Jordan

PROGRAM-FOR-RESULTS

Agriculture Resilience, Value Chain Development And Innovation (ARDI) Program (P167946)

Environmental and Social Systems Assessment (ESSA)

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ACRONYMS AND ABBREVIATIONS

ACC	Agriculture Credit Corporation
ARDI	Agriculture Resilience, Value Chain Development and Innovation
CBO	Community-Based Organization
CP	Core Principles
CSA	Climate-Smart Agriculture
CSO	Civil Society Organization
DLI	Disbursement-Linked Indicator
DLR	Disbursement- Linked Result
E&S	Environmental and Social
EA	Environmental Audit
EIA	Environmental Impact Assessment
ESCP	Environmental and Social Commitment Plan
ESCWA	Economic and Social Commission for Western Asia
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESSA	Environmental and Social Systems Assessment
EU	European Union
EWS	Early Warning System
FAO	The Food and Agriculture Organization of the United Nations
FFS	Farmer Field Schools
FIDIC	International Federation of Consulting Engineers
FMD	Foot and Mouth Disease
GBV	Gender-Based Violence
GoJ	Government of Jordan
GM	Grievance Mechanism
HFDJB	Hashemite Fund for the Development of the Jordan Badia
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ILO	International Labor Organization
IPF	Investment Project Financing
JAP	The National Plan for Sustainable Agriculture 2022-2025 or Jordan Agriculture-Plan
JCC	Jordanian Cooperative Corporation
JD	Jordanian Dirham
JEDCO	Jordan Enterprise Development Corporation
JSDF	Japan Social Development Fund
JVA	Jordan Valley Authority
LA	Land Acquisition
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoL	Ministry of Labor

MOPIC	Ministry of Planning and International Cooperation
MoS	Ministry of Social Development
MoTA	Ministry of Tourism and Antiquities
MoWI	Ministry of Water and Irrigation
MWI	Ministry of Water and Irrigation
NAF	National Aid Fund
NARC	National Agriculture Research Center
NGO	Non-Governmental Organization
OHS	Occupational Health and Safety
OP	Operational Policy
OPIC	Overseas Private Investment Corporation
PAD	Project Appraisal Document
PAP	Program Action Plan
PDO	Program Development Objectives
PEIA	Public Expenditure and Institutional Assessment
PforR	Program for Results
PPE	Personnel Protective Equipment
RA	Results Area
REL	Real Estate Law
RSCN	Royal Society for Conservation of Nature
RWH	Rainwater Harvesting
SEA	Sexual Exploitation and Abuse
SESA	Strategic Environmental and Social Assessment
SH	Sexual Harassment
SME	Small and Medium Enterprises
SOP	Standard Operating Procedures
SRA	Sub Results Area
TOR	Terms of Reference
TVSDC	Technical and Vocational Skills Development Commission
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development.
WAJ	Water Authority of Jordan
WB	World Bank
WFP	World Food Program

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EXECUTIVE SUMMARY

The proposed Agriculture Resilience, Value Chain Development and Innovation (ARDI) Program (P167946) is being developed by the Government of Jordan with support from the World Bank. The program objective is to strengthen resilience to water stress by farm households and increase competitiveness of selected agri-food value chains. This Environmental and Social Systems Assessment of the Program should be read in conjunction with the Program's Project Appraisal Document (PAD) to provide full details of the Program Design.

Purpose and Scope of the ESSA

This Environmental and Social Systems Assessment (ESSA) has been prepared by the World Bank according to the requirements of the Bank's Policy for PforR financing for adequately managing the environmental and social effects of the Program. The ESSA assesses the potential Environmental and Social (E&S) effects of the PforR, including direct, indirect, induced, and cumulative effects as relevant. It also assesses the Borrower's capacity (legal framework, regulatory authority, organizational capacity, and performance) to manage those effects in line with the core principles of the World Bank policy for PforR and identifies measures to enhance both the environmental and social (E&S) management systems and the E&S outcomes during Program implementation. Program activities and the expenditure framework were screened against exclusion criteria including large scale land use conversion; child and forced labor; significant expansions of industrial facilities; large dams; and any other high-risk activity. The findings and recommendations of the ESSA were subsequently factored into the operations overall Integrated Risk Assessment, Program Appraisal Document (PAD), and PAP. The findings, conclusions and opinions expressed in the ESSA document are those of the World Bank.

Methodology

The ESSA was prepared using qualitative methods to collect relevant information including collection and review of documents, conducting meetings and interviews, and conducting site visits to interact with local authorities, farmers' cooperatives, and private sector. ESSA team also has visited several sites including RWH project of Hafir, and other farms east of Amman. The ESSA preparation was also informed by consultations with The Bank and MOA jointly conducted consultations on the draft findings of the ESSA with stakeholders ESSA in May 2022.

Findings of the assessment have informed the program design and activities that may be supported under the PforR and the formulation of E&S related actions of the PAP with key measures to improve environmental and social management outcomes of the Program. The World Bank team has assessed to what degree the PforR Program Systems address the core environmental and social principles.

Consultation and Disclosure

The preparation of the ESSA included stakeholder mapping of consultations and inputs from implementing agencies and key stakeholders relevant to the program including governmental institutions, farmers' organizations, civil society organizations, women's organizations, and international donor agencies supporting the agriculture sector. The Bank and MOA conducted consultations with stakeholders on the Draft ESSA and findings in May 2022. The outcomes of consultation have been considered in the assessment process and relevant significant concerns have taken in to account in the ESSA and recommendations. The final ESSA will be disclosed on the Bank and MOA websites incorporating stakeholders' feedback, prior to appraisal.

Program description

The overall strategic relevance and technical soundness of the Program is predicated on JAP's recognition of the most significant strategic challenges Jordan's Agriculture sector is facing and the identification of a comprehensive set of costed interventions across public, private sectors and international partners with the potential to lay the foundations to significantly shift the sector's performance.

Climate resilience in the context of this Program is defined as the ability of (i) farming households to respond to climatic changes and weather-related shocks and stresses and thrive despite the impacts of those shocks and stresses, and (ii) agricultural services to adapt to changing farmer and agribusiness needs in the context of increasing water scarcity For improving farm household resilience to increasing water scarcity, the Program will (i) develop better adaptation strategies that are based on rain-water harvesting technologies, and (ii) directly promote the quantity and seasonal reliability of water available to farming households for production purposes. The latter will be through financing the installation and use of water harvesting technologies at landscape and farm-level—dams and ponds, and tanks and cisterns, respectively—based on a rigorous watershed-level rainwater harvesting strategy that assesses cumulative impacts on water balance to identify suitable sites and densities. Resilience of farm households, of which a significant share are refugees, will be also promoted by strengthening the adaptive capacity in choosing and applying on-farm technologies that enable them to move towards more water saving production practices and to effectively participate in climate smart agro-food value chains.

The program Result Areas are 2 as follows: Results Area 1 – Climate Resilience and Sustainability; Results Area 1's objective is to strengthen the resilience of the agricultural production system to climate change and to shift the sector towards a more sustainable growth path. This Result area has several sub areas that include:

- Sub Result Area 1.1 – Scaling Up Sustainable Rainwater Harvesting (RWH)
- Sub Result Area Sub-Results Area 1.2: Building Institutional Adaptive Capacity for Innovation

Results Area 2 – Competitiveness and Export, this area aims to contribute to improved competitiveness of the agri-food sector by strengthening the enabling environment for

agribusiness and making the sector more attractive for investment. This Result Area has the following Sub Areas:

- Sub Results Area 2.1: Enabling Services for Value Chain Development and Export Promotion
- Sub Results Area 2.2: Matching skills supply with demand in agri-food sector

Disbursement-Linked Indicators (DLIs). The program is built around five DLIs, one per Sub-Results Area and cross-cutting DLI covering the broader enabling environment for Program delivery. Table below summarizes the list of the DLIs:

Sub-Results Area (SRA)	Disbursement-Linked Indicator (DLI)	DLI amount (US$ million)	Description
Sub-Results Area 1.1: Scaling Up Sustainable Rainwater Harvesting for Agriculture	DLI1: Adoption of sustainable rainwater harvesting practices	50	Measures expansion of the rainwater harvesting capacity for use in rainfed agriculture and pastoral livestock systems at both farm and landscape (Badia) level to boost resilience to climate change
Sub-Results Area 1.2: Performance of agriculture extension services	DLI2: Innovation and improved performance of crop extension and animal health services	29	Measures performance upgrades in the MoA's advisory support functions for crop and livestock farmers, including the deployment of digital extension tools
Sub-Results Area 2.1: Enabling services for value chain development and export promotion	DLI3: Improved public service delivery for value chain development and export promotion	23	Measures improvements to the enabling environment for private sector-led value chain development and export, including financing focused on stimulating investments in water productivity technologies to enhance sustainable competitiveness.
Sub-Results Area 2.2: Matching skills supply with demand in agri-food sector	DLI4: On and off farm employment skills improved including women and refugees	14	Measures skill development of youth, women and refugees and their successful employment on the agri-food labor market
	DLI5: MoA Delivery Capacity Secured	5	DLI5 ensures that GoJ allocates the required resources for the transformation of the sector.
TOTAL		121	

The implementing agencies of the program are listed at table below:

Result Area	Results	Responsible Implementing Agency	Directorate(s)	Partnering institutions
RA 1.1	Rainwater Harvesting	MoA	Water Harvesting Directorate, Projects Management Directorate, Pastures Directorate Lands and Irrigation Directorate	MoWI, JVA, MoE
RA 1.2	Extension System Performance Veterinary System	MoA	Directorate of Training and Awareness of Farmers and NARC	NARC, OIE

Result Area	Results	Responsible Implementing Agency	Directorate(s)	Partnering institutions
	Performance Digital tools, including early warning system developed, e.g., frost alert Performance of nurseries improved	MoA NARC	Veterinary Directorate Plant Production Directorate, Olives Unit	 MoA, Agriculture Risk Fund, Ag tech ecosystem Private sector
RA 2.1	Water use efficiency financing instrument Traceability System development Public services for value chain development SPS and seed certifications	ACC MoA MoA MoA MoA, NARC	Loans department Quality and Tracking Directorate Marketing Directorate Prevention and Plant Protection Directorate	MoWI Customs JFDA Ministry of Commerce NARC, JEDCO, MOPIC JSDF, JSMO
RA 2.2	Capacity Development in the Agrifood Sector	MoA	Technical Committee with the participation of relevant Directorates	TVSDC, Farmer and private sector associations, civil society;

Environmental and Social Screening

Considering both benefits and opportunities, as well as potential adverse negative risks and impacts, the Program risk is rated Substantial for both environmental and social effects. The Program's activities have been screened for environmental and social effects. The benefits of Result Area 1 to scale up Climate Smart Water Use for agriculture primarily relate to reduced use of scarce groundwater resources through increased number of Rainwater Harvesting structures that include water catchment basins with earthen walls in more arid areas (hafirs), and household level cisterns for home gardens in other areas. The hafir structures may use natural geological features as partial enclosure of the basin (referred to as earthen dams) or may use structural walls, though large dams will be excluded under the Program. These activities will benefit the livelihoods of livestock owners, farmers associations, and households since the cost of treated water sources and groundwater for crops and livestock is high. Hafirs also provide roosting areas for migratory birds with potential for eco-tourism and can support fish. These effects can be indirectly realized and optimized through development of a national strategy for RWH and Badia Restoration, as well as directly through constructing RWH structures under Sub-Result Area 1.1 by the MoA, and grants from ACC for existing farm-level operations including conversion to crops with stronger water sustainability profiles, aquaponics, hydroponics, connections to treated wastewater sources, and advanced smart irrigation systems (under Sub-Results Area 2.1). The Program also offers opportunities for other positive effects including: (i) extension and veterinary services under sub-result area 1.2 are expected to: a) promote integrated pest

management practices resulting in positive impacts on valued environmental components including soil, water and living organisms through efficient use of pesticides and agricultural inputs and efficient use of water and energy resources, b) improve farmer livelihoods and reduce animal losses, and c) potential entry point to improve environmental, worker health and safety and labor management practices (ii) NARC's development of software applications and early weather warning systems (Sub-Result Area 1.2), (iii) connecting farmers to export markets (Result Area 2) will also positively affect farmers' resilience and livelihoods, and (iv) positive livelihood impacts for women, youth and refugees from job-matching and training in the agricultural sector under Sub-Result Area 2.2 as well as access to water-smart grants from ACC under -Result Area 1.

The Program will also result in negative environmental and social effects, if not properly managed. National-level analysis, mapping and planning for rainwater harvesting might result in negative effects on downstream users, if no strategic environmental and social impact assessment is conducted to align with other strategies. At a national scale, hafirs and earthen dams can cause habitat fragmentation and introduce nonnative species through cultivation of fodder crops. If not well sited, hafirs and earthen dams may impact semi-nomadic Bedouin groups and their traditional land use patterns or may flood cultivated lands of small existing informal users. Increases in availability of water, may also lead to unsustainable use of the collected water for irrigation, if not properly monitored and managed. There is also a risk of elite capture by larger livestock herders, if communities, and small-scale herders are not adequately represented and consulted on site selection, and sites monitored. Construction of *hafirs*/earthen dams and other civil works under the Program, e.g., household RWH cisterns and laboratories, and water-smart equipment installations such as hydroponics from ACC grants might increase water and energy use, pose risks for workers' health and safety, and generate dust or noise emissions and waste during construction. During operations, hafirs pose public health and safety risks from drowning, and require structural maintenance. The ESSA notes that supporting water smart-technologies and rainwater harvesting structures might cause agriculture intensification/expansion. Program activities are also expected to result in increased use of fertilizers and pesticides which would eventually lead to generation of hazardous wastes from on-farm operations including pesticides, fertilizers, and wastewater from agricultural operations. Other types of wastes which might be generated by the implementation of Program activities include biomedical waste (veterinary services include biomedical waste.). Finally, the Program takes place within the context of the agriculture sector with significant risks related to decent work conditions, child and contracting labor (including potential forced labor), and occupational health and safety for agricultural workers. The Program is not expected to require land acquisition as MoA owns extensive areas of rangeland, forestry, and treasury lands. Household RWH cisterns and supported activities through ACC grants will take place on existing private lands.

Exclusions

The ESSA includes a list of the interventions which are excluded from financing. This Program is not expected to finance large rainwater harvesting infrastructure, earthen dams or hafirs which have a dam wall of 10 meters or higher. The Program will exclude financing large dams as defined by OP 4.37; as well as small dams which might cause significant impacts on sensitive receptors such as ecological habitats.

Recommendations of the ESSA

Assessment of the environmental and social management systems and the capacity of the implementing agencies along with evaluating existing arrangements and performance has resulted in several recommendations that need to be addressed prior and during the implementation of the proposed program.

The proposed Program can be used strategically to strengthen MOA environmental and social management system by reinforcing the human, financial and logistical capacities to promote good environmental and social practices and monitor for compliance. Beyond limitations in human resources, the implementing agencies lack procedures for environmental and social screening, assessment, and management of investments. In this context, the ESSA recommends developing site level environmental and social screening methodology and Environmental and Social Health and Safety (ESHS) monitoring protocol for RWH structures. Similarly, the ESSA recommends ACC to develop formalized procedure for environmental and social screening of loan applicants; enhance environmental and social specifications within grant agreements (including adherence to appropriate technologies when using treated wastewater for irrigation); and assigns, trains environmental and social focal point to monitor ESHS performance. Furthermore, the Program will support incorporation of strategic environmental and social assessment aspects in the RWH Operational Framework at a national/regional scale, including the preparation of stakeholder engagement plan.

To improve implementation capacity, the program will support training MOA technical specialists and extension agents in several topics, including biological control, child labor, gender, Occupational Health and Safety (OHS) and other topics on labor and working conditions. Additionally, the Delivery Unit -which will be entrusted for the implementation of the IPF- will include one Environmental Health and Safety Specialist and one Social Inclusion Specialist. In implementing the intervention for 'Matching skills supply with demand in agri-food sector' the ESSA recommends conducting Training Needs Assessment and Outreach Plan for women, refugees, and youth, disclose clear eligibility criteria and include ESHS topics and accessibility to GM.

