No.13 of year 205 and its amendments</p> <p>This law is the legal umbrella to regulate the agriculture sector. The law also prohibits wood cutting and collection at governmental and private forestry without a permit. The law also prohibit hunting of wild animals and birds without a license and according to relevant regulations and instructions that will be issued accordingly</p>	<p>ESS2: Labor and Working Conditions.</p> <p>ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.</p>
	<p>Labor Law No. 8 for the year 1996 and its amendments</p> <p>The law defines work obligations and rights for employees as well as the obligations of the employer in terms of providing safe</p>	<p>ESS3: Resource Efficiency and Pollution Prevention and Management.</p> <p>ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may</p>

	<p>work environment, wages, working hours, paid annual and sick leaves, adequate code of conduct and suitable welfare for employees. The Jordanian Labor Law protects women from discrimination with additional maternity rights</p>	<p>threaten people, ecosystem services and the environment at the local, regional, and global levels. This standard is also aim to avoid or minimize generation of hazardous and non-hazardous waste</p>
	<p>Social Security Law No. 1 of 2014 and its amendments This law regulates the national insurance system for all labor in Jordan who must be above 16 years old regardless of nationality and gender. This law provisions the types of insurance that laborers and their inheritors are entitled to, for work injuries, retirement, disabilities, death, maternity, unemployment and health</p>	<p>ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. ESS6 recognizes that protecting and conserving biodiversity and habitats, along with sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms, this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem service.</p>
	<p>Human Trafficking Prevention Law No. 9 of 2009 This law has considered exploitation of labor at work, and forced labor and child labor is a human trafficking crimes that is prohibited by law despite of the nationality and gender</p>	<p>ESS10: Stakeholder Engagement and Information Disclosure This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.</p>
	<p>Child Rights Law No.17 of 2022 This law prohibits child forced labor by his/her parents or any individual</p>	
	<p>Waste Management Framework Law no. 16 for the year 2020 This law governs solid waste management in Jordan, the law consider the waste generator is the ultimate responsible for waste handling and disposal (extended</p>	

	<p>responsibility principal), specifies pollution prevention measures which might occur by or due to waste management, and detail the inspection frameworks and penalties for non-compliance.</p> <p>The Management, Transportation & Handling of Harmful and Hazardous Substances Regulation No. 24 of 2005: This regulation sets the responsibility of monitoring hazardous waste management under MoEnv., and defines the classification of hazardous waste and the disposal method at hazardous waste landfills in the country. Handling and transporting of hazardous materials and waste.</p> <p>Nature Reserves and National Parks Regulation No. 29 of 2005 This regulation sets the nature reserves and national parks definitions, reasons for being established, and the buffer zones around the nature reserves. That include the allowed activities within the delineated buffer zones boundaries.</p> <p>Instructions for the Prohibition of hunting wild animals and birds and organizing its hunting and trade No.2 of 2021 These instructions are according to agriculture law No. 13 of 2015. It prohibit hunting of wild animals and birds that are not allowed according to the hunting license and lists of allowed species to be hunted at specific locations.</p> <p>Regulation of Protection and Safety from Industrial Tools and Machines and Work</p>	
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	<p>Sites No. 43 for 1998 and its amendment This regulation obligates the employers to protect employees from mechanical, electrical and chemical hazards by applying proper mitigation and control measures. The regulation sets the definitions for these hazards and the required warning and informative signs and materials that must be disclosed to employees.</p>	
<p>Automation and modernization of public food testing laboratories</p>	<p>The Environment Protection Law No. 6 of 2017 This law promotes sustainable development and environment protection where all projects or activities have to consider environmental protection, and to eliminate potential adverse impacts through applying adequate management measures and controls.</p>	<p>ESS2: Labor and Working Conditions. ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.</p>
	<p>Labor Law No. 8 for the year 1996 and its amendments The law defines work obligations and rights for employees as well as the obligations of the employer in terms of providing safe work environment, wages, working hours, paid annual and sick leaves, adequate code of conduct and suitable welfare for employees. The Jordanian Labor Law protects women from discrimination with additional maternity rights</p>	<p>ESS3: Resource Efficiency and Pollution Prevention and Management. ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. This standard is also aim to avoid or minimize generation of hazardous and non-hazardous waste</p>
	<p>Social Security Law No. 1 of 2014 and its amendments This law regulates the national insurance system for all labor in Jordan who must be</p>	<p>ESS10: Stakeholder Engagement and Information Disclosure This ESS recognizes the importance of open and transparent engagement between the Borrower and</p>

	<p>above 16 years old regardless of nationality and gender. This law provisions the types of insurance that laborers and their inheritors are entitled to, for work injuries, retirement, disabilities, death, maternity, unemployment and health</p>	<p>project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.</p>
<p>Waste Management Framework Law no. 16 for the year 2020 This law governs solid waste management in Jordan, the law consider the waste generator is the ultimate responsible for waste handling and disposal (extended responsibility principal), specifies pollution prevention measures which might occur by or due to waste management, and detail the inspection frameworks and penalties for non-compliance.</p>		
<p>Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment This regulation obligates the employers to protect employees from mechanical, electrical and chemical hazards by applying proper mitigation and control measures. The regulation sets the definitions for these hazards and the required warning and informative signs and materials that must be disclosed to employees.</p>		
<p>The Management, Transportation & Handling of Harmful and Hazardous Substances Regulation No. 24 of 2005: This regulation sets the responsibility of monitoring hazardous waste management</p>		

	<p>under MoEnv., and defines the classification of hazardous waste and the disposal method at hazardous waste landfills in the country. Handling and transporting of hazardous materials and waste.</p>	
<p>Refurbishment of Seed Testing Laboratories</p>	<p>The Environment Protection Law No. 6 of 2017 This law promotes sustainable development and environment protection where all projects or activities have to consider environmental protection, and to eliminate potential adverse impacts through applying adequate management measures and controls.</p>	<p>ESS2: Labor and Working Conditions. ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.</p>
	<p>Labor Law No. 8 for the year 1996 and its amendments The law defines work obligations and rights for employees as well as the obligations of the employer in terms of providing safe work environment, wages, working hours, paid annual and sick leaves, adequate code of conduct and suitable welfare for employees. The Jordanian Labor Law protects women from discrimination with additional maternity rights</p>	<p>ESS3: Resource Efficiency and Pollution Prevention and Management. ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. This standard is also aim to avoid or minimize generation of hazardous and non-hazardous waste</p>
	<p>Social Security Law No. 1 of 2014 and its amendments This law regulates the national insurance system for all labor in Jordan who must be above 16 years old regardless of nationality and gender. This law provisions the types of insurance that laborers and their inheritors are entitled to, for work injuries, retirement,</p>	<p>ESS10: Stakeholder Engagement and Information Disclosure This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a</p>

	disabilities, death, maternity, unemployment and health	significant contribution to successful project design and implementation.
	<p>Waste Management Framework Law no. 16 for the year 2020</p> <p>This law governs solid waste management in Jordan, the law consider the waste generator is the ultimate responsible for waste handling and disposal (extended responsibility principal), specifies pollution prevention measures which might occur by or due to waste management, and detail the inspection frameworks and penalties for non-compliance.</p>	
	<p>Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment</p> <p>This regulation obligates the employers to protect employees from mechanical, electrical and chemical hazards by applying proper mitigation and control measures. The regulation sets the definitions for these hazards and the required warning and informative signs and materials that must be disclosed to employees.</p>	

Table 5: Relevant Local Regulations and World Bank ES Standards

2. Environmental and Social Risks / Impacts

This ESMP will address the Environmental and Social (ES) risks / impacts due to the implementation of the IPF. The assessment of the ES risks will be in relevance with applicable local regulations and World Bank ES Standards (ESSs)².

2.1 Environmental and Social Risk / Impacts

This section presents the potential ES risk / impacts (positive and negative) due to the implementation of each IPF's component. According to the IPF components and associated activities, there are no high or substantial adverse ES impacts. However, some activities may have ES impacts and risks that need to be mitigated under this ESMP.

2.1.1 Project Potential Environmental Health and Safety (EHS) Risks / Impacts

- Positive Impacts:

Component 1 will enhance the capacity of implementing agencies in assessing the environmental and OHSE risk, developing proper management controls at planning phase, and monitoring the OHSE performance during IPF implementation. In addition, this component will ensure safe implementation for workers and farmers by providing the required OHS expertise and support, as well as prevents child labor and secure proper working conditions for workers involved at project implementation.

Component 2 will improve coordination between implementing agencies and ministries with other governmental agencies especially for environmental and social compliance with relevant OHSE regulations and to ensure timely obtaining required permits when legally needed. Engagement of stakeholders will enable the implementing agencies to capture stakeholders concerns and interests in IPF implementation at planning stage which will lead to effective participation of these stakeholders at IPF implementation.

Component 3 provides a good opportunity to build the capacity implementing agencies staff in OHSE safeguards development for PforR implementation. Providing the knowledge through assigned expertise to identify, assess and propose required control and mitigation measures in the frame of OHSE instruments to eliminate and or reduce these OHSE risks to acceptable level by local regulations and WB ESSs.

Component 4 is mainly to enable MOA to response for eligible crisis or emergency under PforR activities by establishing the CERC, therefore, potential environmental positive impacts are related to applied PforR activities but not of IPF activities.

Component 5 includes activities that will enable delivery of PforR program, and some of these activities includes physical works related to refurbishment or maintenance of trees nurseries. Indirect positive environmental impacts are related to creating opportunities for inclusion of environmental concerns and aspects at activities include physical works. Installation of solar PV panels would enhance energy conservation. This component will Increase the OHSE awareness of farmers regarding agriculture-relevant OHSE aspects by enhancing their access to extension information and knowledge. It also

² <https://projects.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards>

Provides accessible platform to framers in order to share their OHSE experience and to raise their OHSE concerns.

- **Negative Impacts:**

Project components 1-4 have no potential negative environmental risks or impacts, nevertheless, Traffic Accidents is a potential OHS risk for project workers under all components. Project team are going to use public roads to reach target departments of implementing agencies to perform technical assistance and capacity building activities under components 1-4, and construction sites under component 5. That would subject them to traffic accidents. This risk is low as the technical assistance and the capacity activities are limited to MoA directorates within other implementing agencies that centralized in Amman.