To enhance adequate management pesticides of agriculture wastes, the ESSA recommends a strategic dialogue between MOA and Ministry of Environment on developing mechanism for tracking, collection, and efficient disposal of empty pesticide containers. Moreover, MOA is recommended to develop a plan to manage agricultural waste such as manure and wastewater of slaughterhouses. Finally, the ESSA recommends that MoA develops and implements regular monitoring programs to verify if farmers adhere to requirements of pesticide dosage and preharvest interval.

The environmental and social risks of the Technical Assistance activities under the IPF component are rated Low. There are no physical works under this component. Technical Assistance will support an implementation unit (Delivery Unit) at the MoA, as well as 'just-in-time' technical studies on as needed basis that have not been identified at this time. An Environmental and Social Commitment Plan (ESCP), proportionate to the risks and consistent with World Bank Environmental and Social Framework (ESF), has been prepared

that includes environmental and social staffing requirements, reporting, stakeholder engagement and labor management procedures. The ESCP was disclosed before appraisal.
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Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program Grievance Mechanism (GM) or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit. For information on how to submit complaints to the World Bank Inspection Panel, please visit http://www.inspectionpanel.org.

Detailed recommendations linked to SRAs and DLIs are provided in the table below:

Sub-Results Area (SRA)	**Disbursement-Linked Indicator (DLI)**	**Verification Protocol** /DLI Definitions	**Program Action Plan**
Sub-Results Area 1.1: Scaling up Climate Smart Water use in Agriculture	DLI1: 1. Adoption of sustainable rainwater harvesting practices	DLI 1.1 The National Agricultural RWH Plan will comprise a cumulative and strategic environmental and social assessment (SESA) on the national agricultural RWH plan, that has been consulted and disclosed and a Stakeholder Engagement Plan (SEP);. DLI 1.1 Evidence that the National Agricultural Plan has a (i) a dedicated section explaining how the findings of the SESA have been incorporated in particular mapping of potential future sites (ii) include a Stakeholder Engagement Plan (iii) discloses targeting criteria and processes for eligibility. DLI 1.3 Disbursement against aggregate storage capacity includes requisite E&S screening conducted, and evidence of approvals from MOE, as appropriate.	MOA to develop E&S screening procedures for site selection and design of individual RWH sites developed including avoiding and minimizing and mitigating land-related impacts and applying the exclusion criteria. MOA to develop ESHS Monitoring Protocol developed encompassing (i) construction and (ii) operations phase and covering environmental aspects; sustainable use of collected water; public and worker health and safety, elite capture, and functioning of site level GRM. MOA to develop and incorporate worker and community health and safety technical specifications to be incorporated into FIDIC standard procurement document for RWH.
Sub-Results	DLI2: Innovation and improved	DLI 2.2 Extension agent training plan includes modules on the following	

Area 1.2: Performance of agriculture extension services	performance of crop extension and animal health services	topics: environment; child labor; gender; OHS and biological control provided by technical experts. Actual training of Master Trainers and farmers on above subjects, including a dedicated module on OHS delivered by qualified professional.	
Sub-Results Area 2.1: Improved integration of agri-food value chains and export	DLI3: Improved public service delivery for value chain development and export promotion		ACC to develop formalized procedure for E&S screening of loan applicants; enhance E&S specifications within grant agreements (including adherence to appropriate technologies treated wastewater use) and safe working conditions and prohibiting child labor;; and assigns, trains E&S focal point to monitor ESHS performance.
Sub-Results Area 2.2: Matching skills supply with demand in agri-food sector	DLI4: On and off farm employment skills improved including women and refugees	Conduct Training Needs Assessment and Outreach Plan for women, refugees and youth, disclose clear eligibility criteria and include ESHS topics and accessibility to GRM	MOA to improve GRM [improvements to be specified in ESSA]
	DLI5: MoA Delivery Capacity Secured		
Other: Labor and Working Conditions including Child Labor			MOA to develop a Child Labor Action Plan with involvement of CSOs and Ministry of Labor, supported with technical assistance from the World Bank, and implement the plan thereafter.
Other: Agricultural Wastes and Pesticide Management			Strategic dialogue between MOA and MOEnv on developing mechanism for tracking, collection and efficient disposal of empty pesticide containers MOA to develop a plan to manage agricultural waste such as manure and wastewater of slaughterhouses MoA develops and implements regular monitoring programs to verify if farmers adhere to requirements of pesticide dosage

		and preharvest interval.
Technical Assistance (DU unit)		Enhance MOA capacity with one Full-time Environmental Health and Safety Specialist and One Full-time Social Inclusion Specialist. Capacity and resourcing will be reviewed annually.

I. CHAPTER I – INTRODUCTION

The proposed Agriculture Resilience, Value chain Development and Innovation (ARDI) Program (P167946) is developed by the Government of Jordan with support from the World Bank. The program objective is to strengthen resilience to water stress by farm households and increase competitiveness of selected agri-food value chains. This Environmental and Social Systems Assessment of the Program should be read in conjunction with the Program's Project Appraisal Document (PAD) to provide full details of the Program Design.

a. Country Context

Jordan's economy showed a healthy recovery following a moderate contraction of 1.6 percent in 2020, but the war in Ukraine and related commodity prices increases including food are likely to have negative impacts. Many sub-sectors remain below their pre-pandemic level and unemployment rates remain high. Jordan's real gross domestic product (GDP) registered a solid 3.2 percent year-on-year rebound in Q2 of 2021, then slowed down to 2.6 percent in Q3 of 2021. Jordan is one of the most import dependent countries for covering its national grain consumption needs and recent food price records will worsen the balance of payments. The COVID-19 pandemic has increased unemployment from 19 to 23.3 percent , with youth and female unemployment at 48.5 and 30.8 percent respectively. These heightened levels reflect structural issues pertaining to the labor market, including large gender gaps. The working-age population is expected to increase from 4.4 million in 2020 to 6 million in 2030 (NES 2011–2020). Jordan urgently needs to create broad-based and inclusive job opportunities.

As a result of slow economic growth and lack of inclusive job creation, progress on poverty reduction has been stagnant. Even before the COVID-19 pandemic, recent progress in poverty reduction was limited. The national poverty rate for Jordan was estimated at 15.7 percent in 2017–2018 (MOSD, MOPIC, UNICEF 2019).[1] In addition, many households live near the poverty line and small shocks to income make many of them vulnerable to falling below it. Refugees and their host communities are among the most vulnerable groups.

Jordan ranks among the countries with the lowest rates of women's labor force participation globally.[2] The women's labor force participation rate is 14.6 percent compared to about 63.9 percent for men. Jordan ranks among the countries with the lowest participation rates for women in the world, only followed by the war-torn Syrian Arab Republic and the Republic of Yemen.[3] Participation is particularly low for less-educated women; only 8.2 percent of women with less than secondary education participates in the formal labor market.[4] Young women between the ages of 15 and 24 have a high

[1] Based on the most recent national socio-economic household survey (HEIS 2017/18) conducted by the GOJ.
[2] Data for this paragraph was extracted from https://databank.worldbank.org/source/world-development-indicators
[3] World Bank 2020. World Bank, 2020, State of the Mashreq Women. http://pubdocs.worldbank.org/en/868581592904029814/State-of-the-Mashreq-Women.pdf
[4] World Bank 2020. World Bank, 2020, State of the Mashreq Women. http://pubdocs.worldbank.org/en/868581592904029814/State-of-the-Mashreq-Women.pdf

unemployment rate of 50.7 percent, compared to 34.3 percent for young men. Despite the country's relatively high ranking on the Human Development Index—102 out of 189 as of 2020—gender gaps in economic participation and empowerment persist due to a combination of legal, structural, and institutional barriers, combined with widespread expectations on women's traditional role in the household.[5]

Jordan is characterized by a rural-urban economic divide. Average household incomes in urban areas are 20 percent higher than average incomes for rural households. Over 60 percent of rural workers are informal, compared to under half of urban workers. Rural households headed by women tend to be the poorest, with large gender gaps in the ownership of assets such as land, i.e., 68 percent for male-headed versus 44 percent for women-headed rural households. While the majority of Jordan's population is concentrated in and around cities, the rural economy serves as a major source of food security and livelihoods for the entire country.

b. Purpose and Scope of the ESSA

This Environmental and Social Systems Assessment (ESSA) has been prepared by the World Bank according to the requirements of the Bank's Policy for PforR financing for adequately managing the environmental and social effects of the Program. The ESSA aims to assess at the Program level, the potential Environmental and Social (E&S) effects of the PforR (including direct, indirect, induced, and cumulative effects as relevant); the Borrower's capacity (legal framework, regulatory authority, organizational capacity, and performance) to manage those effects; and the determination if any measures would be required to strengthen them. The specific objectives are as follows:

- Identify potential environmental and social benefits, risks, and impacts applicable to the Program activities.
- Assess the borrower's environmental and social management systems for managing the identified E&S effects relevant to these activities, including reviewing the policy and legal framework and the performance track record.
- Assess the extent to which the Borrower's environmental and social management systems are consistent with the Bank's core environmental and social principles spelled out in Bank policy and associated guidance materials (refer to Section 1.2 for further elaboration).
- Based on the identified gaps, recommend, and formulate measures for inclusion in the Disbursement Linked Indicators (DLIs), if any, and the Program Action Plan (PAP) to enhance both the E&S management systems and the E&S outcomes during implementation.
- Describe the consultation process for the ESSA, and for the preparation and implementation of the Program.

The findings and recommendations of the ESSA are subsequently factored into the operation's overall Integrated Risk Assessment, Program Appraisal Document (PAD), and

[5]The 2020 Human Development Report, 2020. UNDP. http://hdr.undp.org/sites/default/files/hdr2020.pdf

PAP, which is used as an input for the decision-making by the World Bank regarding the Program activities that will be supported under the proposed PforR.

The findings, conclusions and opinions expressed in the ESSA document are those of the World Bank. Recommendations contained in the analysis were discussed with the Hashemite Kingdom of Jordan counterparts. Recommendations from the Consultations and additional pre-appraisal discussions were integrated and reflected into this document.

c. Methodology

This ESSA report was prepared by the World Bank staff and consultants drawing upon the reviews of existing Program materials, relevant technical reports and studies, interviews with implementing agencies (MoA, NARC, and ACC) relevant staff, as well discussions with the relevant governmental institutions. The World Bank team also conducted a site visit for two farms to witness the existing practices of the reuse of treated wastewater in irrigation of livestock fodder (Photos 1a–c). In addition, a site visit was conducted to a current household rainwater harvesting that supported by the MoA (Photos 2a–c). Another site visit was conducted to a rainwater harvesting Hafir made by the MoA under the Badia Restoration Program. These site visits aimed to evaluate the environmental, social, health and safety system performance and effectiveness of measures applied.

Photos 1a–c. 1a: Al Kharranah hafir; 1b: The reuse of treated wastewater in the irrigation of livestock fodder; 1c: A household water harvesting cistern

Photos 2a–c. 2a: Al Kharranah hafir location; 2b: A household water harvesting well; 2c: The reuse of treated wastewater in the irrigation of livestock fodder

Findings of the assessment were used in the decision-making process by the World Bank regarding the Program activities that will be supported under the PforR and at a later stage the formulation of E&S related actions of the PAP with key measures to improve environmental and social management outcomes of the Program. Further consultation was performed with a wider spectrum of stakeholders to present the Program and the findings of the ESSA in order to capture a national perspective, interest, and concerns by implementing the proposed program, and to update PAP. The findings, conclusions and opinions expressed in the ESSA document are those of the World Bank. Recommendations contained in the analysis were discussed with the counterparts in Hashemite Kingdom of Jordan. Recommendations from the consultations and additional discussions were integrated and reflected into this document. The World Bank team has assessed to what degree the PforR Program Systems address the following core environmental and social principles:

1. Core Principle (CP) 1: Promote environmental and social sustainability in the PforR Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the PforR Program's environmental and social impacts.
2. Core Principle (CP) 2: Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the PforR.
3. Core Principle (CP) 3: Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the PforR Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the PforR Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.
4. Core Principle (CP) 4: Manage land acquisition, if any, and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards.
5. Core Principle (CP) 5: Give due consideration to the cultural appropriateness of, and equitable access to, PforR Program benefits, and to the needs or concerns of vulnerable groups.
6. Core Principle (CP) 6: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

The assessment is undertaken by the World Bank and its consultants using the following systematic, qualitative, methods.

1.14 Document Review

The ESSA Report is based, in part, on information obtained from such sources as data provided by the implementing agencies, published studies; media reports; web-based information; assessments carried out in the context of other Bank-supported activities, e.g., other operations, country studies, technical assistance; assessments undertaken by other development agencies associated with the Program; or other relevant national, regional, or sectoral assessments or analyses. Annex 1 lists the information sources used in this ESSA.

1.15 Stakeholder Mapping and Consultation During ESSA Preparation

The ESSA was prepared during March to April 2022 after re-opening all sectors activities in Jordan that were closed during COVID-19 pandemic restrictions; therefore, face-to-face meetings with small groups were employed to consult a range of stakeholders working and involved in the agricultural sector of Jordan, and engaged in activities relevant to the Program. Stakeholder identification and mapping informed by consultations is shown in Table 1. More detailed meeting minutes of consultations are provided in Annex 2. The outcomes of consultation have been considered in the assessment process and relevant significant concerns have been taken in to account in the ESSA and recommendations.

All implementing agencies have been consulted in preparing the ESSA. Consultations were conducted with the following departments at the MoA as the major implementing agency: Rural Development and Woman Empowerment Directorate, Land and Irrigation Directorate, Plant Production Directorate, Water Harvesting Directorate, Plant Protection Directorate, Projects Management Directorate, Strategic Planning and Institutional Development Directorate, Extension Directorate, Agricultural Possessions Directorate, and Internal Monitoring Division. In addition, the ESSA team met with NARC and ACC as implementing agencies of the program. The purpose of these consultations and discussions with the MoA, NARC and ACC were to obtain information about the applied environmental, social and health and safety policies, plans and procedures of these entities and to assess their environmental and social capacity and management systems. Discussions covered environmental, social, health and safety, and stakeholder engagement and disclosure practices and handling of grievance and complaints.

In addition, a meeting was held with the Ministry of Environment to understand the environmental regulatory framework under which implementing agencies operate. This meeting was held with the Licensing Directorate – EIA Division, Monitoring and Control Directorate, Inspection Directorate, and Hazardous Waste Directorate. Key issues that were discussed included: EIA requirements for MoA projects especially those related to earthen dams and hafirs under the Badia restoration program; reuse of treated wastewater in irrigating livestock fodder crops; and pesticides handling and disposal as hazardous materials. Regarding the latter, the MoE stressed the importance of creating proper disposal sites for hazardous agricultural wastes such as wastewater from olive oil pressing. MOA's responsibilities to provide hazardous waste facilities for such waste are set out in the regulatory framework.

During ESSA preparation, consultations with groups representing beneficiaries and vulnerable groups were conducted. The purpose of these consultations was for stakeholders to share experience working in the agriculture sector, including challenges and opportunities for enhancing the environmental and social aspects.

A consultation was conducted with private sector associations namely, the General Farmers Union, Olive Oil Press Owners Association, along with some large farmers who are mainly cultivating olive were consulted on the potential environmental and social risks and benefits of the program. This meeting was also attended by OHS expert from the private sector who was involved at OHS matters and risk management in the agriculture sector. Several key

issues were discussed in relation with the program such as the importance of supporting farmers' ability to have sustained livelihoods; the impact of water scarcity and climate change on farmers livelihoods; deployment of new technologies at agri-business; role of extension services and impacts of the Farmer Field School (FFS) program; management and handling of pesticides, and farmers lack of funds to provide adequate workers labor conditions and social security coverage.

A women's focus group was also organized in Amman to present the new PforR and validate the environmental and social risks and impacts of the program. The focus group brought together several local women organizations active in the agriculture sector. The session was facilitated by the World Bank and the Ministry of Agriculture (MoA). Interventions from NGOs centered around the main challenges facing women involved in the Jordanian agriculture sector such as working conditions, training needs, health and safety, communication, and outreach strategies, and the accessibility of the GM.