Component 5 has some physical works that expected to have negative environmental and health and safety risks or impacts and need to be mitigated accordingly. Below are the anticipated environmental and OHS impacts due to the execution of component 5 activities. Repeating of identified impacts is intentionally present at ESMP as works included under this component will be implemented by different contractors at different locations.

- Upgrading veterinary service centers:
 - Pollution by random disposal of generated waste related to packaging materials of purchased equipment. This impact is of low significance and limited to the site.
 - Muscle fatigue or back injuries due to manual handling or lifting of purchased heavy equipment This impact is expected to be low due to limited number of equipment need manual handling
 - Electrocution of installation technicians and MoA staff during installation and operation of purchased electrical equipment. This impact expected to be low due to competency of supplier staff that are familiar with electrical hazards of installed equipment.
- Automation and refurbishment of tree nurseries:
 - Pollution by improper management and disposal of construction waste
 - Air pollution by generated dust and paints fumes generated by construction activities especially those related to demolition of damaged break walls.
 - Impacts on biodiversity especially for nurseries at Jerash and Madaba that are located at and surrounded at natural habitats. The relative dense vegetation cover within nurseries would attract wildlife and birds, so construction and operation activities may have impact on biodiversity. The significance of this impact is expected to be low as the works are limited inside MoA nurseries. These potential impacts are:
 - Wood collection from surrounding environment for fire
 - Hunting or capturing of wild animals or birds
 - Accidental killing of wildlife by project's vehicles and trucks

- Workers injuries with cuts and wounds by sharp objects and materials ie glass, grinders. The significance of this risk is expected to be low to medium
 - Workers backbones and muscular injuries by improper manual handling. The significance of this impact expected to be low- medium based on type of physical works required at each nursery.
 - Workers inhalation of dust and paint fumes which may cause irritation of eyes and respiratory system. This impact expected to be low as potential generation dust and fumes will be limited at refurbishment works.
 - Noise pollution and hear loss result from long time exposure to some work equipment such as grinders, cutters and drillers.
 - Workers injuries by collusion with mobile vehicles and construction machineries inside nurseries. This impact expected to be of low significance as work site area is limited and mobility of trucks and vehicles is limited to nurseries' inner roads.
 - Workers exposure to poisoning or bites of biological hazards ie scorpions and snakes. This impact of low to medium significance, and abundance of lethal snakes and scorpions at nurseries areas is rare.
 - Fire risk due to use of flammables materials like paint solvents, or use of electrical tools and machines. This impact is considered low to medium due to the small quantities of flammable materials expected to be used, and limited number of electrical machines needed at work.
 - Fall from height for workers during installation of solar PV panels on rooftop. This impact significance is low to medium, that depends on the total area of installed panels and the height of the building
 - Generation of hazardous waste comprise of damaged solar PV panels during installation or operation, and empty paints containers.
- Automation and modernization of public food testing laboratories:
 - Pollution by waste that generated due to random or improper disposal of packaging materials. This impact is of low significance and limited to the site. Workers may
 - Muscle fatigue or back injuries due to manual handling of purchased heavy equipment
 - Electrocution of workers and relevant operators of implementing agency during the commissioning and operation of IPF
 - Refurbishment of Seed Testing Laboratories:
 - Pollution by waste that generated due to random or improper disposal of packaging materials. This impact is of low significance and limited to the site. Workers may
 - Muscle fatigue or back injuries due to manual handling of purchased heavy equipment
 - Electrocution of workers and relevant operators of implementing agency during the commissioning and operation of IPF

2.1.2 Project Potential Social Risks / Impacts:

- **Positive Impacts:**

All components will provide business opportunities for local suppliers, consultants and software programming firms. Other positive social impacts are as follows:

Component 1 will enable implementing agencies in assessing the social opportunities and risk, identifying potential stakeholders and their concerns and interest to the project. This component will enhance developing proper social management controls at planning and implementation phases.

Component 2 will support implementing agencies to identify stakeholders and to engage them at the project during planning and implementation to address their interests and concerns especially vulnerable groups i.e. women and refugees.

Component 3 is an opportunity to build the capacity implementing agencies staff in social aspects for PforR implementation, especially for managing potential social risks and maximizing social benefits. It will ensure that proper and meaningful engagement of stakeholders during PforR implementation.

Component 4 will enable reduction of impacts on communities and vulnerable groups result from emergency and crisis situations through timely response with mobilization of required resources and intervention.

Component 5 has activities that associated with potential positive social impacts as follows:

- Upgrading veterinary service centers:
 - This activity will improve the livelihood of livestock owners and farmers by enhancement of veterinary services that will reduce economic losses result from livestock and farmed animals.
 - This activity will also improve the livelihood of workers including refugees in animal production and farming sector by sustaining the business, reduction of economic losses through the enhancement of veterinary services.
 - This activity will contribute to maintain affordable prices of animal products for the majority of local consumers which enable them to maintain balanced dietary scheme at household level.
- Automation and refurbishment of tree nurseries
 - Provides direct work opportunities for local workers, and business opportunities for local contractors during construction phase
 - Enhance seasonal work opportunities for locals especially women and also for refugees who are the most beneficiaries from such opportunities at nurseries.
 - Enhance plant production of farmers thus enhancing their livelihoods by providing diverse and sufficient quantities of seedlings for free or with affordable prices.
- Automation and modernization of public food testing laboratories
 - Provides business opportunities for local suppliers / contractors

- Enhance and upgrade the capacity and controls in food safety which will contribute in preserving public health of food consumers in Jordan.
 - Digital Farmer Extension Services Platform
 - Increase the awareness of farmers regarding agriculture-relevant social aspects by enhancing their access to extension information and knowledge.
 - Provides accessible platform to framers in order to share their experience and to raise their concerns.
 - Refurbishment of Seed Testing Laboratories:
 - Provides direct work opportunities for local workers, business opportunities for local contractors and supplier during construction phase
 - Enhance the plant production of farmers, thus their livelihood by enhancing the quality of seeds in the market.

- **Negative Social Impacts**

- Components 1-4

The proposed activities under these components are to provide technical capacity buildings for implementing agencies which may involve contracting consulting firms that provide experts for the project or individual consultants that either directly contracted by the implementing agency or freelancers contracted by the consulting firms. These experts and despite of their contracting status may subjected to the following potential social impacts:

- Working Terms Conditions:

This risk related to working hours and overtime, delay in wages payment, and social security insurance. This risk is low as experts assigned by consulting firms' are either firm's employees whom their wages payments, working hours and registration at social security is mandatory, or the free lancing experts whom working conditions and terms are agreed in advance upon signing consultancy agreements with consulting firms.

- Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH):

SEA / SH are potential risks at workplace for workers, where most of contracted workers at the project under these components. It's expected that females will be among all workers categories in the project under technical support activities, such as of in strategic planning, capacity building, Information Technology services and procurement.

- **Component 5:**

This component has sub-components that include physical interventions and activities. These activities are expected to be within the boundary of the work site, sites that would have more refurbishment or maintenance works as described at chapter 1 are

not surrounded by close residential communities, and the expected of workers at each site will be relatively small. Therefore potential negative social impacts of more significance will be those related to workers. These potential impacts are:

- Non-recruitment of local workers
Ignorance in providing work opportunities for local workers available at close villages and communities. This potential impact is of low significance due to limited opportunities available and lack of close communities to work sites. However, requires to be considered at mitigation to avoid any conflict with subcontractors.
- Child Labor:
Labor age for hazardous works in Jordan is 18 years by law, while workers from age of 16 to 18 years can be engaged at non-hazardous works if certain conditions are met. However, refurbishment activities under this component are considered construction works where workers under 18 may be recruited by contractor especially as unskilled labor. This risk's significance is considered low because refurbishment works usually require skilled labor to demolish, maintain and reconstruct inside existing structures. In addition to the limited number of workers expected to be involved based on the area of structures targeted at this component.
- Forced Labor:
Forced labor is not expected to occur in the project under this component, as it's legally prohibited and culturally denied in Jordan. In addition, most of the expected workforce at refurbishment works are skilled labor, and number of non-skilled labor who are may subjected to other forms of forced labor is quite limited. Such forms include unfair or clear contractual terms, long working hours and unsafe work conditions. Migrant and refugees workers who do not have work permit are more subjected to these forms of forced labor.
- Labor Influx:
This component is not expected to trigger labor influx risk because the volume of physical work is very limited, and requires limited number of skilled labor who are usually available within local communities close to work sites.
- Labor Disputes over Employment Terms and Conditions (including wages, overtime and social security):
Based on the small scale and short duration of the construction and maintenance works under this component, this impact may occur for unskilled labor who may contracted verbally by the contractors from local communities and or from refugees and migrant workers. Those unskilled labor are usually contracted on daily basis where their registration at social security may not considered, therefore, they will not be insured against work accidents. In

addition, they may be paid low wages below the legally defined limits, and delays in wages payments which impact the livelihood of these workers.

- Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)
SEA./ SH are potential risks at workplace for workers, where most of contracted workers at construction works are expected to be males while Females' presence at construction sites might be of supervisory role. This risk is mitigated owing to size and scale of the works with limited number of workers will be present at each site for refurbishment. Therefore, this risk is expected to be low.

2.2 Recommended Mitigation Measures:

This section presents the proposed mitigation and control measures to eliminate and or to reduce potential negative environmental and social impacts of the project. In addition, it provides the responsible institution for the implementation of the proposed mitigation measures, as well as when to be applied and the estimated cost for such application. As mentioned at section 3.1, component 5 of the project has sub-components that require physical interventions and some light construction works (Refurbishment). These activities have potential negative impacts that need to be mitigated through adequate control measures that comply with relevant local regulations and World Bank ES standards.

Table 5 below provides the proposed mitigation measures for identified potential environmental and social risks of the project.