The ESSA team also consulted with national and international donor agencies namely, HFDJB, USAID, and WFP about their experience working with implementing agencies if any, and their environmental and social performance. National and international donors emphasized on the cross-cutting issues between the proposed program activities and their involvement in supporting the agriculture sector and the development at Jordan Badia. Key issues of concern were the need for design of sustainable programs that last beyond the financed period of the project, in addition to the importance of early engagement of farmers and communities at the project planning and execution. While some donors have recommended to adopt the complementary approach to build on what has been achieved in the sector, and not to repeat some implemented programs that end with utilization of the allocated fund. The need for building the capacity of the implementing agencies, especially that of the MoA was strongly addressed by the international donors.

A multi-stakeholder workshop to consult on the draft ESSA and its findings was organized on May 9, 2022, in Amman, by the World Bank environmental and social team and the Ministry of Agriculture (MoA). It was attended by a group of diverse stakeholders from across Jordan in person and virtually. The workshop participants included government institutions, civil society, women agricultural associations, private sector, development partners, and representatives of nongovernment organizations. Notes from the workshop and list of participants are found in Annex 2. The ESSA will be disclosed by the Bank prior to appraisal. The ESSA will be translated into Arabic and will be disclosed in-country and on the World Bank website in both languages.

Table 1. Program stakeholders

Group/Entity	Internal/External	Role in Project	Interest in Project/E&S Issues
Ministry of Agriculture (MoA)			
- Water Harvesting Directorate - Projects Management Directorate - Pastures Directorate – - Lands and Irrigation Directorate - Directorate of Training and Awareness of Farmers - Veterinary Directorate - Plant Production Directorate - Olives Unit - Quality and Tracking Directorate - Prevention and Plant Health Directorate	Internal	Implementation/ regulatory	**Interest:** The listed directorates will be involved in implementing various activities under the program: • Expansion of rainwater harvesting structures • Improvement of veterinary system performance • Improvement of nurseries' performance • Development of traceability system • Improvement of seed system performance • Development of public services for value chain • Development of capacity in the agri-food sector • **E&S Issues:** Pesticide management • Productivity/efficiency in agriculture Existing E&S management capacity • Health and safety management • Engaging a wide range of stakeholders• Eligibility and selection criteria for program benefits • Inclusion/Empowerment schemes for rural women
Agricultural Credit Corporation (ACC)			
- Loans Department - - Projects Management Directorate	Internal	Implementation	**Interest:** • Water savings investments • Development of public services for value chain **Issues or E&S concerns:** - Compliance with environmental regulations - Supporting women in agriculture - Supporting water efficiency and mitigating climate change
National Agriculture Research Center (NARC)			
- Environment and Climate Change	Internal/partner	Implementation/pa	**Interest:**

Group/Entity	Internal/External	Role in Project	Interest in Project/E&S Issues
Research Directorate - Others	institution	rtner institution	- Performance of extension system - Development of public services for value chain development **E&S Issues** - E&S and health and safety within extension services to farmers
Ministry of Environment (MoE.)			
- National Committee for Environmental Impact Assessment (EIA) - Environmental Impact Assessment (EIA) Directorate - Environmental Monitoring and Assessment Directorate - Waste and Hazardous Materials Directorate - Inspection and Environmental Monitoring Directorate	External/ Partner institution	Regulatory	**Interest/Issues:** - Regulatory approval of rainwater harvesting interventions (earthen dams and Hafirs) - Disposal of agricultural waste including hazardous wastes and agricultural wastewater discharges (- Strategic environmental assessment
Ministry of Water and Irrigation (MWI)/ Water Authority of Jordan (WAJ)/ Water Harvesting Directorate at the Jordan Valley Authority (JVA)			
- Operation and Maintenance Department of the JVA (North, Middle, and South) - Reuse of Treated Wastewater in Agriculture (WAJ)	External/ partner institution	Regulatory	Interest: - Conducting studies related to selected sites for RWH structures (earthen dams and Hafirs) - Approving site selection for earthen dams and Hafirs **E&S Issues:** - E&S requirements for RWH interventions
Ministry of Labor (MoL)			
- Inspection Directorate (central and in governorates) - Foreign Labor Directorate	External	Regulatory Enforcement Inspection	**Interest:** - Regulatory enforcement and labor conditions in the agricultural sector - jobs for Jordanians and non-Jordanians - Grievance Mechanism (GM) - Agricultural workers complaints' managing system **E&S Issues :**

Group/Entity	Internal/External	Role in Project	Interest in Project/E&S Issues
			- Working conditions and health and safety of informal and vulnerable workers including refugees, migrants and women - child and forced labor risks in the agricultural sector
Direct Beneficiaries			
- Household farms - Semi- nomadic Bedouins - Livestock owners - Women, youth, and refugees - Exporters (SMEs)	External	Beneficiaries (project affected People)	**Interest:** - All these direct beneficiaries will be directly benefiting from projects' interventions in different areas: RWH, extension services, veterinary services, training and skills enhancement, etc. **E&S Issues:** - Climate change hazards affecting their livelihoods - importance of extension services (Farmers Field Schools) - E&S requirements for export (including child labor)
Other Interested Parties			
- Jordan Food and Drug Association (JFDA) - Customs Department - Ministry of Industry and Trade (MOITS)	External	Regulatory	**Interest** - Traceability System Development - E&S requirements for export
Governates and municipalities	External	Consultation and coordination	**Interest:** -identification of needs /decentralization committees -Extension and other MOA services **E&S issues:** • Climate Change • Needs of poor or vulnerable households including women and refugees • Social cohesion
All those working along the agricultural value chain	External	Indirect beneficiaries	**Interest:** Indirectly benefiting while working or being related to program's implementation including private sector and SMEs in general
Development Partners and UN Agencies			
FAO, WFP, USAID, IFAD, OPIC, ESCWA, EU, ILO, Netherlands Cooperation	External	Consultation and Coordination	**Interest:** -Productivity/efficiency in the agriculture sector

Group/Entity	Internal/External	Role in Project	Interest in Project/E&S Issues
			- building on experience/coordination with on-going projects - **Issues or E&S concerns:** - Sustainability of projects - protecting poor and vulnerable - Social cohesion - transparency and monitoring results - Enhancing E&S capacities of implementing agencies
Vulnerable Groups and CSO's that represent them			
- Women - Youth - Refugees - Migrant workers - Small holder farmers - Nomadic or Semi-nomadic groups	External	Beneficiaries	**Interest:** - Training and skills enhancement activities - Job matching in agri-food sector and economic opportunities - Access to financial services - accessibility to water efficient techniques/cost savings and improved livelihoods - Mechanisms for further engagement with CSOs **E&S Issues or E&S concerns:** - Climate change effects Labor and working conditions, including enforcement of new agricultural workers regulation, particularly for women and vulnerable groups - Lack of protection for women's safety working in agriculture - Inequality of pay between men and women
Civil Society Organizations (CSOs) representing the Private Sector			
- Women Agricultural Associations - Jordan Farmers Union - Exporters' Associations - Association of Veterinarians - Agricultural Engineers Association - Others	External	Implementation/ Consultation and Outreach	**- Interest:** - improving livelihoods of farmers - traceability standards and export requirements - Animal health and extension services - Access to financial services - Access to extension and other MOA services **E&S Issues** :

Group/Entity	Internal/External	Role in Project	Interest in Project/E&S Issues
			- Climate change effects affecting their livelihoods - health and safety in agriculture - agricultural workers' rights and safety, particularly women, children

1.16 Program for Results (PforR) Program Scope and Boundaries

The Program's strategic focus. The overall strategic relevance and technical soundness of the Program is predicated on JAP's recognition of the most significant strategic challenges Jordan's Agriculture sector is facing and the identification of a comprehensive set of costed interventions across public, private sectors and international partners with the potential to lay the foundations to significantly shift the sector's performance.

The Program is anchored in the JAP, both in terms of its development objectives as well as its priority activities and main results, with the following defining strategic characteristics:

i. **It would focus on improving the effectiveness and introducing innovations related to sustainable water use at farm and community level**. Whilst Jordan achieved significant progress in water productivity of agriculture, Jordan's extreme and further exacerbating water scarcity demands further efforts to achieve excellence and technological leadership in this area; this includes the development of an evidence-based approach to rainwater harvesting and the development of an innovative financing product that monitors and integrates conditionalities on freshwater consumption.

ii. **It would significantly strengthen systems underpinning farmers' adaptive capacity** by improving the quality of and access to public and private extension services, developing an early warning system and for agricultural risks and leveraging the potential of digitalization for farmers.

iii. **It would seek to address fundamental elements of the enabling environment for agribusiness to attract private sector investments in the agri-food sector**, such as improving selected regulations, public core services on food safety and developing and implementing a coordinated approach to market development and export promotion; and

iv. **It would seek to ensure greater inclusion of women, youth, and refugees**. By providing these groups with access to services, knowledge, and skills, the program creates formal jobs and economic opportunities for other vulnerable groups, especially youth, refugees, and host communities

Program boundaries GoJ sought WB support in achieving a set of cornerstone results under the JAP umbrella that touch on critical priorities and can help crowd in other partners. Through subsequent dialogue with the client and development partners, results were identified that (i) target the most pressing sector challenges noted above (eg climate resilience and competitiveness); (ii) strengthen key public functions (such as extension, phytosanitary services, early warning system) that would enable investments by other actors, notably the private sector; (iii) build on the existing capacity and the track-record of implementing agencies to generate rapid results (eg farmer field schools); and (iv) complement interventions by other development partners (eg value chain development interventions by NL, IFAD, AFD). As such, activities within the boundary cut across priority areas to constitute a coherent set of results areas laying the foundations for sector transformation

1.17 Program Development Objectives (PDO) and Results Areas

The **Program Development Objective** is to strengthen the climate resilience and enabling environment for agriculture development in selected value chains in Jordan.

Climate resilience in the context of this Program is defined as the ability of (i) farming households to respond to climatic changes and weather-related shocks and stresses and thrive despite the

impacts of those shocks and stresses, and (ii) agricultural services to adapt to changing farmer and agribusiness needs in the context of increasing water scarcity For improving farm household resilience to increasing water scarcity, the Program will (i) develop better adaptation strategies that are based on rain-water harvesting technologies, and (ii) directly promote the quantity and seasonal reliability of water available to farming households for production purposes. The latter will be through financing the installation and use of water harvesting technologies at landscape and farm-level—dams and ponds, and tanks and cisterns, respectively—based on a rigorous watershed-level rainwater harvesting strategy that assesses cumulative impacts on water balance to identify suitable sites and densities. Resilience of farm households, of which a significant share are refugees, will be also promoted by strengthening the adaptive capacity in choosing and applying on-farm technologies that enable them to move towards more water saving production practices and to effectively participate in climate smart agro-food value chains.

At the policy level the Program supports strengthening the enabling environment for agri-food value chain development in Jordan. The Program focuses on addressing constraints to value-addition, product quality, and exports. In addition, the program will support on the job training of (semi-skilled) workers and professionals (in particular women, youth and refugees) to fill skills gaps labor capacity gaps across the agri-food sector.

Selected agri-food value-chains. While the Program would strengthen the overall enabling environment for agri-food value chain development in Jordan, it focuses on the production of commodities with competitive potential and climate resilient profiles as identified Jordan Climate Smart Agriculture Action Plan: Horticulture, rainfed olives, dates, and small ruminants. The Program would place specific focus on addressing constraints that producers and agribusiness firms face with regards to post-harvest value-addition, product quality, and exports.

The **PDO results outcomes are measured by:**

1. Sustainable[6] agricultural rainwater harvesting capacity at household and communal levels (in m3)
2. Number of farmers completing CSA training courses (crops and livestock) (share of which women, youth, and refugees)
3. Value of agri-food exports covered by traceability system (JOD)
4. Share of trainees supported by the Program retained by employers after completion of training (share, of which women, youth, and refugees)
5. Number of beneficiaries reached with assets and services (Of which women, %; Youth, %; Refugees %)

1.18 Results Area

Results Area 1 – Climate Resilience and Sustainability

Results Area 1's objective is to strengthen the resilience of the agricultural production system to climate change and to shift the sector towards a more sustainable growth path.

Sub Results Area 1.1 – Scale-up of Sustainable Agricultural Rainwater Harvesting (RWH). Under SRA1.1, MoAs rainwater harvesting programs will be placed on a more evidence-based footing to

[6] Aligned with the national agricultural rainwater harvesting strategy and operational guidelines developed under the Program.

ensure sustainability and expanded at the farm and community levels for building climate resilience to increasing water scarcity.

GoJ will generate the evidence base to improve the sustainability and development effectiveness of its Rainwater Harvesting (RWH) programs. RWH investments (both at farm/household and community levels) backed by the PforR would be underpinned by a multi-stakeholder national GIS mapping and planning exercise including analysis of existing and cumulative planned water balance impacts at watershed level and improved implementation procedures (targeting, community outreach, storage technology options). The *ex-ante* impact assessment will ensure that potential negative impacts such as on downstream water users are avoided including by determining a sustainable density of RWH capacity per square kilometer. A National RWH committee will be established, co-chaired by the MoA and MOWI and include other relevant government entities. It will be tasked with overseeing the preparation of the national agricultural rainwater plan as well as the development of operational guidelines setting out performance standards and specifications for agricultural RWH covering the farm-household and community levels.

Resilience of rainfed farming will be strengthened through the sustainable expansion of a sustainable farm-level RWH grant program. Building on an existing successful program, individual grants and technical support will enable eligible farmers to install water harvesting and storage installations on their farms. Targeting and system specifications will be aligned with the national RWH plan and the operational guidelines. Payments will be provided upon verification of functionality (water harvesting capacity, absence of leaks).

Resilience of herders will be supported through an expansion of MoA's integrated RWH and landscape restoration program in the *Badia,* using an adjusted approach. Based on the national strategy and new operational guidelines, mapping surveys will be prepared with engagement of local communities to more accurately assess the demand, potential, and technical soundness of integrated investments. This will regard medium-scale RWH investments embedded in surrounding landscape restoration and sustainable rangeland management activities and include new sites as well as the restoration of existing structures.

Sub-Results Area 1.2: Building Institutional Adaptive Capacity for Innovation

Farmers will gain better access to information and increase their capacity to adopt CSA technologies through a restructuring and expansion of MoAs extension services for crop farmers. As part of a major reform of the extension system, MoA will work with other stakeholder to develop an extension implementation plan and training needs assessment, covering (i) training and equipment for newly hired agents based on farmer and private sector needs to build a roster of CSA specialists; (ii) a scale-up of digital extension tools in collaboration with NARC and other partners, including the development of a farmer registry system; (iii) the strengthening of a program for the preservation of native species; as well as (iii) the scale-up of demand-based face to face extension approaches through the Farmer Field Schools (FFS) on CSA technologies, post-harvest improvements as well as environmental and social aspects. Three agendas will be mainstreamed into extension service reform: Inclusivity of vulnerable groups (women, youth, refugees), climate change context and opportunities to expand the role of the private sector in extension service provision.

Access to essential veterinary services for herders will be expanded and live animal exports facilitated through a refocusing and expansion of key public functions such as epidemiological-surveillance and vaccinations. Based on a set of recommendations provided by the World

Organization for Animal Health (OIE) MoA will build an effective disease surveillance and control program[7]. Based on a strategic implementation roadmap prepared at the outset, (i) the number of staff of the veterinary service (veterinarians, para-veterinarians and laboratory technicians) will be strategically increased, adequately equipped and trained, focusing on young graduates (both women and men); (ii) critical vaccines will be procured and administered using established implementation pathways, and (iii) two regional veterinary centers will be upgraded to provide currently unavailable diagnostics and treatment options complementary to clinics operated by the private sector. As a result, Jordan will be in a position to apply for formal recognition by OIE of having reached a mode advanced level in disease prevention and control.

Farmers will benefit from the roll-out of a suite of digital services improving access to critical information such as on agricultural risks and market prices. Led by NARC, collaboration between research, extension, farmers, and the private sector driven ag tech ecosystem in Jordan will generate an improved portfolio of agriculture relevant digital applications and services. These include (i) the development and management of an Early Warning System (EWS) offering alerts to farmers in case of risks such as natural disasters. (ii) the scale-up of a set of extension applications designed to facilitate collaborations between research teams. extension agents and farmers.

Results Area 2 – Competitiveness and Export

RA2 objective and description. RA2 aims to contribute to improved competitiveness of the agri-food sector by strengthening the enabling environment for agribusiness and making the sector more attractive for investment. Focusing on the value chains strengthened under RA1, RA2 will address structural on and off-farm constraints, including the development of a coordinated approach to value chain promotion for exports and local markets, removing bottlenecks in public service provision as well as improvements in water use efficiency to reduce production costs. It will also cover the need to strengthen the supply and facilitate the matching of skilled labor with opportunities in the sector in support of these activities.

Sub-Area 2.1 - Enabling Services for Value Chain Development and Export Promotion: SRA 2.1 will provide assistance in five key areas relevant to improving competitiveness of agri-food value chains: (i) collection and provision of product/market information; (ii) coordinated value chain and export promotion; (iii) investments in water productivity, and (iv) provision of traceability and certification services.

A coordinated approach to analytics based market development and export promotion on analytics through the establishment of a market intelligence mechanism. A public mechanism will be created capable of observing agricultural production patterns and trends in local production, and take stock of existing export opportunities, as well as opportunities for import substitution on the domestic market, for the national production. A multi-disciplinary advisory group comprised of key public entities (MoA, NARC, Jordan Export, JEDCO, etc.), private sector representatives, farmer association, development partners and international experts in target markets will be established. The group would be supported to build a process for obtaining and analyzing market information on trends and demand for products that are grown or could be grown in Jordan, assessing which new climate resilient crops or varietals are optimal for Jordan's conditions, testing these crops, and disseminating this information to farmers (in the form of pilot farms, post-harvest SOPs, etc.). The mechanism would also seek to identify opportunities to stimulate private investment into post-harvest value chains, including through regulatory reforms on cooperatives. This would in involve (i) mapping the current operators and infrastructure available in Jordan for relevant post-harvest value

[7] OIE PVS Gap Analysis for Jordan, 2017

chain activities such as cold-chain, sorting, grading, and packing facilities; (ii) identifying gaps, reviewing international approaches for attracting private sector investment in energy efficient post-harvest value chain development using de-risking instruments (matching grants, first loss guarantees, etc), and (iii) advancing the readiness of farmers and logistics suppliers deploy it.

Expanded access to finance for investments in water efficiency technologies. To remain competitive agriculture will need to further increase its water use efficiency, as water is already and will increasingly be a critical competitiveness factor, comprising both the sustainability and cost dimensions. Under SRA 2.1 the Agriculture Credit Corporation (ACC) will develop and implement an innovative reimbursable grant product that would base financing on conditionalities and stringent monitoring to ensure investments achieve water savings. The product will be based on existing ACC products and support investments such as the conversion to crops with higher water productivity and lower demands; controlled environment production systems such as aquaponics and hydroponics, adaptive investment for use of treated wastewater and saline sources, the introduction of crop cover, and smart irrigation systems. Support will be coupled to agreements with beneficiaries not to shift production to less water efficient cropping systems such as banana trees, etc., and to commit to a cap on fresh water use at farm level. A water use measurement protocol would be developed, combining remote sensing approaches with field sampling, and cross-referenced with MoWI data.

Improved premium export market access through increased access and improved quality of traceability and certification services for sanitary and phytosanitary (SPS) standards. Basic traceability regulation will be issued by MoA to ensure appropriate public sector monitoring of food safety standards, and voluntary value chain traceability and added services promoted, i.e. Standard Operating Procedures (SOPs), residue control, child labor certifications, etc. This will improve differentiation and competitiveness of Jordan's products, particularly for niche export markets. On the latter, a review of comparative approaches followed in other competing countries will inform recommendations on which aspects to trace and what added services could be offered in Jordan, as well as support with the initial stages of implementation of a traceability system for 3 value chains and their associated SOPs. On food safety certification services for the local market and exports, the program will involve the (i) expansion and modernization of public laboratory facilities at MoA for SPS and laboratory at NARC specialized in the certification of seed quality; (ii) the promotion of an accreditation scheme for private laboratories performing similar or complementary functions; as well as (iii) advance the digitalization of all certifications.

<u>Sub-Area 2.2</u> – Matching skills supply with demand in agri-food sector. Agri-food value chains have the potential for employment opportunities (on and off-farm). For various socio-economic reasons, Jordanians are not maximizing these opportunities; in particular, the agricultural sector is not attracting young graduates as they are not provided with the right training and not given sufficient incentives to move to rural areas. Investment in building skills and knowledge will increase employability. Modern value chains require skilled and semi-skilled labor for on and off farm work. Investing in the skills of women, youth, and refugees, in particular, will contribute to the movement towards more formal job markets. The focus will be on applied skills taking into account the specific circumstances in which they will be used. In that respect, designing and implementing the training program will be achieved by enlisting the participation of key private operators in the targeted value chains.

Labor market entry for unskilled and semi-skilled job seekers facilitated through an up-skilling and job matching program tailored to the agri-food sector inclusive of women, youth and refugees. To achieve results under SRA2.2 MoA will first conduct a needs assessment of skills in the agri-food sector overseen by a technical committee with representation of relevant government agencies

(MoL) and MoA directorates, private sector, farmer, and civil society organizations representing vulnerable groups covering a broad range of potential topics including those most relevant to specific groups. Second, building on the experience of an existing successful program, MoA partner with other agencies (such as TVSDC) to offer one month of theoretical and two months of practical on-farm training.

1.19 Disbursement-Linked Indicators (DLIs)

1. **Disbursement-Linked Indicators (DLIs).** The Program is built around five DLIs, one per Sub-Results Area and cross-cutting DLI covering the broader enabling environment for Program delivery. Table 2 summarizes the list of the DLIs.

Table 2: Disbursement Linked Indicators (DLIs)

Sub-Results Area (SRA)	Disbursement-Linked Indicator (DLI)	DLI amount (US$ million)	Description
Sub-Results Area 1.1: Scaling Up Sustainable Rainwater Harvesting for Agriculture	DLI1: Adoption of sustainable rainwater harvesting practices	41	Measures the sustainable expansion of the rainwater harvesting capacity for use in rainfed agriculture and pastoral livestock systems at both farm and landscape (Badia) level to boost resilience to climate change
Sub-Results Area 1.2: Performance of agriculture extension services	DLI2: Innovation and improved performance of crop extension and animal health services	29.5	Measures performance upgrades in the MoA's advisory support functions for crop and livestock farmers, including the deployment of digital innovations and private sector participation.
Sub-Results Area 2.1: Enabling services for value chain development and export promotion	DLI3: Improved public service delivery for value chain development and export promotion	24	Measures improvements to the enabling environment for private sector-led value chain development and export, including financing focused on stimulating investments in water productivity technologies to enhance sustainable competitiveness.
Sub-Results Area 2.2: Matching skills supply with demand in agri-food sector	DLI4: On and off farm employment skills improved including women and refugees	12.5	Measures skill development of youth, women and refugees and their successful employment on the agri-food labor market
	DLI5: MoA Delivery Capacity Secured	14	Measures GoJ resources allocation in support of JAP and PforR.
TOTAL		121	

1.20 Program Implementing Agencies

The key line ministries and agencies of the key results areas are detailed in Table 3.

Table 2. Key Implementation Agencies

Result Area	Results	Responsible Implementing Agency	Directorate(s)	Partnering institutions

RA 1.1	Rainwater Harvesting	MoA	Water Harvesting Directorate, Projects Management Directorate, Pastures Directorate Lands and Irrigation Directorate	MoWI, JVA, MoENV
RA 1.2	Extension System Performance	MoA	Directorate of Training and Awareness of Farmers, Human Resources Development and NARC	
	Veterinary System Performance	MoA	Veterinary Directorate	OIE
	Digital tools, including early warning system developed, e.g., frost alert	NARC		MoA, Agriculture Risk Fund, Ag tech ecosystem
	Performance of nurseries improved		Plant Production Directorate	Private sector
RA 2.1	Water use efficiency financing instrument	ACC MoA	Loans department	MoWI
	Traceability System development	MoA	Quality and Tracking Directorate	Customs JFDA
	Public services for value chain development	MoA	Directorates: Marketing project management, studies and production chain development and Irrigation and land	Ministry of Commerce, JEDCO, MOPIC JSDF, JSMO
	SPS and seed certifications	MoA, NARC	Prevention and Plant Protection Directorate	
RA 2.2	Capacity Development in the Agrifood Sector	MoA	Technical Committee with the participation of relevant Directorates	TVSDC, Farmer and private sector associations, civil society;

Technical Assistance through the IPF Component

The implementation of the broader government program including but not limited to the PforR would be underpinned by an IPF component establishing a *Delivery Unit*, for the MoA. The unit will support additional technical capacity of THE MOA in areas critical to the delivery of a large sector-wide investment program and its associated entities and there is interest in from other development partners to co-fund the unit, e.g., IFAD. The Delivery Unit will include the required capacities for project management, M&E, social and environmental aspects. The *Delivery Unit* would also hold the institutional mandate to enhance consultation and coordination with other stakeholders across GoJ, the private sector and development partners.

The ESF will apply to this IPF Component/ technical Assistance. There are no physical works under this component. Technical Assistance will primarily support staffing costs, as well as providing some funds for capacity building of MOA staff and commissioning specific pieces of technical advice that may arise in the future during program implementation, although no specific studies are earmarked at this time. The Environmental and Social Risk Classification and ESF documentation requirements are further described in Chapter 2.

2 CHAPTER II – PROJECT ANTICIPATED ENVIRONMENTAL AND SOCIAL EFFECTS

a. Environmental and Social Screening

The Program will have environmental and social benefits as well as risks which are rated as Substantial. Both the environmental and social risk ratings are Substantial, and this is mainly owing to the potential environmental and social risks from the activities associated with sub-result areas 1.1 and 1.2 as well as the limited environmental and social management capacity at THE MOA. The physical interventions include investments to develop farm and home garden level rainwater harvesting systems and scale up RWH by earthen dams (hafir) in Badia. The program will also support conducting animal vaccination program, rehabilitation of public veterinary facilities and upgrading seed testing Labs. These interventions might cause potential environmental impacts and occupational health and safety risks. These risks, if any, will be site-specific, and amenable to mitigation by standard good practices and other well-understood mitigation measures and technologies. The risk screening of the program is described in Table 4.

Table 3. Screening of Environmental and Social Effects

	Activities Within PforR Boundaries	Environmental Effect	Social Effect	Relevance to ESSA Core Principles (CPs)
RESULTS AREA 1: CLIMATE RESILIENCE AND SUSTAINABILITY				
Sub-results Area 1.1 – Scaling Up Sustainable Rainwater Harvesting in Agriculture.				
DLI1: Adoption of sustainable rainwater harvesting practices	**Prepare a National Strategy for Water Harvesting, including Badia rehabilitation**	Indirect positive environmental effects related to future implementation of the strategy and efficient use of natural resources. Indirect negative effects on downstream users, if no strategic environmental and social impact assessment is conducted to align with other strategies, e.g., water, climate change, tourism, and alternatives analysis.	Indirect positive social effects related to future implementation of the strategy, particularly contributing to the livelihood of livestock owners and other water users, and addressing the effects of water scarcity. Potential indirect negative social effects on (i) small-scale livestock owners or if excluded from program benefits (ii) semi-nomadic Bedouin groups and their traditional land use patterns and access to natural resources if RWH and Badia restoration is not properly sited or consulted. iii) poor or other vulnerable households if excluded from roof top RWH	CP1 CP2 CP3 CP4 CP5 CP6

	Scale up farm and home garden level RWH in areas with annual precipitation of 200 mml or more through construction of rooftop rainwater collection connected to underground water cisterns, Scale up rainwater harvesting and landscape restoration in areas with less than 200 mml through construction of hydraulic structures, either earthen dams or hafirs (collection pits) to collect and retain flash floods waters.	-Positive effects related to harvesting and use of rainwater and reducing the use of the limited ground water resources - Positive effects related to recharging ground water basins. -Localized, temporary negative effects during construction of RWH structures, related to workers' health and safety, dust & noise emissions, and waste, if not managed properly. Potential negative effects on downstream water users during operation - Positive impacts by providing suitable habitats and roasting areas for migratory birds. - Negative effects related to potential habitat fragmentation, disruption of ecological corridors and introduction of nonnative species.	- positive social effects livelihood of livestock owners and other water users and addressing the effects of water scarcity. - Potential socio-economic impacts on eco-tourism and hunting to be managed. -Potential negative social effects on (i) small-scale livestock owners if excluded from program benefits (ii) semi-nomadic Bedouin groups and their traditional land use patterns and access to natural resources if RWH and Badia restoration is not properly sited or consulted. iii) poor or other vulnerable households if excluded from roof top RWH (iv) Public health and safety risks associated with hafirs (earthen dams) once operational. -	CP1 CP2 CP3 CP4 CP5 CP6
Sub-Results Area 1.2 – Performance of Agriculture Extension Services				
DLI2: Innovation and improved performance of crop extension and animal health services	**EXTENSION** - Hiring and training of additional extension agents - Development and adoption of digital extension tools and systems - Increase MoA staff transport resources - Prepare and offer additional curricula based on local potential and needs	- Positive effects on valued environmental components including soil, water and living organisms by efficient use of pesticides, agricultural inputs and efficient use of water and energy resources - Positive effects on farmers' and public	-Potential positive effects on farmer livelihoods from knowledge transfer on good management practices and adoption of new technologies. -Potential positive effects on animal welfare	CP1 CP2 CP3 CP5

	- Deployment of national electronic farmer and herder registration system - update and refurbish existing nursery facilities in two government agriculture stations,	health and safety	-Potential positive indirect effects for workers via improved labor management practices, including reducing harmful child labor, if farmers are adequately trained].	
	ANIMAL HEALTH - Equipping and developing veterinary laboratory testing capacity at clinic in south and another clinic at middle Jordan - Purchase additional stock of vaccines for FMDs - increase the number of staff at veterinary services	- Temporary negative, localized effects related to workers health and safety, dust or noise emissions and waste, if not managed properly. -Temporary negative effects related to occupational health and safety and medical waste management, if not managed properly.	Improved animal welfare in livestock operations Improved livelihoods of farmers through increasing productivity and reducing animal losses.	CP1 CP3
SRA 1.2 Support NARC To Develop And Scale-Up Critical Digital Innovations For Farmers And In Support Of Public Extension				
	- Development and management of an Early Warning System (EWS) against risks such as natural disasters as drought or earthquakes - Scale-up and sustained development of mobile applications to facilitate the work of extension agents and to enable farmers to access valuable information, such as price data and agronomic advice	Indirect positive impacts on environment, agricultural production as well as farmers and public health and safety	Positive livelihood impacts for farmers.	CP1 CP2 CP3
RESULTS AREA 2: COMPETITIVENESS AND EXPORTS				
Sub-Results Area 2.1 – Public Services For Value Chain Development And Export Promotion				
DLI3: Improved public service delivery for value chain development and export promotion	- Establish a market intelligence unit as a public mechanism capable of observing agricultural production patterns and trends in local production, and take stock of existing export opportunities, as well as opportunities	- Positive effects through more efficient water use technologies, resulting in more water savings		CP2 CP3 CP5

	for import substitution on the domestic market, for the national production. - Develop post-harvest value chain development and export marketing strategy that map the current operation and infrastructure, identify gaps, attract private sector investment at postproduction energy efficiency, and develop investment attar action plan for local and international investors. - Improve access to finance for water productivity investments as a reimbursable matching grant product, that managed by ACC to promote farmers level use of water efficiency or water saving technologies that will impact the cost of the supply chain (this includes small irrigation systems, installation of treated wastewater re-use systems for livestock fodder) - Traceability & certification: implementation of a traceability system for 3 product types and their associated SOPs, piloting state of art plant health and seed certification capacity between MOA and NARC	- Potential negative effects due to the increase in water and energy use as well as waste generation, if not managed properly - Localized, temporary negative effects related to the use and management of chemicals for lab testing and occupational health and safety.	-Potential negative effects for vulnerable groups if there are barriers to access program benefits/matching grants. -Positive indirect effects on good agricultural practices, including labor and working conditions, once traceability and certifications systems are in place. Foreign buyers increasingly demand that agricultural products meet internationally recognized labor standards (e.g., BRCGS Global Standard for Food Safety https://www.brcgs.com/our-standards/ethical-trade-and-responsible-sourcing/)	