Table 6: Recommended Mitigation Measures

Subproject Activity	Potential E&S Impacts	Proposed Mitigation Measures <i>(including legislation & regulations)</i>	Responsible Institutions <i>(including enforcement & coordination)</i>	Implementation Schedule for Mitigation Measures	Cost Estimates	Comments <i>(e.g. secondary impacts)</i>
Environmental Health and Safety Mitigation Measures						
All Components	Traffic Accidents	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments:</i></p> <ul style="list-style-type: none"> - Include commitment of project workers to comply with traffic regulations at project's code of conduct - Conduct preventive maintenance for vehicles and machineries used in the project - Maintain records for preventive maintenance - Inspection on compliance with required mitigations - Maintain records of any traffic accidents 	<ul style="list-style-type: none"> - MoA - Contractors - Suppliers 	<ul style="list-style-type: none"> - Induction on relevant clauses at code of conduct upon worker assignment with receive signature records. - Monthly inspection on preventive maintenance records - Investigation on traffic accidents root causes within 48 hours. 	-	ESMP that include code of conduct is part of the project and tender documents for contractors and suppliers

		occurred with investigation on root causes.				
Upgrading veterinary service centers	Pollution by random disposal of generated waste related to packaging materials of purchased equipment	<p><i>To comply with Waste Management Framework Law no. 16 for the year 2020:</i></p> <ul style="list-style-type: none"> - Collection of waste packaging materials at sealed waste bags or containers - Reuse and recycle of heavy duty packaging materials ie wood and carton boards - Dispose collected waste to the nearest municipal public waste collection bins (for small quantities) - Dispose collected waste to the nearest municipal land fill (for large quantities) <p>Maintain records for disposed waste</p>	<ul style="list-style-type: none"> - Supplier - MoA/DU - Municipalities - 	<ul style="list-style-type: none"> - Daily collection of waste packaging material - Daily disposal of collected waste - Reuse & recycle of waste packaging material when possible - Daily inspection by contractor - Weekly inspection by MoA/DU 	-	Waste collection, disposal and workers training is part of supplier scope and BOQ
	Muscle fatigue or back injuries due to manual handling	<i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i>	<ul style="list-style-type: none"> Supplier MoA/DU 	<ul style="list-style-type: none"> - Workers training once before start of work - TBT on daily basis 	-	Providing lifting equipment and training of workers on safe manual handling part

		<ul style="list-style-type: none"> - Development of OHS policy for the project - Use of lifting equipment for heavy loads - Train workers on safe manual handling techniques - Conduct Tool Box Talk (TBT) on manual lifting hazard - Direct supervision on manual lifting operation - Direct supervision on manual handling - Inspection for contractor compliance with mitigation measures 		<ul style="list-style-type: none"> - Daily supervision by contractor - Weekly inspection by MoA/DU at site 		<p>of supplier scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>
	Electrocution of installation technicians purchased electrical equipment	<p><i>To comply with Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment:</i></p> <ul style="list-style-type: none"> - Development of OHS policy for the project - Apply Lockout Tag- 	Supplier MoA/DU	<ul style="list-style-type: none"> - LOTO training prior the start of electrical works - TBT daily prior work start - MoA technicians training prior operation start - Daily supervision by contractor - Weekly inspection 	-	<p>Providing safe electrical work practices is part of supplier scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		<p>out (LOTO) measures during installation by supplier technicians</p> <ul style="list-style-type: none"> - Train technicians and MoA staff on electrical safety - Conduct Tool Box Talk (TBT) on electrical hazard prior start of installation by technicians - Direct supervision on equipment installation 		by MoA/DU		
<p>Automation and refurbishment of tree nurseries</p>	<p>Pollution by improper management and disposal of construction waste</p>	<p><i>To comply with Waste Management Framework Law no. 16 for the year 2020:</i></p> <ul style="list-style-type: none"> - Collection of refurbishment solid waste at designated area at site - Disposal of refurbishment solid waste to the nearest municipal dump site - Direct supervision on collection and disposal process - Inspection for contractor 	<ul style="list-style-type: none"> - Contractor - MoA/DU 	<ul style="list-style-type: none"> - Daily collection of waste packaging material - Daily disposal of collected waste - Reuse & recycle of waste packaging material when possible - Daily inspection by contractor and weekly inspection by MoA/DU at site 	-	<p>Waste collection, disposal and workers training is part of contractor scope and BOQ</p> <p>ESMP is part of the tender documents</p>

		compliance with mitigation measures				
	Generation of hazardous waste comprise of damaged solar PV panels during installation or operation, and empty paints containers	<p><i>To comply with Waste Management Framework Law no. 16 for the year 2020:</i></p> <ul style="list-style-type: none"> - Segregation of hazardous waste from construction waste - Temporary store hazardous waste at designated HAZMAT area - HAZMAT area must be shaded and bounded with isolation on the floor. - Hazardous waste must be collected in sealed containers, and labeled according to Material Safety Data Sheet (MSDS) - Collected hazardous waste must be disposed to hazardous waste landfill and in coordination with Ministry of 	Contractor MoA/DU MoEnv	<ul style="list-style-type: none"> - Collection of hazardous waste at HAZMAT area on daily basis - Disposal of hazardous waste upon refurbishment completion - Recycling of damaged solar panels upon installation completion or as agreed with manufacturer - Daily supervision for hazardous waste management - Document hazardous waste disposal records upon each disposal event - Daily supervision by contractor - Weekly inspection by MoA/DU 	-	<p>Hazardous waste collection and disposal or recycling is the responsibility of contractor and part of his BOQ</p> <p>ESMP is part of the tender documents</p>

		<p>Environment via authorized contractor</p> <ul style="list-style-type: none"> - Recycling of collected damaged solar PV modules must be considered by returning them manufacturer prior being disposed to hazardous landfill - Records for hazardous waste must be documented along with evidence for safe disposal - To include required hazardous waste management applied measures at workers induction - Direct supervision for hazardous waste management at site - Inspection for contractor compliance with mitigation measures 				
	Impacts on biodiversity	<i>To comply with Instructions for the Prohibition of hunting wild animals and birds and organizing its hunting and trade</i>	<ul style="list-style-type: none"> - Contractor MoA/DU 	<ul style="list-style-type: none"> - Induction of workers prior the start of work at site - Daily supervision by contractor - Weekly inspection 	-	<p>Biodiversity protection is part of contractors scope and responsibility</p> <p>ESMP is part of the</p>

		<p><i>No.2 of 2021</i></p> <ul style="list-style-type: none"> - Prohibit Wood collection and hunting at site - Induct workers on biodiversity protection measures - Maintain records for accidental killing for wildlife at site - Direct inspection and supervision on biodiversity applied mitigation measures - Inspection for contractor compliance with mitigation measures 		by MoA/DU		tender documents
	Workers injuries with cuts and wounds by sharp objects and materials	<p><i>To comply with Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment:</i></p> <ul style="list-style-type: none"> - Induct workers with sharp objects hazards at TBT - Adequate protective gloves must be used all the time 	Contractor MoA/DU	<ul style="list-style-type: none"> - Daily TBT induction prior work start - Daily inspection on grinders and other sharp tools by contractor - Weekly inspection by MoA/DU 	-	<p>Providing PPEs is part of contractor scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		<ul style="list-style-type: none"> - Ensure that grinders has protective guard over grinder disks - Direct supervision - Inspection for contractor compliance with mitigation measures 				
	Workers backbones and muscular injuries by improper manual handling.	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - Use of lifting equipment for heavy loads - Train workers on safe manual handling techniques - Conduct Tool Box Talk (TBT) on manual lifting hazard Direct supervision on manual lifting operation - Direct inspection and supervision on manual handling 	Contractor MoA/DU	<ul style="list-style-type: none"> - Workers training once before start of work - TBT on daily basis - Daily supervision by contractor - Weekly inspection by MoA/DU at site 	-	<p>Providing lifting equipment to perform work safely is part of contractor's scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>
	Workers inhalation of dust and paint fumes which may cause irritation of eyes and respiratory	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - Use of dust mask during demolition 	Contractor MoA/DU	<ul style="list-style-type: none"> - Induction TBT daily before work start - Daily supervision by contractor - Weekly inspection 	-	<p>Providing PPEs is part of contractor scope and BOQ</p> <p>Project OHS policy is</p>

	system.	works and chemical filtered mask for fumes during painting <ul style="list-style-type: none"> - Ensure proper natural ventilation for work location - Include dust and fumes hazard at TBT - Direct inspection and supervision on applying mitigation measures 		by MoA/DU at site		part of LMP at ESMP ESMP is part of the tender documents
	Noise pollution and hear loss result from long time exposure to some work equipment such as grinders, cutters and drillers.	<i>To comply with Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment</i> <ul style="list-style-type: none"> - Selection of low noise decimal equipment when applicable - Provide workers with hear protection PPE - Reduce exposure by applying breaks during use of equipment - TBT for workers on noise hazard 	Contractor MoA/ DU	<ul style="list-style-type: none"> - TBT to be performed daily - Daily inspection by Contractor - Weekly inspection by MoA/DU 	-	Providing PPEs is part of contractor scope and BOQ Project OHS policy is part of LMP at ESMP ESMP is part of the tender documents

		- Inspection at site for mitigation measures implementation				
	Workers injuries by collusion with mobile vehicles and construction machineries inside nurseries.	<p><i>To comply with Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment:</i></p> <ul style="list-style-type: none"> - Include collusion hazards with mobile machineries at TBT Installation of reverse alarm at all construction vehicles and machineries - Direct inspection and supervision on applying mitigation measures 	Contractor MoA/DU	<ul style="list-style-type: none"> - Daily TBT before work start - Daily supervision by contractor - Weekly inspection by MoA/DU 	-	<p>Providing safe construction practices and vehicles and machineries is part of contractor scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>
	Fall from height for workers during installation of solar PV panels on rooftop.	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - To consider any work platform at 1.5m or more above ground is work at height - Use of full body harness with lifeline 	Contractor MoA/DU	<ul style="list-style-type: none"> - Conduct work at height induction and training on PPEs prior work at height starts - Inspection for ladders and scaffolds prior work at height start - Daily supervision 		<p>Providing fall protection equipment and PPEs when needed is part of contractor scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the</p>

		<ul style="list-style-type: none"> - Erection of safe scaffolds by competent person - Use of safe ladders that have manufacture certificate or inspected by 3rd party - Induct workers on work at height hazards and the use of PPEs - If work platform has proper physical fall protect measures include hand – mid and foot rails then full body harness can be not used. - Direct inspection and supervision on mitigation measures application at site 		<ul style="list-style-type: none"> by contractor - Weekly inspection by MoA/DU 		tender documents
	Fire Risk	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - To keep flammable material away from any ignition source during work - To label container of flammable material 	Contractor MoA/DU	<ul style="list-style-type: none"> - Perform induction for fire prevention measures once prior the work start includes training on use of fire extinguishers. - Daily inspection by contractor - Weekly inspection 	-	<p>Providing fire fighting extinguishers is part of contractor scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the</p>

		<ul style="list-style-type: none"> - To perform regular housekeeping especially for combustible waste ie wooden and cartoon material - To prohibit making fire by workers for food or drinks - To provide portable fire extinguishers at site - To include above fire prevention measures at workers induction 		by MoA / DU		tender documents
	Workers exposure to poisoning or bites of biological hazards	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - To limit works inside the required facilities for maintenance and refurbishment - To collect and dispose food waste at closed waste bins - To ensure that workers wear high neck safety shoes - To induct workers for potential biological hazards - Inspection and 	Contractor MoA/DU	<ul style="list-style-type: none"> - Induction of workers on biological hazards once prior start of work - Daily inspection by the contractor - Weekly inspection by MoA / DU 	-	<p>Providing safe work environment and provide workers with proper induction is part of contractor scope and BOQ.</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		supervision on applied mitigation measures				
Automation and modernization of public food testing laboratories	Pollution by waste that generated due to random or improper disposal of packaging materials. This impact is of low significance and limited to the site.	<p><i>To comply with Waste Management Framework Law no. 16 for the year 2020:</i></p> <ul style="list-style-type: none"> - Collection of waste packaging materials at sealed waste bags or containers - Reuse and recycle of heavy duty packaging materials ie wood and carton boards - Dispose collected waste to the nearest municipal public waste collection bins (for small quantities - Dispose collected waste to the nearest municipal land fill (for large quantities) <p>Maintain records for disposed waste</p>	Supplier MoA/DU	<ul style="list-style-type: none"> - Workers training once before start of work - TBT on daily basis - Daily supervision by contractor - Weekly inspection by MoA/DU at site 	-	<p>Compliance with relevant regulation and application of proper waste management measures is part of supplier scope and BOQ</p> <p>ESMP is part of the tender documents</p>
	Muscle fatigue or back injuries due to manual handling of purchased heavy equipment	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - Use of lifting 	Contractor MoA/DU	<ul style="list-style-type: none"> - Workers training once before start of work - TBT on daily basis - Daily supervision by 	-	<p>Providing lifting equipment to perform work safely is part of contractor's scope and BOQ</p>

		<p>equipment for heavy loads</p> <ul style="list-style-type: none"> - Train workers on safe manual handling techniques - Conduct Tool Box Talk (TBT) on manual lifting hazard - Direct supervision on manual lifting operation - Direct inspection and supervision on manual handling 		<p>contractor</p> <ul style="list-style-type: none"> - Weekly inspection by MoA/DU at site 		<p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>
	<p>Electrocution of workers during installation of supplied equipment and lab staff during operation</p>	<p><i>To comply with Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment:</i></p> <ul style="list-style-type: none"> - Apply Lockout Tag-out (LOTO) measures during installation by supplier technicians - Train technicians and MoA staff on electrical safety - Conduct Tool Box Talk (TBT) on electrical hazard prior 	<p>Supplier</p> <p>MoA/DU</p>	<ul style="list-style-type: none"> - LOTO training prior the start of electrical works - TBT daily prior work start - MoA technicians training prior operation start - Daily inspection by contractor - Weekly inspection by MoA/DU 	-	<p>Providing safe work practice for workers is part of supplier scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		<p>start of installation by technicians</p> <ul style="list-style-type: none"> - Direct supervision on equipment installation 				
Refurbishment of Seed Testing Laboratories:	<p>Pollution by waste that generated due to random or improper disposal of packaging materials. This impact is of low significance and limited to the site. Workers may</p>	<p><i>To comply with Waste Management Framework Law no. 16 for the year 2020:</i></p> <ul style="list-style-type: none"> - Collection of waste packaging materials at sealed waste bags or containers - Reuse and recycle of heavy duty packaging materials ie wood and carton boards - Dispose collected waste to the nearest municipal public waste collection bins (for small quantities) - Dispose collected waste to the nearest municipal land fill (for large quantities) <p>Maintain records for disposed waste</p>	<p>Supplier</p> <p>MoA/DU</p>	<ul style="list-style-type: none"> - Workers training once before start of work - TBT on daily basis - Daily supervision by contractor - Weekly inspection by MoA/DU at site 	-	<p>Compliance with relevant regulation and application of proper waste management measures is part of supplier scope and BOQ</p> <p>ESMP is part of the tender documents</p>
	<p>Muscle fatigue or back injuries due to</p>	<p><i>To comply with Labor Law No. 8 for the</i></p>	<p>Contractor</p> <p>MoA/DU</p>	<ul style="list-style-type: none"> - Workers training once before start of 	-	<p>Providing lifting equipment to perform</p>

	<p>manual handling of purchased heavy equipment</p>	<p><i>year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - Use of lifting equipment for heavy loads - Train workers on safe manual handling techniques - Conduct Tool Box Talk (TBT) on manual lifting hazard - Direct supervision on manual lifting operation - Direct inspection and supervision on manual handling 		<p>work</p> <ul style="list-style-type: none"> - TBT on daily basis - Daily supervision by contractor - Weekly inspection by MoA/DU at site 		<p>work safely is part of contractor's scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>
	<p>Electrocution of workers and relevant operators of implementing agency during the commissioning and operation of IPF</p>	<p><i>To comply with Regulation of Protection and Safety from Industrial Tools and Machines and Work Sites No. 43 for 1998 and its amendment:</i></p> <ul style="list-style-type: none"> - Apply Lockout Tag-out (LOTO) measures during installation by supplier technicians - Train technicians and MoA staff on electrical safety 	<p>Supplier MoA/DU</p>	<ul style="list-style-type: none"> - LOTO training prior the start of electrical works - TBT daily prior work start - MoA technicians training prior operation start - Daily inspection by contractor - Weekly inspection by MoA/DU 	<p>-</p>	<p>Providing safe work practice for workers is part of supplier scope and BOQ</p> <p>Project OHS policy is part of LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		<ul style="list-style-type: none"> - Conduct Tool Box Talk (TBT) on electrical hazard prior start of installation by technicians - Direct supervision on equipment installation 				
Social Mitigation Measures						
Component 1-4	Working Terms Conditions	<ul style="list-style-type: none"> - <i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i> - To comply with relevant working terms and conditions defined at LMP - Inspect for compliance with LMP required terms and conditions - Perform induction on LMP and workers' grievance mechanism - Inspect register of workers' grievances 	<ul style="list-style-type: none"> Contractor MoA/DU MoL 	<ul style="list-style-type: none"> - LMP development at planning phase - Induction on LMP upon recruitment of workers - Monthly 	-	ESMP is part of the tender documents
	Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)	<ul style="list-style-type: none"> - <i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i> - Development of relevant project policy 	<ul style="list-style-type: none"> MoA/DU Contractor MoL 	<ul style="list-style-type: none"> - LMP development at planning phase - Inspection for mitigation measures implementation 	-	<p>SEA/SH policy is part of the LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		<p>at LMP</p> <ul style="list-style-type: none"> - Implementation of relevant mitigation measures at LMP - Inspection of relevant worker's grievance register 		<p>weekly</p> <ul style="list-style-type: none"> - Inspection for workers grievance register on monthly basis 		
Component 5	Non-recruitment of local workers	<ul style="list-style-type: none"> - To comply with Labor Law No. 8 for the year 1996 and its amendments - Develop relevant policy in LMP of the project - Include instruction at tender document to provide work opportunities for local communities as much as applicable. - Contractor to provide list of recruited workers - Site inspection for local recruitment 	<ul style="list-style-type: none"> - Contractor MoA/DU - MoL 	<ul style="list-style-type: none"> - LMP development at planning phase - Instruction at bidding phase - List of local workers prior to work start - Weekly inspection for local recruitment 	-	<p>Recruitment of local workers when possible is the contractor responsibility at tender documents</p> <p>ESMP with LMP is part of the tender documents</p>
	Child Labor:	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments & Child Rights Law No.17 of 2022</i></p> <ul style="list-style-type: none"> - Development of relevant project policy 	<ul style="list-style-type: none"> - MoA/DU - Contractor - MoL 	<ul style="list-style-type: none"> - LMP development at planning phase - Inspection for mitigation measures implementation weekly 	-	<p>Child Labor policy is part of the LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		<p>at LMP</p> <ul style="list-style-type: none"> - Implementation of relevant mitigation measures at LMP - Inspection for implementation of relevant mitigation measures 				
	Forced Labor	<p><i>To comply with Human Trafficking Prevention Law No. 9 of 2009</i></p> <ul style="list-style-type: none"> - Development of relevant project policy at LMP - Implementation of relevant mitigation measures at LMP - Inspection for implementation of relevant mitigation measures 	<p>MoA/DU Contractor</p>	<ul style="list-style-type: none"> - LMP development at planning phase - Inspection for mitigation measures implementation weekly 	-	<p>Forced Labor policy is part of the LMP at ESMP</p> <p>ESMP is part of the tender documents</p>
	Labor Disputes over Employment Terms and Conditions (including wages, overtime and social security)	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - Development of relevant project policy at LMP - Implementation of relevant mitigation measures at LMP 	<p>MoA/DU Contractor MoL</p>	<ul style="list-style-type: none"> - LMP development at planning phase - Inspection for mitigation measures implementation weekly 	-	<p>Forced Labor policy is part of the LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

		- Inspection for implementation of relevant mitigation measures				
	Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)	<p><i>To comply with Labor Law No. 8 for the year 1996 and its amendments</i></p> <ul style="list-style-type: none"> - Development of relevant project policy at LMP - Implementation of relevant mitigation measures at LMP - Inspection for relevant worker's grievance register. - 	<ul style="list-style-type: none"> - MoA/DU - Contractor - MoL 	<ul style="list-style-type: none"> - LMP development at planning phase - Inspection for mitigation measures implementation weekly - Inspection for workers grievance register on monthly basis 	-	<p>SEA/SH policy is part of the LMP at ESMP</p> <p>ESMP is part of the tender documents</p>

3. ESMP Monitoring Program

The objectives for monitoring are:

- To ensure compliance with relevant local regulations and the World Bank requirements through the proper implementation of the mitigation measures.
- To alert project authorities by providing timely information about the success or otherwise of compliance with ES requirements as outlined in this ESMP in such a manner that changes to the plan can be made in a timely manner, if required
- To make a final evaluation in order to determine whether the mitigation measures designed into the sub-components level have been effective in such a way that the environmental and social conditions have been restored, improved or if these mitigation measures need to be reviewed and improved.