Sub-Results Area 2.2 – Matching Skills Supply With Demand In Agri-Food Sector				
DLI4: On and off farm employment skills improved including women and refugees	**Conduct Capacity needs assessment in Agri-Food sector** **Expand job matching program in Agri-food sector** - Unskilled, Semi-skilled Women Youth Refugees	Potential positive effect from inclusion of Environment, Health, and Safety (EHS) aspect as part of capacity building assessment	Positive livelihood effects from jobs for vulnerable groups. Negative effects if decent working conditions, or SEA/SH are not adhered.	CP1 CP3 CP5
DLI5: MoA Delivery Capacity Secured	timetable for the budget process, i.e., the MoA should ensure that requests to the MoF are in line with the incremental budget requirements needed for completion of the PforR and sent to MoF by June 1 of the preceding year and reflected the GoJ Budget		-	

b. Exclusion Criteria

Consistent with World Bank PforR Policy requirements, the Program will exclude any activities or expenditures that are likely to have significant, sensitive, diverse or unprecedented impacts to the environment and/or affected people. Such activities include significant land acquisition, economic or physical displacement or changes in land use, and significant impacts to critical cultural heritage sites or natural habitats. Screening against the exclusion criteria have has been completed of program activities and expenditures required to meet the PDO and results areas, at time of ESSA preparation. The following exclusion criteria apply to the PforR:

i. Significant conversion or degradation of critical natural habitats or critical cultural heritage sites
ii. Air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems
iii. Workplace conditions that expose workers to significant risks to health and personal safety, such as projects requiring major works in confined spaces (such as tunnels); or projects with high risk of exposure to toxic chemicals (such as mines)
iv. Land acquisition and/or resettlement of a scale or nature that will have significant adverse impacts on affected people or the use of forced evictions
v. Large-scale changes in land use or access to land and/or natural resources
vi. Adverse E&S impacts covering large geographical areas, including trans-boundary impacts, or global impacts such as greenhouse gas (GHG) emissions
vii. Significant cumulative, induced, or indirect impacts
viii. Activities that involve the use of forced or child labor
ix. Marginalization of, or conflict within or among, social groups; or
x. Activities that would have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation.

The program will support the physical works including rehabilitation of public veterinary facilities under Sub-results Area 1.2; and construction of RWH systems under Sub-result Area 1.1. Screening of these physical interventions during ESSA preparation has identified that the construction of RWH structures, particularly earthen or structural dams (Hafirs) will require further environmental and social screening, including land-related impacts, when the structures are at site selection and design stages to ensure that the exclusion criteria are met. Under Result Area 1 a Strategic Environmental and Social Assessment (SESA) will be conducted that will include alternative analysis based on E&S criteria to contribute to identification of areas and relative placement of RWH sites. Further the Program Action Plan requires development of E&S screening procedures for site selection and design of individual RWH sites including avoiding and minimizing and mitigating land-related impacts. The implementing agencies will carry out screening of the activities and will exclude activities according to the above criteria. RWH will be subject to classification and Environmental and Social Impact Assessments and/or Environmental Approvals conducted/obtained in accordance with Jordanian Law (this is part of the Verification Protocol).

Generally, hafirs which are constructed by the MOA have a size of 100'000 m3, with wall height less than 5 m. Moreover, earthen dams could have a size of 50'000 m3 with wall height less than 15 m. The World Bank Operational Policy (OP) OP 4.37 – Safety of Dams – distinguishes between small and large dams, as follows: (a) Small dams are normally less than 15 meters in height. This category includes, for example, farm ponds, local silt retention dams, and low embankment tanks, (b) Large dams are 15 meters or more in height. Dams that are between 10 and 15 meters in height are treated as large dams if they present special design complexities, such large dams will be excluded from the Program. The Program will exclude financing large dams as defined by OP 4.37; as well as small dams which might cause significant impacts on sensitive receptors such as ecological habitats.

c. Environmental and Social Benefits and Risks

Considering both benefits and opportunities, as well as potential adverse negative risks and impacts, the Program is rated Substantial for both environmental and social effects. The program's activities have been screened for environmental and social effects. The benefits of Result Area 1 to scale up Climate Smart Water Use for Agriculture primarily relate to reduced use of scarce groundwater resources through increased number of Rainwater Harvesting structures that include water catchment basins with earthen walls in more arid areas (hafirs), and household level cisterns for home gardens in other areas. The hafir structures may use natural geological features as partial enclosure of the basin (these are referred to as earthen dams). These activities will benefit livelihoods of livestock owners, farmers associations, and households since the cost of treated water sources and groundwater for crops and livestock is high. Hafirs also provide roosting areas for migratory birds with potential for eco-tourism and can support fish. These effects can be indirectly realized and optimized through development of a national strategy for RWH and Badia Restoration, as well as directly through constructing RWH structures under sub-result area 1.1 by MOA, and grants from ACC for existing farm-level operations including conversion to crops with stronger water sustainability profiles, aquaponics, hydroponics, connections to treated wastewater sources, and advanced smart irrigation systems.

The program also offers opportunities for other positive effects including: (i) extension and veterinary services under sub-result area 1.2 are expected to: a) promote integrated pest management practices resulting in positive impacts on valued environmental components including soil, water and living organisms through efficient use of pesticides and agricultural inputs and efficient use of water and energy resources, b) improve farmer livelihoods and reduce animal losses, and c) potential entry point to improve environmental, worker health and safety and labor management practices (ii)NARC's development of software applications and early weather warning systems (sub result area 1.2), (iii) connecting farmers to export markets (Result Area 2) will also positively affect farmers' resilience and livelihoods (iv) Positive livelihood impacts for women, youth and refugees from job-matching and training in the agricultural sector under sub result area 2.2 as well as access to water-smart grants from ACC under Result Area 1.

The program will also result in negative environmental and social effects, if not properly managed. National-level analysis, mapping and planning for rainwater harvesting might result in negative effects on downstream users, if no strategic environmental and social

impact assessment is conducted to align with other strategies. On a national scale, hafirs/earthen dams can cause habitat fragmentation and introduce nonnative species through cultivation of fodder crops. If not well sited, hafirs/earthen dams may impact semi-nomadic Bedouin groups and their traditional land use patterns or may flood cultivated lands of small existing informal users. Increases in availability of water may also lead to unsustainable use of the collected water for irrigation, if not properly monitored and managed. There is also a risk of elite capture by larger livestock herders, if communities, and small-scale herders are not adequately represented and consulted on site selection, and sites monitored. Construction of hafirs/earthen dams and other civil works under the program, e.g., household RWH cisterns; cold storage facilities to support the value chain, infrastructure for seed production including the construction of new floor in the existing building) and water-smart equipment installations from ACC grants, e.g., hydroponics, might increase water and energy use, pose risks for workers' health and safety, and generate dust or noise emissions and waste during construction. During operations, hafirs and earthen dams pose public health and safety risks from drowning, and require structural maintenance. The program activities are also expected to result in generation of hazardous waste from on-farm operations including pesticides, fertilizers, wastewater from agricultural operations and biomedical waste (veterinary services). Finally, the program takes place within the context of the agriculture sector with significant risks related to decent work conditions, child and contracting labor (including potential forced labor), and occupational health and safety for agricultural workers. The program is not expected to require land acquisition as the Ministry of Agriculture owns extensive areas of rangeland, and forestry and treasury lands. Household RWH cisterns and supported activities through ACC grants will take place on existing private lands.

The program will provide Technical Assistance through an IPF component which is expected to be of low environmental and social risk. The objective of the IPF Is to support the implementation of the National Sustainable Agriculture Plan 2022-2025 (JAP) with well-coordinated, timely, and focused technical support from the Ministry of Agriculture, particularly during the early stages of implementation. The IPF/Technical Assistance does not comprise any physical works. It will be used to supports through establishment of a Delivery Unit within the MoA. Under Component 1, funds will be used to provide 'just in time' expertise and staff in various areas, including strategic planning; financial management; procurement as well as environmental and social risk management in areas informed by the findings of the ESSA. Under Component 2, funds will support soft activities particularly inter-ministerial and agency coordination, e.g., the MoPIC, Ministry of Water and Irrigation, Ministry of Environment, JEDCO, etc., and (ii) stakeholder consultation mechanisms (private sector, civil society, producer and farmer organizations). These would be regularized, and their frequency increased. In particular, this component will focus on developing appropriate mechanisms for (i) and (ii) on selected strategic priority areas underpinning JAP, including providing technical assistance in the areas such as: Efficiency of rainwater harvesting, modern technology and efficiency in water use, and competitiveness of agriculture value chains and agricultural exports.

The implementation of the IPF activities is expected to have positive environmental and social effects and will contribute to ensuring adequate environmental and social management of the program, including through enhanced stakeholder engagement and

incorporation of environmental and social considerations in strategic planning. Potential negative effect might be associated with the planning of any technical studies, plans or strategies if not adequately informed by good international environmental and social practices. However, as such studies are not identified or earmarked at this time and are expected to be very focused and of a “just in time nature” the risks are not considered significant at this time.

An Environmental and Social Commitment Plan was prepared for the TA activities/IPF component only, namely the staffing of the Delivery Unit and preparation of technical studies on an as needed basis. The ESCP specifies requirements for (i) maintaining the required E&S organizational structure consistent with the recommendations in the ESSA PAP (i) screening of TA activities for environmental and social aspects and inclusion in terms of reference as appropriate (i) recruiting and managing hired workers (direct workers under ESS2) for the delivery unit in accordance with ESS2 and national law (iii) preparing and implementing stakeholder engagement plan including a grievance mechanism for the program as per the requirements of the Program Action Plan.

3 CHAPTER III – MINISTRY OF AGRICULTURE ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS ASSESSMENT

The MoA is a governmental and public sector institution in charge of setting and developing policies and strategies that guide the Jordanian agricultural sector. The Ministry is governed by Agriculture Law No. (13) for the year (2015) and provides oversight over the agricultural policies and strategies. The organizational and management aspects of the MoA are governed by Regulation No. (82) for the year (2004) and its amendments issued in accordance with Article (120) of the Constitution and its amendments. The Ministry consists of a main central unit, twelve major Agricultural Directorates at governorate level and thirty-eight Directorates at provincial level. And a central Unit, including three Directorates linked to the Minister of Agriculture. The agricultural function of the Ministry is divided into seven sectors that are directly reporting to the Secretary General: Extension, Agricultural Marketing and Quality, Projects and Rural Development, Range and Forestry Land, Animal Wealth, Plant Wealth, and Financial and Administrative Affairs. The MoA also has under its umbrella, the following agencies: the Agricultural Credit Corporation (ACC), the National Agricultural Research Center (NARC), and the Jordanian Cooperative Corporation (JCC). The Minister of Agriculture is the Chairman of Board of Directors for the three entities.

As per Article 3 of the Agricultural Law, the Ministry is mandated with organizing and developing the agricultural sector to achieve the following main objectives:

i. Increasing food production and agricultural products
ii. Ensure the sustainability of the agricultural resources without harming the environment
iii. Provide the enabling environment for investment in the agricultural sector
iv. Development of the countryside and the Badia and their production capacity
v. Increase the revenues of farmers and their living standards
vi. Provide health protection for the plants and animal wealth
vii. Active participation with international and regional organizations and signing international agreements according to
viii. Enhancing economic opportunities for farmers and following up on local and international business opportunities
ix. Monitor market developments and develop the necessary legislation to regulate marketing operations and raise their level
x. Improving the efficiency of using irrigation water to the level of agriculture.

The MoA also provides basic agricultural services in sectors and areas where the private sector does not intervene or does not provide efficient and effective services. These include:

i. Combating animal and plant pests and epidemics
ii. Animal immunization against epidemic diseases
iii. Carrying out applied agricultural scientific research and agricultural extension
iv. Conducting laboratory analysis related to agricultural production
v. Combating desertification and protecting biodiversity
vi. Establishing and managing agricultural development projects

vii. Providing agricultural information and data
viii. Agricultural machinery and equipment rental
ix. Providing data related to the marketing of agricultural products
x. Encouraging agricultural cooperative work and agricultural cooperative societies in a serious and effective manner

The MoA manages a significant stock of land. This includes all treasury lands that are not registered with anyone, all range and forestry land, and Range Land Reserves (natural reserves that are being protected for their plant diversification and non-native plants which feed the Seeds Bank). All livestock owners have the right to use all the Ministry's lands except for the protected range lands. In addition, the Ministry has produced agricultural digital maps and land use maps.

a. Environmental Social Screening and Assessment

This section describes the existing Jordanian regulatory framework and MOA processes for screening and assessing environmental and social risks and impacts applicable to Ministry of Agriculture activities under the program.

Environment Protection Law No. 6 of 2017 identifies MoE as the entity responsible for protecting the environment in Jordan. The Law gives MoE the authority of issuing environmental licensing, carrying out environmental inspections of establishments, and taking necessary actions in case of severe pollution incidents. Under this law, Environmental Classification & Licensing Regulation No. 69 of 2020 was issued to govern the EIA system through a committee lead by MoE with 16 members from governmental institutions including MoA. The regulation classifies projects and activities according to their E&S risks and defines the level of assessment required for these risks. There are four categories of projects under the classification law:

(i) high risk (full-fledged EIA required): activities that cause large environmental impacts on elements of the environment and their ecosystem services, or significant risks on the environment and/or human health.
(ii) moderate risk (Preliminary EIA required): activities that cause moderate environmental impacts on elements of the environment, their ecosystem services and/or human health.
(iii) limited risk (environmental approval required for verifying the location but no environmental assessment instrument is required): activities that cause possible limited impacts on elements of the environment, their ecosystem services and are geographically limited to their locations; and
(iv) low risk (no need for MoE approval, apply general environmental conditions related to noise and disposal of sewage): activities of low environmental impacts.

The annexes of this regulation include four tables that describe different activities under each of the above four categories. Under the Environmental Classification Law dams and artificial lakes are considered high risk projects and require a full EIA process, which *may* include Hafirs and earthen dams proposed under the program.

The regulation requires that an EIA Committee be formed at MoE to review and approve EIA, Preliminary EIA or environmental licensing requests. The EIA Committee could upgrade a project from the second to the first category if there is potential for wide or significant impacts.

Consultation requirements under the EIA law are limited to the high-risk category projects, where the entity preparing the EIA is required to conduct a scoping session with selected stakeholders for identifying the EIA terms of reference. Other consultation may be required as necessary. Selected stakeholders are usually community leaders or representatives of the potentially affected communities, Community Based Organizations (CBOs) including those work on women and gender rights, environmental NGOs, services providers within the project area, academia and local governmental institutions. EIAs are not required to be disclosed.

The environmental license is valid for 5 years. Annex 2 and 3 of the Decree include the minimum requirements that should be included in an EIA and PEIA respectively, and it is clearly mentioned that all environmental, social, cultural and economic impacts should be identified including cumulative impacts. Also, analysis of alternatives, mitigation measures and remaining impacts (after mitigation) and environmental management and monitoring plan are required per the Decree. For existing facilities in operation, there are certain requirements for conducting an Environmental Audit (EA). This is regulated by the Environmental Auditing instructions issued in 2014. According to those instructions, in case of dangerous violation, the violating institution will be notified of the obligation to do an EA. The EA must be performed by a consultant approved by the MoE within a certain timeline set by the MoE. When the EA is approved, the proponent submits a commitment to implement the mitigation plan with a bank guarantee.