Environmental and social monitoring needs to be carried out during construction and post-construction of relevant components (mainly component 5), in order to measure the effectiveness of the recommended mitigation measures.

Construction Phase: DU at MoA will assign ES Consultant to conduct environmental and social performance monitoring, Monitoring reports will be prepared and should contain information with regard to environmental and social performance and compliance against the contractual requirements, and proposed ES mitigation and control measures. . A monitoring plan outlining the frequency of reporting should be prepared by the Consultant / DU.

Monitoring of mitigation / enhancement measures as outlined at ESMP should be reflected at ES requirements of tender documents. In addition, Contractors should also consider and implement.

Table 6 below describes the monitoring activities that will be done by DU ES Consultant at construction / refurbishment sites to ensure that:

- Occupational Health and Safety Measures are in place
- All personnel at work sites shall be provided with PPEs so that injuries to personnel are avoided or minimized.
- Workforce, likely to be exposed to noise and dust levels beyond regulatory stipulated limits, shall be provided with hearing protection devices (ear muffs), dust masks and eye protective goggles on regular basis
- Work at height is performed with physical fall protection and workers equipped with adequate full body harness and fall arrester (when needed)
- HAZMAT area at site is well established according to MoEnv requirements with proper isolation, shading, and controlled access.
- Information and warning signs are installed in sufficient numbers with visible communication contacts
- Emergency preparedness measures at site are according to EMP with defined escape routes, assembly points, firefighting extinguishers and emergency contacts displayed.
- Contractor workers grievance mechanism is applied, complaints resolved and records maintained.

Post-construction Phase: ES Consultant / DU will prepare a summary report for the implementation effectiveness of all environmental and social mitigation measures and share it with MOA and the WB.

The following are some of the pertinent parameters and verifiable indicators that can be used to measure ESMP mitigation measures and performance.

- How the adoption of the ESMP mitigation measures has eliminated or reduces adverse impacts on environment workers health and safety?
- Has the project resulted in job creation especially for local labor?
- Are there any occupational accidents recorded, if yes, what are they and root causes for these accidents
- Is generated construction and hazardous waste disposed according to ESMP?
- Are periodic monitoring reports being completed?
- How many complaints/grievances have been received regarding the project and how many have been resolved in a timely manner?

The following table shows specific environmental and social indicators that need to be monitored and assessed by DU/MoA.

Table 7: Environmental and Social Monitoring Indicators

Issue / Impact	Indicator	Information Source	Responsibility
Waste Management	<ul style="list-style-type: none"> - Logs for disposed waste and hazardous waste - Evidence receipts for disposal of construction and hazardous waste - Number of fines received on waste management 	Contractor	MoA /DU ES Consultant
Employment	Number of technical and unskilled local workers hired and contract duration.	Contractor	MoA /DU ES Consultant
Social Conflicts	Number of stakeholders consulted, Number of reported public complaints received on social exclusion	Contractor MoA	MoA /DU ES Consultant
Workers Welfare and Working Conditions	Number of reported workers complaints, Number of resolved complaints,	Contractor	MoA /DU ES Consultant
Occupational Health and	Number of Lost Time Incidents (LTIs), Number of Man Hours without LTIs	Contractor	MoA /DU ES Consultant

Safety	Delivered PPE register		
Biodiversity	Reported Number of incidents hunting and killing of wildlife.	Contractor MoA	MoA /DU ES Consultant

4. Labor Management Procedure

4.1 LMP Objectives

LMP has been developed to achieve the following:

- To promote safety and health at work.
- To promote fair treatment, non-discrimination, and equal opportunity of project workers.
- To protect project workers, including vulnerable workers such as women and migrant workers, contracted workers, and primary supply workers, as appropriate.
- To prevent the use of all forms of forced labor and child labor
- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
- To provide project workers with accessible means to raise workplace concerns.

4.2 Project Workers

According to World Bank (WB) ESS2, the project workers are categorized as follows:

- 1- Direct Workers: People employed or engaged directly by the IAs to work specifically in relation to the project
- 2- Contracted Workers: People employed or engaged through third parties (contractor, sub-contractor, agents or intermediaries) to perform work related to core functions of the project that without which the project cannot continue, regardless of location
- 3- Primary Supply Workers: People employed or engaged by the IAs primary suppliers who are on an ongoing basis provide directly to the project goods or materials essential for the core functions of the project.

Sections below elaborates on the categories of workers working in relation to the project, and their estimated numbers and characteristics.

4.2.1 Direct Workers

Under this project, direct workers are staff of implementing agencies who are assigned to carry out key project functions either on full time or part time basis, and the consultants that support will support them. The IA staff consist of the following: Project Team at Delivery Unit (DU), MoA Team at different directorates involved at project implementation such as Plant Production Directorate, Extension

Services Directorate, Labs Directorate, Jordan Valley Agriculture Directorate, MoA Financial Directorate. In addition to NARC staff involved at the project implementation. The estimated number of civil servants are around 15. These workers are expected to be skilled professionals who are Jordanian citizens, of which around 30% are females. Civil servants are subject to the terms and conditions of their existing public sector contracts. This LMP and ESS2 do not apply to such workers excepting for provisions to protect the workforce and Occupational Health and Safety.

Direct Workers also include various consultants that will be hired to support project implementation or provide training. This includes Environmental and Social Specialists, and other technical specialists. These consultants are expected to be skilled professionals, male or female, Jordanian or international. The number of consultants is estimated are 5-10 consultants.

4.2.2 Contracted Workers

Throughout the project life cycle, there will be a number of contracted workers including unskilled and skilled labor by the contractors and sub-contractors during construction / refurbishment activities. 10-15 construction workers will be present at each site, and type of works do not require labor accommodation in worker camps. Contracted workers also includes workers of firms providing technical assistance under the project

Below are the general types of contracted workers expected to be engaged in the project:

- **Skilled permanent staff of the contractors (Construction Company):** The permanent technical staff of the contractors will be engaged in the project, including project managers, project engineers, HSE officer, construction foremen, and admin and finance officers.
- **Skilled workers engaged by the contractors:** Depending on the available expertise within the contractors and other factors, the contractor may engage sub-contractors for some technical work, which may include heavy machine operators for transporting construction waste, construction materials, painting works, carpentry works etc. The contractor may engage such subcontractors locally. Migrant workers can be found under this group of workers who have specific construction skills that sub-contractors usually recruit either to the lack of their skills with local labor market or due to financial reason (less wages than similar skilled local labor).
- **Unskilled workers engaged by contractors and sub-contractors:** Local unskilled labor may include Jordanians or non-Jordanians (migrants and/or refugees). Unskilled labor is usually hired on daily and short term basis.

Technical Assistant (TA) Consultancy firm): MoA may engage an international consulting firm (s) to provide technical support to MoA in projects in order build the capacity, procurement, agriculture and to supervise some specific works like installation of solar PV panels. TA will include experts in strategic planning, agriculture, procurement processes, Information Technology, emergency planning, and renewable energy. The consulting workers of this firm are considered contracted workers

4.2.3 Primary Supply Workers

The Project include purchase of equipment, programs software, lab kits, furniture, and other refurbishment materials. Where the contractor will source such materials directly from primary suppliers on an ongoing basis, the workers engaged by such primary suppliers are deemed "primary

supply workers”, as defined in ESS2. The number and type of primary suppliers will be determined at the project implementation stage. The timing of labor use of primary supply workers will cover the construction and startup stages of the project.

4.3 Roles and Responsibilities in Labor Management

The project implementation arrangements are aligned with the current institutional architecture of the agriculture sector in Jordan and will be led by the Ministry of Agriculture, supported by Delivery Unit and other institutions like NARC. The project will be overseen by a steering committee that will assist in providing strategic guidance during the implementation.

MoA, as implementing agency is accountable for environmental and social requirements, is also responsible for managing labor consistent with this LMP, national law and ESS2. Other implementing agencies and Contractors are also assigned responsibilities for managing, monitoring and reporting on labor and working conditions of their workers. Other stakeholders have responsibilities for regulating labor and working conditions

This section defines the responsibilities of each stakeholder in the project.

4.3.1 Ministry of Agriculture (MoA)

Ultimate responsible for the implementation of this LMP, although the management and monitoring of this procedure has been delegated to Delivery Unit (DU), but MoA will be responsible for coordination with other ministries when needed, report major accidents to WB within 48 hours from the date of accident

4.3.2 Delivery Unit (DU)

A Project Delivery Unit (DU) will be established to support implementation of the project. DU capacity would be strengthened with environmental and social consultant or specialist to ES capacity of the unit and to supervise and monitor the performance of the project by implementation of LMP mitigation measures. DU ES responsibility will include:

- Undertake the overall responsibility to ensure implementation of this ESMP in the project by implementing agencies.
- Engage and manage contractors/subcontractors under MoA in accordance with the LMP and the applicable Procurement Documents.
- Ensure that contractors implement labor management mitigation measures that complies with this LMP as part of Project’s ESMP (including OHS provisions)
- Monitor that contractors/subcontractors are meeting obligations towards contracted workers as included in the LMP and the applicable Procurement Documents.
- Monitor the potential risks of child labor, forced labor and serious safety issues in relation to all project’s workers including primary supply workers.
- Monitor training of relevant project workers.
- Ensure that the grievance mechanism for project workers is established and implemented and that workers are informed.
- Monitoring the implementation of the Worker Code of Conduct and any other measures to address risks of sexual exploitation and abuse (SEA)/sexual harassment (SH).

- Report to WB on labor and occupational health and safety performance on a quarterly basis.
- Report to WB on major accidents within 48 hours from the date of accident
- Lead and participate in investigations for accidents in connection with project activities implemented by MoA, and to review similar reports from contractors

4.3.3 Ministry of Labor

Enforcement of the labor laws and regulations is the responsibility of the Ministry of Labor through its departments at each governorate where the project will be executed when violations were informed or observed by the Ministry. The Ministry is responsible for random inspection of construction work sites to ensure that recruited labor are legally contracted and obtained relevant work permits. In addition to ensure that safe working conditions and required protective measures are adequately provided by the contractors.

4.3.4 Social Security Corporation (SSC)

Enforce relevant regulations related to the insurance of work labor once they are informed. .of noncompliance or violations. The SSC also participates in investigation of accidents that may occur at the project.

4.3.5 Contractors

- 1- Employ or appoint qualified HSE officer to manage OHS issues.
- 2- Contractors must ensure that recruited workers are physically and mentally fit for the jobs they have been assigned for.
- 3- Prepare and implement their labor management procedure ESMP (including OHS provisions) which will apply to the contracted workers who work on the projects. These procedures and plans will be submitted to IAs for review and approval before the contractor is allowed to mobilize to the field.
- 4- Supervise their workers and subcontractors' adherence to the LMP and ESMP.
- 5- Maintain records of recruitment and employment of contracted workers (including subcontractors) with age verification to avoid child labor.
- 6- Provide induction and training to contracted workers on LMP implementation.
- 7- Require the primary supplier to identify and address risks of child labor, forced labor and serious safety issues, and risks of equity and discrimination for primary supply workers.
- 8- Develop and implement the grievance mechanism for contracted workers, ensure that grievances received from their contracted workers resolved promptly, and reporting the status of grievances and resolutions.
- 9- Ensure that all contractor and subcontractor workers understand and sign the Code of Conduct prior to the commencement of works, take all other measures to address risks of sexual exploitation and abuse (SEA)/sexual harassment (SH) as specified in the contractor's LMP/ESMP and supervise compliance with such measures.
- 10- Report to DU on labor and occupational health and safety performance.
- 11- Report to DU on accidents within 24 hours from the date of the accident.

4.4 Project Labors management Policies

The project will apply the following labor policies and procedures to address the key labor risks identified under Chapter 2. The summary of indicative procedures to implement these polices is presented in the following table (Table 1).

4.4.1 Occupational Health and Safety (OHS)

Pursuant to the relevant provisions of the Labor Law No.8 of 1996 and other relevant regulations, World Bank ESS2, the Project's ESMP and, the contractor shall manage all construction sites in such a way that the workers and the community are properly protected against possible OHS risks. Key elements of OHS measures should include (a) identification of potential hazards to workers; (b) provision of preventive and protective measures; (c) training of workers and maintenance of training records; (d) documentation and reporting of occupational accidents and incidents; (e) emergency preparedness; and (f) remedies for occupational injuries and fatalities.

4.4.2 Child labor.

The minimum age of project workers eligible for any type of work under the project (including construction work) is set at 18. To prevent engagement of under-aged labor, all contracts shall have contractual provisions to comply with the minimum age requirements including penalties for non-compliance. The contractor is required to maintain a labor registry of all contracted workers with age verification.

If a child between the age of 16 years and 18 years old is found working on the project in a manner that is likely to be hazardous, a first step is to consider whether the hazard can be removed. If this is not possible, the child is removed in a responsible manner and, if possible, transferred to an alternative position that is not hazardous and for which a risk assessment has been undertaken, taking into account the best interest of the child. Where no such alternatives are possible, the project no longer employs or engages the child. Cases of child labor need to be reported to the DU and WB with due consideration for confidentiality and child centred approach

4.4.3 Labor Influx.

Although labor influx risk is low but to minimize the labor influx, the project will contractually require the contractor to preferentially recruit unskilled labor from the nearest local communities as much as applicable. All contractors will be required to sign a code of conduct at tender documents that they will apply preventive measures to ensure that all their recruited labor will comply with these measures. The code of conduct will include a provision to address the risk of Gender Based Violence (GBV). The code of conduct governs both on-site behavior (with colleagues) and conduct in the community. Relevant training will be provided to workers, such as induction and daily toolbox talks outlining expected conduct and local community values.

4.4.4 Labor Disputes over Terms and Conditions of Employment.

To avoid labor disputes, fair terms and conditions will be applied for project's laborers. The project will also have grievance mechanisms for all types of project workers (direct workers, contracted workers, primary supply workers and community workers) in place to promptly address their workplace grievances. Further, the project will respect the workers' right of labor unions and freedom of association, as set out in the national regulations.

4.4.5 Discrimination and Exclusion of Vulnerable Groups.

The employment of project workers under the project will be based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, terms of employment (including wages and benefits), termination and access to training. The risk of exclusion of vulnerable groups (such as women, persons with disabilities and refugees) from employment opportunities is not expected, but the Project will require the contractor to give such groups an opportunity to work when they apply for a job in the project. The contractor will be also required to comply with the national regulations on gender equality in the workplace, which will include provision of maternity leave and nursing breaks and sufficient and suitable toilet and washing facilities, separate for men and women workers.

4.4.6 Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)

The project will make all necessary measures to Prevent the likelihood SEA/SH (in all its forms) from occurring within the workplace and providing victims with all reasonable protections against SEA/SH ; and effectively respond to presenting SEA/SH cases and manage the impact on victims, and other workers.

MoA and contractors will make explicit commitment to ensure compliance and consistency with relevant laws and World Bank guidelines through outlining a standard behavior at a written code of conduct that will be followed by all project workers. The project will ensure that code of conduct is well informed to all project workers through adequate induction training.

The project will encourage workers to report related incidents through workers grievance mechanism, and will not tolerate any retaliate or take punitive employment actions against any worker for submitting a complaint pursuant to this policy or for disclosing their status as a target or victim.

4.4.7 Monitoring Reporting.

Contractors are responsible for assigning supervision teams including HSE officer to conduct self-monitoring on the performance of the project in compliance with the above policies on a daily basis. DU ES Consultant will closely monitor the contractor on labor and occupational health and safety performance on a weekly basis. In addition, monthly audits will be performed by DU ES Consultant to review contractors' documentation, reporting and site compliance with required policies procedures.

The contractor shall report to the DU on the status of implementation of the above policies and procedures on a monthly basis. DU will report to the World Bank on a quarterly basis and as part of environmental and social progress reports that will be prepared by DU.

Fatality and Major (Serious) Accidents.

In the event of an occupational fatality or serious injury, DU shall report to the World Bank within 48 hours of the date of accident, therefore, the contractor shall report such accidents to DU within 24 hours, and to inform Ministry of Labor / Social Security Corporation with such accidents according to local regulations. DU to report to the World Bank within 48 hours of the date of the accident.

Accident investigation will be performed by contractor and DU to define the root causes and corrective actions applied in response to the accident preventive measures will be proposed for implementation.

4.5 OHS and Labor Management Procedures

Based on risks and impacts identified at ESMP different OHS procedures must be developed to manage and control the identified OHS and labor risks. Table 7 below presents the indicative procedures that shall be prepared to apply the OHS and labor polices mentioned above.

Key Labor Risks	Policy to Address Risk	Procedure to Apply Policy
OHS Risks	LMP Policy 5.4 1 Occupational Health and Safety (OHS)	<ul style="list-style-type: none"> - Bidding document will include clauses that contractor must provide (a) corporate HSE policy / Project HSE policy (b) OHS management approach to eliminate and or reduce OHS risks (c) OHS staff CVs (d) Contractor previous experience in similar projects - Selection criteria for contractors to consider the following during evaluation of tender documents contractor’s OHS capacity and competency including competency of proposed OHS officer, number of recorded accidents, etc. - Contractor required to communicate tasks related risks with workers through induction and TBT - Provide workplace OHS awareness, warning and information signs - Provide appropriate PPEs to workers including mandatory PPEs (hard helmet, reflective vest, safety shoes) and job specific PPEs based on risks identified at ESMP (dust mask, ear muffs, goggles, etc.) - Provide materials for hygiene at work sites. - Provide masks and practice social distancing on work sites, and follow relevant national and international guidelines in case of infectious disease outbreaks - Conduct routine monitoring and reporting.
Child Labor	LMP Policy 5.4.2 Child labor	<ul style="list-style-type: none"> - Include minimum age in procurement documents. - Maintain labor registry of all contracted workers with age verification. - Apply remedial actions as defined at at the policy to deal with child labor incidents.
Labor Influx	LMP Policy 5.4.3 Labor Influx	<ul style="list-style-type: none"> - Require the contractor to preferentially engage skilled and unskilled local workforce from the nearest local communities as much as applicable. - Make all contracted workers aware of signed code of conduct including prevention of SEA/SH by contractor - Ensure that all contracted workers follow the rules for on-site behavior (with colleagues) and conduct in the nearby community. - Perform induction outlining expected conduct and local community values. - Introduce disciplinary measures for violations and misbehavior.
Labor Disputes	LMP Policy 5.4.4 Labor Disputes over Terms and Conditions of Employment.	<ul style="list-style-type: none"> - Provide workers with contracts with fair terms and conditions. - Have grievance mechanisms in place to promptly address workplace concerns.