Implementation Arrangements and Performance

Ministry of Environment: Both Law 6/2017 and Law 16/2020, and their related Decrees, are implemented by the MoE. Environmental licensing is carried out through the Environmental Licensing Department, which receives the licensing applications, and a Licensing Committee screens the project to one of the EIA Categories of Decree 69, and those projects under Category 1 and 2 are transferred to the EIA Department to supervise the preparation of EIA and PEIA respectively according to the requirements of Decree 69/2020. EIAs and PEIAs are reviewed by an EIA Committee that includes representatives from different line ministries. When an EIA or PEIA is accepted, the Licensing Department is notified to issue the license. Once the License is issued the EIA/PEIA with the correspondent Environmental Management Plan (EMP) is transferred to the Inspection Department in MoE to follow up on the EMP implementation.

The Environmental Inspection Department in MoE is carrying out inspection for projects under the 4 EIA categories, even if they do not have an EIA/PEIA. Environmental inspection is coordinated with other inspections, conducted by other entities, per Inspection Law 33/2017. The Law streamlines inspection mandates and processes of several inspectorates in Jordan, including inspection units at MoE, MoL, MoTA and Civil Defense Directorate (for safety against fires and community risk issues) and reduces overlapping inspection

mandates and unplanned inspection visits. Different Decrees were issued in 2018 to further clarify inspection process, including Decree 110/2018 which identifies the procedures for monitoring and inspections that should be followed by different entities, and Decree 113/2018 which identifies the qualifications of inspectors.

The EIA and Licensing Departments are staffed with 2 and 4 staff respectively, but the EIA/PEIA and licensing decisions are taken by the correspondent committee as mentioned above. As the Licensing Department is responsible to carry a site visit for each Licensing application under categories 1, 2 and 3, it seems the workload for each staff member is relatively high. However, because most of those visits are under Category 3, which are small sites, the Licensing Department is processing all applications on a timely basis. EIA department is supported by technical capacity building from international donors on aspects relating to the new 2020 decree such as risk assessment. EIA department is also working with German Agency for International Cooperation (GIZ) on how to incorporate gender into environmental impact assessment.

It is worth noting that the Netherlands Commission for Environmental Assessment conducted an assessment of the ESIA system in collaboration with MoE in February 2020[8]. The assessment concluded that there is a strong regulatory framework, with clear and effective mechanisms to undertake the steps in the process, such as screening and review. The procedure is user-friendly, and timelines are upheld. The assessment recognized that there is a steady level of ESIA practice in Jordan: around 30 comprehensive ESIAs are undertaken on an annual basis. A professional community has grown around this practice, consisting predominantly of governmental staff and consultants, and complemented in small numbers by academics and experts working for international organizations. Areas for improvement are related to monitoring of the ESIA measures during project implementation. Jordan could also benefit from increased stakeholder engagement in ESIA. This would require development of capacity amongst NGOs, as well as improving the arrangements for stakeholder engagement. The study also identified that there is a need to strengthen capacity amongst government staff at the Ministry including the technical review committee, those involved in compliance monitoring and enforcement of the conditions that are attached to environmental approval.

The study also noted the absence of Strategic Environmental and Social Assessment requirements applicable to government policies and strategies. It should be noted that a Strategic Environmental and Social Assessment of the National Tourism Strategy under the Transparency Investment and Climate PforR funded by the World Bank (P175662) is being conducted by UNDP as a Program Action Plan requirement, as well as capacity of MoE inspectors being added.

Ministry of Agriculture: Ministry of Agriculture is responsible for seeking approval and permits from Ministry of Environment for its projects and activities. As noted above, RWH structures including hafirs and earthen dams fall under the category of A of Environmental Classification & Licensing Regulation and are subject to a comprehensive EIA. To date, MOA

[8] https://www.eia.nl/projectdocumenten/00007593.pdf

has not obtained environmental permits from MoE. for any such structures. MoE has limited resources in monitoring and inspection departments which make it difficult to detect every new activity or project in the country, nevertheless, it remains the responsibility of the project owner to initiate the environmental approval process. MoA does apply a technical site selection criterion, in consultation with the requestor (who may be a livestock owner or cooperative), that assesses the geotechnical and hydrological characteristics of sites alternatives. The requestor proposes 5 locations among which the MoA select 2 locations where hydrological and geotechnical studies are performed to feed in the design of the selected site. This process does not systematically consider a full range of environmental and social considerations (e.g., ecology and natural habitats of wadi systems where earthen dams are usually constructed, down-stream water uses of wadi system especially small livestock herders, etc.). MoA has completed 130 Hafirs and 38 earthen dams to date.

The MoA has a large organization structure, however, the number of technical staff at each directorate or division is limited and such under staffing has made the implementation of E&S screening and assessment at the project design and implementation level is limited. The MoA does not have a well-structured E&S management system where clear policies, plans and procedures for managing E&S risk. This low E&S performance may have implication of some of the program proposed activities, such as, RWH activities in construction of Hafirs and earthen dams.

Extension services and training programs lack proper consideration of Environmental, social and health and safety aspects relevant to the farmers through their daily works and operation.

Findings

The identified gaps in environmental and social screening and assessment systems relevant to proposed activities of the program are as follows:

i. MoA's 130 existing Hafirs and 38 existing earthen dams do not have environmental permits or approvals through EIA process as may be required under Environmental Licensing and Classification Regulation for dams and artificial lakes. Further MOA does not conduct systematic screening of RWH structures to identify risks, impact and regulatory requirements.
ii. There are no national regulatory requirements yet for SESA. The RWH operational framework will incorporate results from watershed level mapping and water balance. The ESSA recommends that a SESA also be undertaken in connection with the operational framework for RWH to consider (i) other water harvesting strategies and Badia restoration programs implemented by other institutions such as MoE (ii) other regional-scale environmental and social aspects including current land-use, migration patterns of Bedouins as well as bird species that use RWH structures to make informed decisions on siting of rainwater harvesting. E&S
iii. The MoA lacks specialized personnel in E&S issues therefore E&S risks screening at projects planning and monitoring is inadequate for PforR program requirements

iv. Extension programs focus on agri-technical aspects of farming with no proper attention to E&S risks associated

b. Natural Habitats

Different relevant agriculture regulations that are relevant to natural habitats and biodiversity preservation are also relevant to some proposed activities of the program. Such as:

I. Instruction for regulation and Management of Governmental Forestry and Rangelands at Treasury Rangelands No. 1 of 2017. This instruction prohibits the cutting of protected defined natural trees species, in addition to regulating the grazing at natural forage in order to preserve the natural vegetation cover. This regulation must be addressed during the planning and implementation of RWH structures at the Badia. These activities shall maintain and enhance the grazing activities at the Badia but not to limit or restrict grazing at certain areas which will lead to overgrazing that will deteriorate the vegetation cover and reduce ecosystem and natural habitats functions.

II. Instructions on the Protection of Wildlife and Wild Birds and Regulating its Hunting and Trade No. 2 of 2021. This regulation although under the mandate of the MoA but the implementation and monitoring of this regulation is under the Royal Society for Conservation of Nature (RSCN) which is a local NGO. By this regulation, only registered hunters at RSCN database can perform legal hunting for allowed game species at allowed seasons. RSCN rangers are responsible for monitoring the implementation of this regulation. The regulation also monitors the implementation of The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) agreement that was ratified by GoJ. Proposed RWH interventions of hafirs and earthen dams at Badia may create attraction locations for migratory birds which may subject them to the risk of capturing and hunting, especially raptors, some of these species are global and regional conservation importance.

III. Instructions for Fishing at Freshwater Bodies No.44 of 2016. This regulation is under the mandate of the MoA, where it defines allowable fishing techniques, allowed locations for fishing, also it controls fish farming by defining the allowable fish species to be farmed at open water bodies i.e., dams. The regulation also prohibits fishing at protected wetland reserves as well as at breeding locations of the endemic Sarahani fish species. The regulations are administrated by a committee formulated by the MOA with members from the MoA, MWI, Royal Rangers, academia, and NGOs. Proposed RWH structures may create opportunities to farm fish species, such practice needs to be properly monitored to limit the possibility of spreading of unallowed species at wadi systems in the Badia especially at RWH structures that remain almost a year around and subject to flood at rain seasons.

Implementation Arrangements and Performance

The MoA performance in protecting natural habitats is varied, where control and management of hunting wildlife and birds is relatively adequate due to proper capacity of the implementing organization (RSCN), but activities performed by the MoA do not take this

concern into account. In relevance to RWH at Badia region, construction of Hafirs and earthen dams do not consider the ecology of the selected sites for this intervention, especially issues of habitats fragmentation and connectivity of ecological corridors along Badia region. Although these specific interventions may comprise opportunities to enhance the habitats for some wildlife species like migratory birds, but this not properly managed and maximized.

Findings

a. The MoA does not adequately consider natural habitat protection at the projects implemented by the ministry, especially those related to RWH in the Badia region either in planning or implementation phases
b. the MoA does not have specialized capacity in natural habitat preservation.

c. Health and Safety

Jordanian Labor Law No. 8 of 1996 and its Amendments regulates the relationship between the employer and the employee and defines the obligations of the employer to provide a safe work environment, adequate code of conduct and suitable welfare for employees. The Ministry of Labor is mandated for Labor Law enforcement. It is the responsibility of the activity owner to apply these regulations to any civil works under the program, for example to construct hafirs and earthen dams. Household level RWH are typically installed by farmers themselves and they are responsible for applying the laws in these cases. The program also takes place within the context of the agriculture sector and might result in increased agricultural productivity and expansion of agricultural lands leading to increased employment on farms. Agricultural workers face a number of health and safety risks.

Until recently, the Labor Law did not cover agricultural workers. In 2021, Government of Jordan issued the Agricultural Workers Regulation No.19 of 2021 under the Labor Law to fill this gap. The regulation covers key labor issues and incorporates many good international labor practices including working hours (8 hours a day and not to exceed 11 hours upon agreement with worker); annual leave; paid medical leave and maternity leave; registration of workers in social security by the employer; minimum age of employment is 16 for routine agriculture works and age 18 for hard physical works; prohibition of forced employment; prohibition of sexual and physical harassment at workplace, equity in rights and wages despite of gender of worker, employer commitment with minimum wages defined by MoL. The employer is required to provide a safe and healthy working environment and adequate accommodations according to a new set of OHS instructions issued by the Minister of Labor.

The Occupational Health and Safety Instructions at Agricultural Workplace, also issued in 2021, obliges the employer to apply all necessary measures to protect the worker from mechanical, physical, electrical, biological, chemical and fire and explosion risks and hazards at workplace. Also, employer must: provide all required Personal Protective Equipment to workers, perform medical check for worker to ensure his physical fitness and he/she is free of any communicable diseases; training and induction for workers; provide special arrangements to protect pregnant and nursing working women; be responsible for the

safety of temporary and short-term workers; provide safety warning signs regarding the OHS risks at workplace; provide required first aid kits at workplace; be responsible for providing safe and hygiene conditions at workers accommodation; and employer responsible for medical treatment and compensation of lost time for injured worker who is not registered at the social security and employer responsible for keeping all workers records including those related to OHS performance. Workers are responsible for compliance with all OHS instructions at workplace, and to attend trainings and inductions relevant to OHS provided by employer.

Implementation Arrangement and Performance

Although the regulations have covered a wide range of health and safety aspects and provide the legal mandate for enforcement, implementation has lagged, and enforcement is still limited. MOA's procurement processes for hafirs and earthen dam construction requires a contract that is based on FIDIC, but contract supervision and monitoring need to be improved.

A range of stakeholders during ESSA consultations noted the lack of enforcement of labor law. Farmers who are already economically strained by effects of climate change, expressed concerns about the costs of applying the new agriculture workers regulation and OHS instructions, in particular the cost of enrolling workers in social security and health insurance for small farmers. Women participating in the Focus Group Discussions described in Annex 2, expressed a number of concerns about inadequate working conditions for women in agriculture including lack of PPE, lack of medical attention to incidents such as snake bites and risks of reprisal, risks of sexual harassment; low and inequal pay between women and men. Women also encouraged a number of interventions that would contribute to addressing such issues including training on labor rights and organization into worker committees; access to childcare; accessibility to a grievance mechanism.

ILO supports a number a number of interventions in the agriculture sector in Jordan to promote decent work and collaborates often with MOA. They have good expertise on competency-based training. They have worked extensively on building capacity of cooperatives and have developed a specific training module on OHS for Jordan; they have worked to organize worker management committees to act as a way for agricultural workers (who are not unionized) to organize; training for unskilled jobseekers on labor rights, etc. They also had a pilot program to train MOA extension agents on decent work topics. They are working through a process of establishing a tripartite committee with GOJ (ILO, labor organizations and MOL) that eventually would pull in other ministries such as MOA.

Findings

Regulations for health and safety and working conditions in the agriculture sector lack enforcement and agriculture workers especially vulnerable workers face significant health and safety risks. The responsibility for improved legal enforcement falls under MoL. However, MOA has shared objectives in improving living standards and productivity in the agriculture sector. MOA's extension agents, with their technical knowledge and

geographical presence are well positioned to transfer knowledge on health and safety during regular interactions with farmers in the field and at Farmers Field Schools. The Program will significantly enhance the number of Extension Agents. The ESSA recommends that Extension Agent curriculum include relevant topics on OHS and other topics on labor and working conditions. This training should be provided by qualified experts. Centralized capacity of MOA should also be enhanced. ESSA also recommends that MOA and MOL further engage in strategic dialogue and align on improved results indicators for decent work in agriculture.

d. Child and Forced Labor

Child labor including its worst forms, is prevalent in all the sectors of the Jordanian economy, especially the agriculture sector. According to the National Child Labor Survey of 2016[9], around 1.9 percent of children aged 5–17, representing 700,000 children, are working under child labor conditions. The majority of child laborers are boys (nearly 90 percent of child laborers), and they work an average of 34.5 hours per week. Child laborers work in the agriculture, manufacturing, construction, and wholesale and trade sectors. However, the largest share of working children occurs in the agriculture sector – 42.7 percent of economically active children ages 7 to 14 years were engaged in agriculture, including weeding, planting, and harvesting tomatoes and olives in 2016.[10] This rate represents a 2.7 percentage point increase compared to 2007. Girls are more actively engaged in agriculture than boys (52.2 percent of all economically active females ages 7-14 were engaged in agriculture compared to 40.9 percent of boys). By contrast, the share of children engaged in manufacturing and services is 14.7 percent and 42.6 percent, respectively.[11] As many as 32 percent of child laborers are employed in work that negatively impacts their health and or development, including in the agriculture sector.

Child labor is prevalent amongst both Jordanians and Syrians, while children of Syrian refugee families may face additional risks. About 80 percent of working children are Jordanian, and about 15 percent are Syrian. Despite being granted access to Jordanian public schools, children of Syrian refugees are less likely to enroll in formal schools – in 2018/19, almost one third of all Syrian refugee children were not enrolled in informal or formal schools. [12] Syrian refugee children face barriers to education, including the cost of transportation, uniforms, and school materials and may turn to negative coping strategies including early child marriage, radicalization, and child labor.

There are some risks of forced labour in relation to the employment of low and semi-skilled migrants in primary agriculture. Migrant workers are particularly vulnerable to forced labour given that their legal status and right to work are tied to their employer. The Jordanian Labour Code requires that international migrant workers who wish to work outside of

[9] Center for Strategic Studies, University of Jordan. National Child Labour Survey 2016 of Jordan - Summary Report on Main Findings. August 2016. https://www.ilo.org/beirut/publications/WCMS_510520/lang--en/index.htm.
[10] Understanding Children's Work project based on data from ILO, UNICEF and the World Bank. Available at https://data.worldbank.org/indicator/SL.AGR.0714.ZS
[11] Center for Strategic Studies, University of Jordan. National Child Labour Survey 2016 of Jordan - Summary Report on Main Findings. August 2016. https://www.ilo.org/beirut/publications/WCMS_510520/lang--en/index.htm.
[12] https://www.dol.gov/agencies/ilab/resources/reports/child-labor/jordan

Qualified Industrial Zones are recruited through a sponsorship system (commonly called Kafala), which effectively ties the legal residency of the migrant worker to their labour contract. Resident permits under this system are only issued for one year and employers are responsible for renewing the permits annually [13]. Many migrant workers are forced to pay excessive recruitment fees to unauthorized agents and intermediaries to secure their employment[14]

This system presents a risk factor for forced labour as the terms and conditions of residence and work for migrant workers, to a large extent, continue to be determined by the sponsor, e.g., non-Jordanian workers are not permitted to change employer without the previous written permission of the sponsor[15] . Passport confiscation, restriction of movement and passing of financial costs of recruitment and employment onto workers is reportedly common practice[16].

A legal and regulatory framework is in place to eliminate child labor in Jordan, but gaps remain. [17] Jordan ratified six international conventions on Child Labor, including the Minimum Age Convention in Age Convention, 1973 (No. 138), the Worst Forms of Child Labour Convention, 1999 (No. 182), and the UN Convention on the Rights of the Child. In addition, in 2011, the Government of Jordan adopted a National Framework to Combat Child Labor.
Jordanian Labor Law No. 8 (1996) and the recently issued Agricultural Workers Regulation No. 19 (2021) prohibits any employment of children under 16 years of age for agricultural work , and under 18 years in agricultural work that is dangerous, exhausting or harmful to health, subject to determination by the Minister. (Between 16 and 18, minors are limited to the hours and duration that they can work The Agricultural Workers Regulation (2021) is recently issued and implementation is in early stages.

The Government of Jordan has several ongoing measures to prevent and eliminate child labor. [18] The Child Labor Unit of the Ministry of Labor, which is one of the agencies responsible for Child Labor Law enforcement, established a digital monitoring system to coordinate the efforts of the Government and civil society to eliminate child labor and provide child laborers with services. The Government also supports a number of social programs with the goal of preventing child labor by supporting children engaged in child labor. For example, the Child Labor Unit within the Ministry of Social Development (MoSD)

[13] *A Challenging Market Becomes More Challenging – Jordanian Workers, Migrant Workers and Refugees in the Jordanian Labour Market* (ILO, 2017): https://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-Beirut/documents/publication/wcms_556931.pdf
[14] *Migrant Support Measures from an Employment and Skills Perspective (MISMES) (ETF, 2017)*: https://www.researchgate.net/profile/Ummuhan_Bardak/publication/321803589_MIGRANT_SUPPORT_MEASURES_FROM_AN_EMPLOYMENT_AND_SKILLS_PERSPECTIVE_MISMES_-_JORDAN/links/5a327968458515afb6f43531/MIGRANT-SUPPORT-MEASURES-FROM-AN-EMPLOYMENT-AND-SKILLS-PERSPECTIVE-MISMES-JORDAN.pdf
[15] *Jordan Decent Work Diagnostic*, Regional Office for the Arab States (ILO, 2017): http://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_542358.pdf
[16] *A Challenging Market Becomes More Challenging – Jordanian Workers, Migrant Workers and Refugees in the Jordanian Labour Market* (2017): https://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-Beirut/documents/publication/wcms_556931.pdf
[17] https://www.dol.gov/agencies/ilab/resources/reports/child-labor/jordan
[18] https://www.dol.gov/agencies/ilab/resources/reports/child-labor/jordan

supports child laborers, returns them to school, and provides services to their families; provides vocational training for youth; organizes training on child labor for families; and maintains the website of the National Child Labor Database. In 2019, they expanded the benefits received through the National Aid Fund to more families and conditioned cash receipts on families re-enrolling their working children in school.

Forced labour is prohibited under Article 13 of the Jordanian Constitution (but not explicitly in the Labour Code). Employers may also be penalized for employing workers illegally, under duress including confiscation of passports under the Penal Code. Jordan also enacted the Anti-Human Trafficking Law in 2009. This law prohibits all forms of trafficking and prescribes penalties of up to ten years of imprisonment for forced prostitution and trafficking, including child trafficking. There has been a recent loosening of the kafala system for Syrian refugees in the construction and agriculture sectors, providing them with the flexibility to change employers.

Findings

Gaps exist in Jordan's legal framework to protect children from the worst forms of Child Labor. Additionally, capacity and resource constraints hinder the Ministry of Labor's ability to enforce the different child labor laws – despite an increase in inspectors from 135 to 171 in 2019, the high number of child labor cases per inspector may prevent inspectors from enforcing the law correctly. A new agricultural by-law has been introduced that regulates working conditions and sets a minimum age for agricultural workers however the by-law is not yet substantively being enforced. While Jordan has a national Committee for the Prevention of Human Trafficking, the country lacks an active coordinating mechanism to address child labor in other contexts, including farm work. The scope of GOJ's programs does not include all the sectors, such as the worst forms of child labor in agriculture and are much less established in rural areas where Syrian work.

Similar to other aspect of Labor Law, the Ministry of Agriculture has maintained an awareness-raising role, while enforcement of the provisions of laws on child labor has been the purview of Ministry of Labor or other enforcement agencies in the case of forced labor. The Ministry of Agriculture does not have any dedicated programs or expertise on child or forced labor. As mentioned previously, they have partnered with ILO on a pilot project to train extension agents on labor rights.

The program will contribute to addressing root causes of child labor by contributing to shared prosperity and productivity of livelihoods and reducing farmers' propensity to rely on child labor, particularly harmful child labor, as a coping mechanism. The ESSA recommends a number of safeguard measures to mitigate the risks of child labor across the interventions of the program and for MOA to take an expanded role and build capacity to address root causes of child labor:

(i) MOA will develop and implement a Child Labor Action Plan in coordination and collaboration with Ministry of Labor, and relevant CSOs.

(ii) Extension agents will be used as an entry point for knowledge transfer; core curriculum will be enhanced with information about national laws and good international practice on decent work and OHS that will trickle down to farmers

(iii) Job training/certification (and employment) under DLI3 will shift workers away from unskilled, informal work to higher skilled areas. Minimum age of trainee will be 18, and training topics will include training on labor rights and accessibility to program GRM. Employment will require a written contract with terms and conditions consistent with National labor law, specifically the agricultural by-law

(i) Putting in place safeguards mechanism for the reimbursable grants for ensuring safe working conditions and prohibitions on child labor

(ii) Inclusion of decent work and/or child labor free certifications as part of traceability systems developed will be further explored

e. Pesticide and Fertilizers Management

The program will support the adoption of effective and water savings technologies at farm level such as aquaponics, hydroponics, adoption of treated wastewater sources and advanced smart irrigation systems. Although the program will not finance the procurement of pesticides and fertilizers, water saving interventions might result in increased agricultural productivity and expansion of agricultural lands leading to increasing the use of pesticides and fertilizers which would need to be managed, applied and disposed of adequately and in a controlled manner.

The Kingdom of Jordan has well defined legal and regulatory framework to permitting/licensing and managing pesticides and fertilizers. The Agriculture Law No.13 of 2015 mandates the Ministry of Agriculture to regulate activities in the agricultural sector, including the production, import, trade and handling of pesticides and fertilizers in Jordan.

This Agriculture Law -which consists of 73 articles and is divided in XIV Sections stipulates that the Ministry of Agriculture shall regulate, organize and develop the agriculture field in order to, inter alia, increase the production of food and foodstuffs; protect animals and face animal and plant diseases and epidemics.

Public health measures and sanitary plant measures are discussed in articles 5-8. The Ministry of Agriculture shall: issue the directives required to organize plant production in a manner that secures efficiency of production and conservation of the agricultural resources and the environment. The Law establishes that licenses are required for: producing, propagating, trading in seeds, fertilizers, plant growth regulators, the veterinary medicines, bio-veterinary preparations or animal growth regulators; producing or preparing pesticides and producing or preparing materials of raw feed of animal origin, manufactured feed or feed additives.

Prohibitions for producing, preparing, trading or handling pesticides without prior license from and registration by the MOA are stipulated (Article 21A).

Article 22 mandates the Minister of Agriculture to issue instructions to prevent the spread of pests and plant diseases, including measures for protecting against pest and pandemic diseases through Integrated Pest Management and chemical and biological equipment and materials and conditions of safe use. Such instructions have recently been issued by MOA (nr. Z/7 of 2021 "Instructions for Pesticides Registration, Manufacturing, Preparation, Import, Trading and Handling). The instructions provide the requirements for registering and re-registering pesticides for manufacturing, export, import or use in Jordan. The instructions allow for registering pesticides which are registered in countries with advance registration systems such as EU, USA, Australia, Japan and Canada after providing certificate of analysis proving that the pesticide's specifications meet the standards of the World Health Organization (WHO) and Food and Agriculture Organization (FAO). The Instructions do not allow registering pesticides which are banned in Jordan or in the country of origin for reasons related to impacting human or animal health or the environment. Article nr 43 provides the conditions which should be met by pesticide manufacturers including guidelines for factory's design, machines, environmental, health and fire safety, occupational health and safety measures and PPEs requirements. Furthermore, there are instructions for licensing pesticides' wholesalers and retailers.

On fertilizers and plant growth regulators, Article 20-A prohibits the production, preparation, handling and trade of fertilizers and plant growth regulators before registering and licensing the fertilizer by the Ministry of Agriculture.

MOA also recently issued 'Instructions n.r Z/6 of 2021 on Registration, Production, Import, Analysis, Selling Agricultural Fertilizers and Plant Growth Regulators'. These instructions provide guidelines for fertilizers which are imported or manufactured locally and are allowed to be registered. The instructions provide for forming the technical committee which are mandated with evaluating applications for registering agricultural fertilizers and plant growth regulators, as well as the renewal or cancellation of existing licenses. Guidelines for analyzing, testing and examining fertilizers and plant growth regulators are also provided. Specific instructions regulate licensing factories for manufacturing fertilizers and regulators, including conditions related to factory location, buildings, labs, machines and safety. Other sections provide requirements for importers, wholesalers and retailers.

Implementation Arrangements and Performance

The MOA Pesticides Department is part of the s to the Plant Protection and Phytosanitary Directorate and is responsible for implementing requirements related to pesticides regulations stipulated in Agriculture Law 13/2015 and relevant instructions as well as implementing decisions of the Pesticides Registration Technical Committee.

The Pesticides Registration Technical Committee plays a key role in regulating pesticides in the county as this Committee is entrusted with the duty of licensing agricultural pesticides for import, export, trade and local manufacturing. The Committee is composed of representatives of several national authorities and headed by the director or deputy director and the following members:

i. A representative of the Ministry of Health
ii. A representative of Jordan Food and Drug Administration
iii. A representative of the Royal Scientific Society (RSS)
iv. Two representatives of public Jordanian universities/ Faculty of Agriculture
v. A representative of the Ministry of Environment
vi. Two members of the Union of the Traders and Producers of Agricultural Material
vii. A representative of Jordan Chamber of Industry
viii. A representative of the National Agricultural Research Centre (NARC)
ix. A representative of the Agricultural Engineers Association
x. A representative of Plant Wealth Labs / the Ministry of Agriculture
xi. The head of Pesticide Registration section
xii. The head of Monitoring Pesticide Manufacturing and Import section

The Plant Protection and Phytosanitary Directorate implements programs for monitoring and targeting pests which impact crops of economic value, using chemical pesticides and Integrated Pest Management methods. Instructions Z/7 of 2021 on Pesticides which are mentioned above provides for prompting the use of biological control agents. For increasing farmers' awareness on pesticide application and management, extension services are provided to farmers by the 116 staff of the Extension Department of the Ministry of Agriculture. These services are provided using various platforms including by direct visits to farmers, through 42 Farmers Field Schools which cover the country and more recently by using social media. Furthermore, MOA has recently issued guidelines and awareness materials on registration, handling, and safe application of pesticides as part of the ministry's plan to enhance the outreach to farmers and other beneficiaries. The extension services cover multiple topics including plant phytosanitary. In terms of control of the quality of pesticides -only registered safe pesticides are used- several tools are used to ensure adequate control over quality, mainly through the process of registration at the Ministry of Agriculture, as well as control over borders to ensure ban of non-registered products and the inspection over distribution and trading outlets.

The Fertilizers Department of the Land and Irrigation Directorate is responsible for managing fertilizers in the country in collaboration with the Plant Protection Committee which is formed in accordance with the Z/6 Instructions mentioned above. The Committee is in charge of licensing fertilizers' manufacturing, import and trade. The staff of the Fertilizers Department at the Ministry of Agriculture monitors fertilizers which are manufactured locally or imported to the local market to ensure compliance with national standards and licensing requirements. The Extension Services relevant to the use of fertilizers is provided by the Extension Department of the Ministry of Agriculture, this includes provision of fertilizers – 10.1 tons were provided to farmers in 2021 – as part of the extension services for plant protection. Moreover, and as part of monitoring visits by the staff of Fertilizers Departments, the staff provide awareness to manufacturers, wholesalers and retailers on different aspects related to fertilizers licensing and management.

Findings

Legal and institutional arrangements are in place for managing pesticides which are imported to the country, nonetheless, there is risk relating to non-registered, banned pesticides which could leak in the local market posing risks to public and environmental health. The arrangements described above for licensing and controlling pesticide which are imported and traded in the country reasonably minimize this risk. However, another risk which is more difficult to control is the compliance of farmers of the pesticide's dosage and safe period between pesticide application and crop harvesting (preharvest interval); and to ensure that no pesticides residues on the crop after harvest. Currently, there is lack of guidelines for the safe application of pesticides for different agriculture products; as well as lack of structured and regular monitoring programs to verify if farmers adhere to requirements of pesticide dosage and preharvest interval, which poses risks on the health and safety of workers, local communities and consumers of agricultural products. In this context, extension services should be enhanced to increase farmers' awareness on adequate application and pesticide dosage as well as other relevant measures including community and occupational health and safety measures of pesticide application to minimize risks on workers and local communities. Similarly, monitoring programs should be systematically developed and implemented to ensure farmers' compliance with adequate application of pesticides and relevant occupational and community health and safety measures.

In terms of promoting Integrated Pest Management, promotion programs and extension services are required to minimize current common practices of using chemical pesticides and promote the use of biological control agents, which is in accordance with the new Instructions of Z/7 that provides for promoting the use of biological agents for pest management.

f. Agricultural and Hazardous Waste

Waste management is regulated by the Framework Law for Waste Management No. 16 of 2020. The Law is under the mandate of Ministry of Environment and requires waste generators to apply reduction, reuse and recovery of waste and for remaining waste to be treated and disposed according to proper environmental procedures. Although this regulation is under the environmental regulations in Jordan, but it indicates that The Ministry of Agriculture shall manage, supervise and control Waste in agricultural, pastoral and forest lands, and Waste resulted from the agricultural sector with regards to Waste Collection and Transport. And it may seek the assistance of the private sector for that. The Law also requires that generators of any amount of hazardous waste to keep records of those amounts and how they are handled and requires operators of hazardous waste facilities to be licensed from MoE and to apply processes that would minimize the environmental impacts of handling and disposal of such hazardous wastes. This law includes the regulations below that relate to waste management:

Decree 68/2020: includes certain procedures obtaining a permit for hazardous waste management and certain requirements for segregation, storage, transport, treatment, disposal and process documentation of hazardous waste. The Decree includes specific requirements for the disposal of containers of hazardous substances.

Decree 85/2020: requires the establishment of information database that includes information about the quantities of waste generated (from sources that exceeds 1,000 tons/year non-hazardous waste or any quantities of hazardous waste) waste admitted transferring stations and landfills, monitoring data of landfill leachate and gas emissions, information about operators of waste handling facilities

Other environmental management aspects related to air quality, water quality and noise are covered under Law 6/2017 and different Decrees and standards that identify emission/discharge standards and ambient air and noise standards.