Discrimination and Exclusion of Vulnerable Groups.	LMP Policy 5.4.5 Discrimination and Exclusion of Vulnerable Groups.	<ul style="list-style-type: none"> - Require the contractor to provide equal opportunity for vulnerable groups in employment. - Provide maternity leave and nursing breaks where relevant. - Require the contractor to address potential sexual exploitation or harassment in recruitment of skilled or unskilled female workers. - Require the non-discrimination and harassment and should be socialized/basis for training
Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)	LMP Policy 5.4.6 Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)	<ul style="list-style-type: none"> - Tender documents to include written commitment of bidder to comply with Project relevant mitigations and policies at ESMP - The contractor not carry out any works, including mobilization and/or pre-construction activities unless DU ES Consultant is satisfied with induction and awareness measures performed by contractor to address SEA/HS at the project. - Public consultations be held on ESMP, with relevant stake holders as described at SEP prepared for the project - The ESMP will be publicly disclosed on the MoA web sites,

Table 8: Project Policies and Indicative Procedures to Address Key Labor Risks

4.6 Age of Employment

4.6.1 Age Limitation for Hazardous Work.

The national labor legislation states that the working age for works that considered by law hazardous such as construction works that need high physical efforts, works involve use of machines that harmful to workers like grinders, cutters, lifting, and works include handling of hazardous materials. However, the regulations have conditionally allowed children of age between 16-18 years old to work at jobs that are not considered hazardous, along with application of specific working terms and conditions, such as reduced working hours, prohibition of night work shifts, probation of outdoor jobs under extreme weather conditions, etc. Similarly, ESS2 sets out further conditions on the minimum age, stating that a child over the minimum age and under the age of 18 will not be employed or engaged in connection with the Bank-financed project in a manner that is likely to hazardous or interfere with the child's education or be harmful to the child's health or physical, mental and any other relevant development. Considering these national and WB requirements, and the nature of the works under the project, the minimum age for work under the project is set at 18 years old.

4.6.2 Minimum Age for Project Workers.

Project workers are expected to be staffs of the MoA, DU, NARC and technical assistance consultants who are subject for national recruitment requirements, where these qualified personnel will not be under the age of 18 years old.

4.6.3 The Process of Age Verification.

In order to prevent engagement of under-aged labor, all contracts with work contractors shall have contractual provisions to comply with the minimum age requirements including penalties for non-compliance, and it will be well communicated to all potential stakeholders including the local community where the unskilled workforce will be sourced. The contractor is required to maintain a labor registry of all contracted workers with age information. Verification of the age shall be undertaken prior to the engagement of labor and be documented based on the workers ID or other relevant legal documents.

4.7 Labor Grievance Mechanism

Worker/labor grievances is a process to ensure that all workers on the project have access to a grievance mechanism, are informed of the mechanism when they start work and can identify how it works and who is responsible for administering it. The grievance mechanism will allow employees to address workplace disputes or concerns in a fair, easily accessible and transparent manner. Although a labor grievance mechanism must be in accordance with the Human Resources (HR) policy, the following is a standardized procedure for labor grievance applicable to the direct workers, contracted workers, primary supplier workers and community workers of the project.

4.7.1 Grievance Principles

- MoA, NARC, contractors and suppliers are committed to a transparent process for workers to express concerns and file grievances, including anonymous complaints.
- MoA, NARC, contractors and suppliers will ensure that there is no retaliation or discrimination against those who express grievances, and that grievances will be treated with confidentiality.
- MoA, NARC, contractors and suppliers management will treat the grievances seriously and take prompt and appropriate action.

- MoA, NARC, contractors and suppliers management shall ensure that the labor grievance mechanism is in line with the company HR policy.
- The worker has the right to keep the process of filing a grievance confidential and to appeal to a higher level of management if he or she is not satisfied with the initial findings.
- The Worker has the right to express his or her grievance to workers organizations to protect their rights.
- DU at MoA is responsible to monitor implementation of grievance principles and mechanism by contractor through regular check and inspection of contractors’ records
- DU has the right to randomly check and ask workers at site if they have any complaints and if the contractor implements the labor grievance mechanism to address their complaints
- The contractor is requested to maintain grievance boxes at his offices and at each sites office to receive complaints

4.7.2 Labor Grievance Process

The table below describes the steps of labor grievance process.

Steps	Grievance
<p>Step 1: Informal Discussion</p>	<p>Workers and Management are encouraged to use informal methods of resolving disagreements or disputes. If workers have a reasonable grievance or complaint regarding the workplace, working conditions or the way they are being treated at work they should, where possible, start by discussing it with their direct supervisor or manager. It may be possible to agree a solution informally between worker and manager.</p> <p>Every effort will be made by both management and workers to resolve complaints, grievances and disputes at the earliest possible opportunity and with the minimum opportunity for tension or conflict.</p>
<p>Step 2: Formal Grievance & Confidential</p>	<ul style="list-style-type: none"> • When a concern or an action has occurred, the project worker must file a written grievance to his or her direct manager within 5 working days, either at the site or at the office. • If a worker has a concern but prefers not to mention his name, then anonymous complaint can be submitted and it will be treated as an official submission where steps of grievance implementation will be performed. • The direct manager has 5 working days to respond back. If the employee/worker is not satisfied with the supervisors’ response, he/she can direct the grievance to the Human Resources (HR) manager who will record the grievance at the grievance log or delegate this to HR staff to initiate the grievance mechanism response. • The HR has 7 working days to respond back. If the worker is not satisfied with the response and wishes to appeal, he or she can direct the grievance to higher level or management within 7 working days of receiving the HR’s response. Every effort should be made to secure a resolution in the best interests of the worker(s) and the company. After the meeting senior manager will give the employee a decision in writing. • If the employee was not satisfied with the response of senior management, then he or she can approach the workers’ organization (that he or she belongs to) where applicable for further advice and assistance. • If an employee is not satisfied with the final determination of the internal grievance procedure, the employee can still hire a lawyer and resolve the issue at court.

Table 9: Labor Grievance Process**4.8 Employment Terms and Conditions**

Terms and conditions in terms of working hours and wages to be followed for the employment of workers in accordance with labor legislation of Jordan and ESS2 are described in this section. The work in the project will regularly performed during the day time (ie 08:00 am – 16:00 pm), however, upon collective labor agreement and contract conditions that will follow the conditions at terms described at this section, some deviations are possible.

The below terms and conditions are applied for all 3 types project worker, however, civil servants who work in the project, their employment terms and conditions will abide with civil service regulations that generally consistent with ESS 2 requirements.

Working hours

- Regular working hours per day are 8 excluding breaks with a maximum of 48 hours per week, with a total of 10 working hours per day including the breaks. If the working days upon the employment contract are 5 days per week, then the regular daily working hours is 9.6 hour per day without breaks and with a total of 10 working hours including breaks.
- Working hours including mandatory overtime (in the cases to avoid losses in the business such as communications with international manufacturers and supplied with time zone difference, etc.) amounts to a maximum of 10 hours per day, but not to exceed collectively 30 working days per year.
- Working hours including mutually agreed overtime amounts to maximum 11 hours per day, however, the worker has the right to not to work these overtime hours upon advance notice to the employer without being subjected to any disciplinary action by the employer.
- Line managers in the project have no limited working hours as long as that stated at their mutually agreed working agreements. If not, then terms and conditions of working hours of this project applied.

Breaks

- Workers during regular a working day are entitled to a break of maximum one (1) hour.
- The breaks are not part of the working hours and are therefore not paid.

Periods of Rest

- In the period between 16:00 hours in the evening and 08:00 hours in the morning; however, the agreed working time in the work agreement may have some deviations.
- Fridays;
- Official Holidays, including those announced by the government for specific occasion or conditions i.e. weather conditions.

Overtime and Overtime Compensation

There is overtime in the following situations:

- If the worker works during his period of rest;
- If the worker works longer than the maximum working hours per day or per week.

Compensation of Overtime is calculated based on the following:

- At regular working day, an overtime working hour is equal to 1.25 of regular working hour
- At a rest day including holidays, an overtime working hour is equal to 1.5 of regular working hour
- For a worker in part time service, overtime work only exists, if the hours worked exceed the average weekly working hours of a worker in full time service.

Payment of Wages

- Wages must be paid for the worker on monthly basis, unless its mutually agreed to be within shorter periods (weekly or biweekly), but not to exceed a calendar month.
- Part time workers must receive their wages upon mutual agreement but not to exceed a calendar month period.
- Casual or day work labor must receive their wages either by the end of the daily job he assigned for or upon mutual agreement but not to exceed a week period.
- Monthly wages to be paid for the worker during the following week from the end of the calendar month, or the end of the mutually agreed period if less than a calendar month, and contractors must not link the payment of wages with the schedule of payments received from the client (IA).
- Payment of wages must be proven either by a bank transfer receipt to the worker account, or by a payable cheque for the worker, or by a signed receivable receipt by the worker if wages are paid in cash.

4.9 Contractor Management

Selection of Contractors.

The MoA shall make reasonable efforts to ascertain that the contractor who will engage contracted workers is legitimate and reliable entities and able to comply with the relevant requirements under the LMP. Such requirements shall be included in the bidding documents. As part of the process to select the contractors who will engage contracted workers, the contractor must provide the following for DU review during tendering process:

- Business licenses, registrations, permits, and approvals
- Public records, for example, corporate registers and public documents relating to violations of applicable labor law; accident and fatality records and notifications to authorities; labor related litigations
- Documents relating to the contractor's labor management system and OHS system (e.g., HR policy, safety program); proposed ESHS personnel and their qualification
- Previous contracts with contractors and suppliers (showing inclusion of provisions and terms reflecting requirements on labor and working conditions).

Contractual Provisions and Non-Compliance Remedies.

The Project will align with the World Bank Standard Procurement requirements for Works for solicitations and contracts. That will ensure inclusion of many labor and occupational, health and safety requirements consistent with ESS2.

MoA shall incorporate the agreed labor management requirements as specified in the bidding documents into contractual agreements with the contractor, together with appropriate non-compliance remedies (such as the provision on withholding a certain percentage of payment to the contractor in case of non-compliance with relevant environmental, social, health and safety requirements; removal of personnel from the works; or lack in the OHS performance security). In the case of subcontracting, MoA will require the contractor to include equivalent requirements and non-compliance remedies in their contractual agreements with subcontractors.

LMP Performance Monitoring.

MoA / DU will be responsible for managing and monitoring the performance of the contractor in relation to the LMP. DU will ensure that the contract with the construction explicitly set out their monitoring responsibility for the contractor's performance on labor and working conditions on a daily basis. The monitoring may include, inspections, and/or spot checks of project locations or work sites and/or of labor management records and reports compiled by the contractor. Contractors' labor management records and reports that should be reviewed would typically include the following:

- Representative samples of employment contracts and signed code of conduct;
- Grievances received from the community and workers and their resolution;
- Reports relating to fatalities and incidents and implementation of corrective actions;
- Records relating to incidents of non-compliance with national Labor Code and the provisions of the LMP; and
- Records of training provided for contracted workers to explain occupational health and safety risks and preventive measures.

The Project requires that contractors monitor, keep records and report on terms and conditions related to Labor management. The contractor must provide workers with evidence of all payments made, including social security benefits, pension contributions or other entitlements regardless of the worker being engaged on a fixed term contract, full-time, part-time or temporarily. The application of this requirement will be proportionate to the activities and to the size of the contract, in a manner acceptable to the MoA and the World Bank including:

- Labor conditions: records of workers engaged under the Project, including contracts registry of induction/training of workers including Code of Conduct, hours worked, remuneration and deductions (including overtime), collective bargaining agreements.
- Safety: recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).
- Workers: number of workers, indication of origin (expatriate, local, nonlocal nationals), gender, age with evidence that no child Labor is involved, and skill level (unskilled, skilled, supervisory, professional, management).

- Training/induction: dates, number of trainees, and topics.
- Details of any security risks: details of risks the contractor may be exposed to while performing its work—the threats may come from third parties external to the project.
- Worker grievances: details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken— grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.

4.10 Primary Supply Workers

Potential risks in primary supply workers.

The construction work under the Project will require primary supplies including, construction / refurbishment materials essential for the functions of the proposed infrastructure, such as aggregates, breaks, paints, cement, Solar PV panels, etc. However, where the contractor will source (a) essential materials (b) directly from primary suppliers (c) on an ongoing basis, the workers engaged by such primary suppliers (that meet all three criteria (a) to (c) are deemed “primary supply workers”, as defined in ESS2.

To address these potential risks on primary supply workers, the following measures will be taken:

- Selection of primary suppliers:
When sourcing construction materials from primary suppliers, the contractor will require such suppliers to identify the risk of child labor/force labor and serious safety risks in producing the construction materials. Where appropriate, the contractor will be required to include specific requirements on child labor/forced labor and work safety issues in all purchase orders and contracts with primary suppliers.
- Remedial process:
If child labor/forced labor and/or serious safety incidents are identified in relation to primary supply workers under the Project, the DU ES Consultant will require the primary supplier to take appropriate steps to remedy them in accordance with Project’s age of employment requirements defined at this LMP. Such mitigation measures will be monitored periodically to ascertain their effectiveness. Where the mitigation measures are found to be ineffective, MoA / DU, within reasonable period, request the contractor to shift the project’s primary supply to other suppliers that can demonstrate that they are meeting the relevant requirements.

4.11 LMP Reporting

The monthly progress report prepared by contractors and PIUs will address the labor and working conditions commitments contained in this document, including the following for IAs and contractor activities.

5. ESMP Institutional arrangements

This section will present the proposed implementation arrangements for the ESMP based on the roles and responsibilities identified at the initial Institutional and Implementation Arrangements described in section 2.2. The project's ESMP implementation arrangements are as follows:

5.1 Ministry of Agriculture (MoA) – Delivery Unit (DU):

MoA is the overall responsible for the implementation of ESMP through establishment of Delivery Unit (DU) at the ministry which will be supported with environmental and social (ES) Consultant. DU will be responsible for the following:

- 1- Defines scope of work and competencies required to recruit ES Consultant
- 2- Define ES requirements at the tender documents for each sub- project according to the ESMP, and SEP, to insure these requirements are incorporated into tender documents.
- 3- Review the national bidding document templates and integrate the Project ESMP required mitigation measures for all activities that require implementation of these mitigation measures.
- 4- Define relevant ES clauses that need to be included in each contract for each activity along with required ES documents to be shared with the contractor such as ESMP and SEP to be adopted
- 5- Assist in tenders' evaluation for compliance with the ES requirements as per ESMP and SEP
- 6- Perform periodic spot check, weekly ES inspection and monthly audit with ES Consultant to insure implementation of required ES mitigation measures. And to verify relevant ES submitted documents and monthly ES performance reports by contractors.
- 7- Lead and participate in reported accidents investigations, especially those accidents involved injuries, Lost Time.
- 8- Investigate for workers grievances that are not resolved by the contractor either due to non-compliance of contractor in applying workers grievance mechanism, or unsatisfactory resolutions proposed by the contractor.
- 9- Notify the Bank promptly of any incident or accident relating to the project which has or is likely to have a significant adverse effect on the environment, nearby communities, the public or workers.
- 10- Preparation of Quarterly ES performance report and to be submitted to the World Bank.
- 11- To represent MoA at any ES technical discussion and communication with the World Bank.

5.2 Contractor / Operator

Contractor for activities under component 5 shall hire an HSE officer, who will be responsible of ensuring the site safety in coordination with contractor's Project Manager and must perform the following tasks under ESMP and the clauses under the bidding documents including

- 1- Perform HSE induction for all workers upon recruitment and prior starting their work

- 2- Conduct training on specific OHS activities to define the required mitigation measures for these activities, ie work at height, hazardous material safe handling, safe use of electrical equipment, etc.
- 3- Authorize permit to work prepared by contractor's engineer or foreman
- 4- Perform daily HSE inspection at site to monitor compliance with relevant mitigation measures required by ESMP of the project.
- 5- Perform inspection on tools, equipment and machineries prior use at site
- 6- Develop lists of required PPEs to be provided by the contractor at site
- 7- Immediate notification of accident event for the project manager
- 8- Prepare accidents reports to be submitted to MoA-DU
- 9- Prepare monthly report for HSE compliance at site
- 10- Maintain all records and registers related to HSE performance at site, that includes
 - a. Daily HSE inspection reports
 - b. Copy of issued work permits
 - c. Delivered PPEs register
 - d. Total Man-Hours executed at site without LTI
 - e. Registers of generated construction and hazardous waste
 - f. Waste disposal records (construction and hazardous)
 - g. Records of inductions and trainings performed for workers
 - h. Workers grievance register
 - i. Accidents notifications and reports
 - j. Monthly HSE reports

6. Capacity Building and Training

In order to ensure proper implementation and compliance with ESMP and its requirements, and based on the current ES capacity of the implementing agencies, Table 9 below represents the required capacity building needs for ESMP implementation.

DU will be responsible for the overall management of the E&S management including capacity development requirements, through assigning tasks to the DU ES Consultant and the contractor.

DU will include capacity building activities under their annual planning and budget.

Required capacity building needs for ESMP implementation

Objectives	Scope	Method	Stakeholder	Responsible	Time frame	Cost (USD)
Institutional Strengthening on project's ESMP	Hire ES Consultant	Contracting	DU	MoA	Prior procurement and tendering process	24,000
	Induction for relevant WB ESSs, WB ES policies and guidelines ESMP required mitigation measures Required organization and competencies for ESMP management	Presentation, Discussion	- DU staff, MoA – procurement Dep., and NARC procurement Dep. - Relevant local authorities (MoEnv, MoL, Municipalities)	MoA / DU	Prior procurement and tendering process	500
Introduction of Project's ESMP and its content	Induction of project's ESMP, ES risks, ES risks mitigation measures	Presentation, Working groups, Discussion	DU staff, NARC, Contractor – HSE officer	MoA / DU,	Prior to Commencement of Project's activities	500
ESMP implementation	ES performance monitoring methods, Reporting ESMP	Presentation, Working groups, Discussion	DU staff, Contractor – HSE officer	MoA / DU,	Prior to Commencement of Project's activities	500

	performance, ESMP Requirements at bidding documents					
Stakeholders Engagement	Introduction of project's SEP, SEP implementation and monitoring Introduction of GM, GM implementation and monitoring	Meeting, Presentation	DU staff, Contractor-HSE officer.	MoA / DU,	Prior to Commencement of Project's activities	500
Labor Management	Introduction of project's LMP, LMP implementation and monitoring Introduction of worker's GM,	Meeting, Presentation	DU staff, Contractor-HSE officer, Contractor HR.	MoA / DU,	Prior to Commencement of Project's activities	500
SEA/SH	All workers must be aware and understanding the requirements code of conduct as presented at ESMP	Induction presentation, Printed code of conduct material	All project workers	MoA / DU,	Prior to Commencement of Project's activities	2000

Table 10: required capacity building needs for ESMP implementation

7. ESMP Implementation Schedule and Reporting Procedure:

The timing, frequency and duration of mitigation measure should be specified in an implementation schedule, showing links with overall project implementation. Procedures to provide information on the progress and results of mitigation and monitoring measures should also be clearly specified.

7.1 ESMP Implementation Schedule

This section presents the implementation schedule of the ESMP during project execution as per Table 10 below.

ESMP Implementation Action	Implementation Schedule	Implementation Responsibility
ESMP Consultation and Disclosure	Prior project appraisal	MoA
Assignment of ES Consultant at DU	Prior procurement and tendering process	MoA
Inclusion of ESMP at tender documents	Prior to tendering process	DU- ES Consultant
ESMP capacity building and training for Project Workers	Prior to Commencement of Project's activities	MoA - DU
Application of risks relevant mitigation measures	Daily during project implementation	Contractor Supplier
Inspection for relevant mitigation measures implementation	Daily during project implementation	Contractor HSE Officer
Monitoring of ESMP implementation and ES performance	Weekly inspection and monthly audit	DU- ES Consultant

Table 11: ESMP Implementation Schedule

7.2 ESMP Reporting:

This section defines the ESMP performance reporting process and frequency in the project.

Contractor

- Daily HSE inspection report by HSE officer
- Weekly HSE compliance report by HSE officer
- Monthly HSE progress report by HSE officer to MoA – DU

MoA- DU:

- Weekly HSE inspection report by DU- ES Consultant
- Monthly HSE compliance report By DU – ES Consultant

Quarterly HSE progress report by DU – ES Consultant to the World Bank