Implementation Arrangements and Performance

Agricultural waste is considered as an environmental challenge, especially those related to poultry manure and olive mill wastewater. The present 7 facilities in the country that process poultry waste into natural fertilizers did not resolve the issue of using untreated chicken manure as fertilizer which created a severe environmental problem of spreading flies and pathogens especially at Jordan Valley. Olive mill wastewater contains suspended olive press cake, this effluent produced from olive oil production exhibit highly phytotoxic and antimicrobial properties, mainly due to phenols, Phenols are poisonous caustic crystalline compounds. The only practice is that olive mills have evaporation ponds to collect effluents but the phenol-contain solid residues are still hazardous and no facility exists to treat this waste.

The hazardous waste related to agricultural activities are mainly the waste pesticides, pesticides empty containers, in addition to waste vaccines and their empty vials. The common practice for treating these hazardous substances is to transfer waste vaccines to the central incinerator in Amman, and to transfer the waste pesticides to Swaqa Hazardous Landfill, nevertheless, MOA does not have a solid system for tracking and recording the required handling and disposal of this waste.

Findings

a. The country still lacks facilities to treat residual solid waste generated at olive mills, where this controversial issue on the responsible party has been legally decided to be under the responsibility of MOA.
b. MOA lacks a solid system to track the process of handling and management of hazardous waste generated in the sector
c. Extension programs are mainly focused on the safe use of pesticides while safe disposal of their waste is not properly delivered

g. Land Acquisition and Loss of Access to Natural Resources

As noted in Chapter 2, land acquisition is not expected under the program. All activities will take place on MOA lands or on private lands. Land related impacts may only arise in scenarios where informal land users are cultivating crops in areas that will be used to construct Hafirs or Earthen dams that become flooded. Recommendations to conduct alternative analyses through Strategic Assessment, and screen individual sites, will minimize impacts to the extent possible.

Land acquisition is a government led process that follows the Real Estate Law (REL) No. 13 of 2019, has been published at the national gazette in 2019 to replace different laws including Land Acquisition Law No.12 of 1987. The aim of this law was to create a stable legal framework for realthe real estate sector that comprises 60 percent of fixed assets in the country, and directly impacts the national economy. This new law will have economic and social benefits that previous laws have not considered including incentivizing the investment in the real estate sector. However, for the land acquisition process, the major differences between the previous law and the new one is to define properly the time frame for implementing the acquisition process, and to expedite the compensation process. Regarding CP4 of the PforR program requirements, loss of access to natural resources is not well addressed by Real Estate law as proposed RWH especially earthen dams may cause flooding of natural pasture lands which according to this law is government owned land (Treasury Land), so impacted herders do not have the legal right according to this law to be compensated.

Implementation Arrangements and Performance

As the proposed activities at the PforR program do not include LA, loss of access to natural resources will be relatively discussed at this chapter.

This impact is not properly addressed at the national regulatory framework including those of the agriculture sector. The major concern is related to RWH at the Badia program by the MoA that is not governed by legal instrument pertaining loss of access to natural resources, especially for the small livestock herders where the selection criteria for RWH interventions is driven by the demand of large livestock herders which can lead to limit the access to water resources. In addition, the flooding of potential pastureland by the RWH structures is not well addressed in the planning and studies performed by the MoA.

Findings

The following aspects represent the main implementation gaps:

i. Access to natural resources is not properly addressed by the national regulations or by the site selection and investigation criteria for RWH interventions in the Badia area.
ii. The national sustainable agriculture strategy does not address this potential impact the need to be addressed by SEA or EIA process

h. Social Inclusion and Vulnerability

In accordance with PforR Core Principle 5, the ESSA examines the extent Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the needs or concerns of vulnerable groups. As noted in the environmental and social risk screening (Chapter 2), the program is expected to result in improved livelihoods in the agricultural sector for beneficiaries, and specifically promotes inclusion of a number of vulnerable groups namely women, youth, and refugees, through various interventions. There are several groups engaged and working in the agriculture sector in Jordan, which may be considered vulnerable.

Women: Jordan ranks among the countries with the lowest rates of women's labor participation, only followed by the war-torn Syrian Arab Republic and the Republic of Yemen. Women's labor force participation rate is 14.6 percent compared to about 63.9 percent for men. Women who are willing to participate in the labor market face high unemployment rates and tend to be paid less than men for similar work. Despite the country's relatively high ranking on the Human Development Index (102 out of 189 as of 2020), gender gaps in economic participation and empowerment persist due to a combination of legal, structural, and institutional barriers combined with widespread expectations around women's traditional role in the household.

In rural areas, only three percent (3 percent) of women engage in paid agricultural work[19], driven by the need to generate income and meet household expenses. Over half of the women engaged in agricultural activities are below the age of 40, are likely to be married with children and with low levels of education. They mostly work 22 days per month and 7 hours per day, earning, on average, between JD 105 and 142 per month[20]. These factors are closely interlinked with restrictive social norms. During consultations, women's groups expressed poor outreach mechanisms targeting women in the agriculture sector, lack of sustainability of training activities as well as working conditions that have been highlighted in etc. (A full summary of the consultation is provided in Annex 2).

Migrant workers: A significant portion of agricultural workers are non-Jordanians. Egyptians have dominated the sector for many years. As of 2016, migrant workers represent 41 to 52 per cent of the agricultural workforce, Syrians represent about 23 to 40 per cent and Jordanians represent the remaining 19 to 24 per cent of the agricultural workforce. Egyptians, predominantly male, are hired for the entire season, and live on the farm (as opposed to Jordanians who may be hired on a daily basis from nearby communities) and undertake tasks involving hard physical labor[21].

Refugees: There are around 1.3 million displaced Syrians in Jordan, of which 656,000 are registered with the United Nations High Commissioner for Refugees (UNHCR). Over 85 percent of Syrians live outside refugee camps. The majority of refugees live in northern Jordan, specifically in Irbid and Mafraq Governates which host approximately 50 percent of

[19] World Bank: Women's Economic Empowerment in Jordan, #179/2020
[20] World Bank: Women's Economic Empowerment in Jordan, #179/2020
[21] https://www.ilo.org/beirut/publications/WCMS_556931/lang--en/index.htm

refugees and happen to be in high poverty and predominantly rural areas. The refugee influx has put additional pressure on food security and natural resources. Prior to 2016, access to the labor market by non-Jordanians was highly restricted. At the 2016 Syrian Donors Conference in London, Jordan agreed to employ 200,000 Syrians in exchange for simplification of rules of origin to export to the EU. For agricultural activities, work permits can be requested through agricultural cooperatives or individual employers. According to the International Finance Corporation (IFC) review, 48 percent of Syrians were employed in agriculture, 19 percent in construction, 17 percent in services and 11 percent in manufacturing in 2017.

Youth: Youth unemployment was at 48.5 reflecting structural issues pertaining to Jordan's labor market, including large gender gaps. UNICEF states that In Jordan, 100,000 young people start looking for work every year. Thirty-two per cent of youth aged 15-30 years are unemployed. Access to opportunities for Syrian refugee youth living in Jordan is more challenging. Eighty-four per cent of Syrian refugee youth are unemployed and are at increased risk of harmful or exploitative labor. Specific challenges facing girls include increased limited mobility and forced or early marriage. Another vulnerable group among youth is youth with disabilities: 6 percent of youth aged 10-24 have at least one disability[22], and face difficulties in accessing services and programs.

ILO assessments have showed gaps in decent work and employment conditions in the agriculture sector[23] for many of these groups. Poverty and unemployment within these groups may lead to negative coping mechanisms, e.g., early marriage, child labor, radicalization, as well as exploitation and discrimination in the working place including pay inequity. Minimum wage for non-Jordanians is set lower than that of Jordanians as per the Labor Law. Intersectionality, (e.g., women refugees or those with disabilities) may suffer compounded risks of vulnerability.

Implementation Arrangements and Performance

The Ministry of Agriculture (MoA) created the "Rural Development and Women Empowerment" Directorate in 2018 in response to the need of combatting poverty among rural households, enhance food security, and combating unemployment for women. The main objectives of this Directorate are:

i. Implementing training programs to develop women's skills.
ii. Preparing projects that contribute to empowering rural women and increasing their economic role in local communities.
iii. Supervising the work and activities of women's associations supervised by the Ministry of Agriculture.
iv. Coordination and cooperation with international bodies in the field of rural development and women's empowerment.

[22] Department of Statistics and ICF International, 2013
[23] https://www.ilo.org/beirut/projects/WCMS_711760/lang--en/index.htm

v. Coordinating project plans at the governorate level and aligning them according to national priorities and the resources available in the governorates.

All the Directorate's activities target rural men and women, but women are the main beneficiary of these interventions. During 2018- 2019 the Directorate's Poverty and Unemployment Section supported 7000 households which were selected by a specialized committee (agricultural engineer, a veterinarian, nurse vet.). The list of poor households is normally compiled through lists provided by the Ministry for Social Development (MoSD), Zakah Fund, charity associations, salary bulletin, and through public announcements. Types of projects supported include Breeding hybrid goats, dairy products at household level, protected agriculture (plastic greenhouses and irrigation networks), and bee breeding. The following targeting and selection criteria are applied when selecting beneficiaries:

i. Women- led households (widows, abandoned, and wives of prisoners)
ii. Disabled- led households or households having disabled members or have members under 18 years old (chronic diseases are not considered a disability)
iii. Big households which have more than four children who are under 18 years old
iv. Household supported by someone who cannot work
v. The household monthly income should not be more than 320 JD
vi. All the Ministry's employees and their wives are excluded from benefiting from the projects
vii. Potential beneficiary households should not be leasing the house but could be residing in the parents' house (the mother or father)
viii. In case of "rainwater harvesting" projects, the beneficiary should be the owner of the land or has a share registered in his name.
ix. In the case of protected agriculture project (plastic green house) the land area of the beneficiary household should 30*10 m
x. In case of implementing an activity related to livestock (goat or cows) the household should provide the required barn with fodder before receiving the project
xi. The selected household should have the willingness and experience to implement the selected activity

Over and above the selection criteria, overall fund allocations are set at the governate level as a decision of the governate council and decentralization committee in each governate about its priorities. Some Jordanian governorates may not deem support from MOA for these programs as a priority. Individual poor households are excluded if they lack capacity to undertake interventions. Refugees are also excluded from benefiting from these projects as the financial resources supporting these activities come from the Jordanian treasury's resources and does not come from external funding or donor support. However, Jordanian women married to Syrians are eligible to benefit from these interventions.

The Directorate's Economic Empowerment for Rural Women Section is mandated with the gender agenda including awareness and sensitization activities for rural women. However, this section has only one staff, with no budget allocated towards its activities and therefore has no active initiatives; women empowerment is solely supported through the grants and

programs under the Poverty and Unemployment Section which provides grants to rural women. The Directorate's Rural Products Exhibition Section supports rural women to market their products through securing access to exhibitions and fairs. Activities are also limited owing to lack of needed resources.

Findings

Based on the above assessment, MOA has established programs and resources for poor and vulnerable households including women. The staff dedicate significant efforts in getting to know their beneficiaries and their socio-economic situation, in order to fund successful interventions that will result in improved livelihoods. However, the programs are underfunded and under-resourced and demand is filtered through decentralization committees. The PforR will mainstream social inclusion and stakeholder engagement throughout its interventions. A Social Inclusion specialist will be hired under the IPF and be part of the program's delivery unit. This person will work closely with MOA poverty unemployment and women's economic empowerment department and will add to the overall capacity of MOA for stakeholder engagement. The training and job-matching interventions under DLI 2.2 will be available and targeted to women, youth and refugees. The ESSA recommends that a training needs assessment, outreach plan and clear disclosed eligibility criteria will be prepared for this intervention. A Stakeholder Engagement Plan for the RWH Operational Framework should also be prepared, consulted and implemented. The Program will also be required to have in place a robust grievance mechanism (see Section x). The ESSA findings related to decent working conditions for vulnerable groups are addressed in Health and Safety Assessment and Child Labor sections.

i. Social Conflict

The program does not take place in any areas that are part of territorial disputes or significant social conflict. The program will also contribute to more efficient use of scare natural resources. However, there are risks related to elite capture particularly as it relates to siting and distribution of water resources from RWH interventions benefiting large livestock owners who are organized and represented by farmers unions or cooperatives, versus smallholders. Livestock owners may also include Bedouins. Historically, Bedouin pastoralists were fully nomadic in communal grazing regions called *al dirah*.[i] Today, over 59 percent of pastoralists are transhumant (semi-mobile), and more than 30 percent are sedentary agro-pastoralists.[ii] Bedouins may own significant portions of land all around the country and tribal leaders hold positions in parliament, the army, and the courts. Bedouin tribes of Jordan widely practice customary law, though informally, and tribal leaders often work with civil courts and public security forces to resolve disputes. The level of tribal integration into civil society, and the relationship between tribal leaders and their members depends on geographic region[24].

Implementation arrangements and performance

[24] http://yris.yira.org/winter-issue/4650

Result Area 1 (RWH and Badia Restoration) builds on MOA's experience, established track record and dedicated department undertaking rainwater harvesting and rangeland rehabilitation projects. Some of these projects have been supported by international donors who were consulted during ESSA preparation (see Chapter 2) and raised these risks and the need for strong monitoring. World Bank also supported a project that closed in 2017 (P127861) which entailed a component for construction of long-lasting multipurpose water harvesting structures (hafirs); establishment and/or rehabilitation of improved rangeland reserves and maintaining and enhancing livelihoods in target communities.

Findings

There are very few available studies on risks, impacts and access to benefits of RWH on smallholders and Bedouins. As mentioned, requests to the MOA for RWH hafirs are currently demand driven and MOA endeavors to consult with smallholders including Bedouins for optimum siting. The program has been designed to take these risks into account including several results indicators to specifically target smallholders. The ESSA recommends that the operational framework for RWH and Badia restoration require a preparation and implementation of a Stakeholder Engagement plan and a strategic environmental and social assessment. The ESSA also recommends that the program require ESHS site screening, social monitoring of RWH interventions, and a robust grievance mechanism that is connected to existing community-level dispute resolution mechanisms.

4 CHAPTER IV – ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS ASSESSMENT OF AGRICULTURAL CREDIT CORPORATION (ACC)

The ACC, and according to Law No. 12 of the year 1963 (replaced the temporary Law No. 50 for the year 1959) is an independent public institution with administrative and financial independence. ACC's mandate is to support development of the agricultural sector, increasing production and improving its quantity and quality, and raising the living standards for farmers. ACC also encourages the establishment, development and expansion of agricultural projects and projects for the manufacture of agricultural products. ACC has a variety of programs, products and service to achieve its mandate (e.g. granting loans; contributing to the capital of joint stock companies; purchasing loan bonds; financing the marketing and export of Jordanian agricultural products; preparing economic feasibility studies and technical studies for agricultural projects; and providing technical advice and administrative aid for agricultural projects). ACC has an established capital of seven million JD. As of the end of 2019, the ACC extended a total of 815 million JD benefiting 285 farmers. ACC also has several active programs geared toward women empowerment and youth and offers 0 percent interest for around 80 percent of the loans relevant to climate change.

ACC last developed a strategy for 2018- 2022 outlining its long-term approach in the agri-business. It is worth mentioning that this strategy and its action plan including adopted KPIs did not address clear E&S issues and concerns, except those related to enhancing water efficiency and reducing poverty by creating job opportunities. However, consultation with

The ACC is currently managed by a Board of Directors which is chaired by the Minister of Agriculture. It includes 15 directorates and 3 regional management offices (north, middle and south) that has 24 branches around the country with a total of 486 employees among which 27 percent are females. ACC has a total of 486 employees among which are 27 percent females, ACC has a total of 486 employees among which are 27 percent females.

Under DLI 3 of the PforR, ACC will provide matching grants to farmers for climate-smart water initiatives on farms, including drip irrigation systems and/or connections to municipal wastewater treatment discharge for reuse on fodder fields.

Reuse of treated wastewater introduces wastewater introduces potential health and safety risks for agricultural workers and the public through exposure to pathogens. Reuse of treated wastewater is covered by Instruction and Conditions for the Use of Wastewater, Treated wastewater, Saline Water and Brackish Water for Agricultural Purposes No. 7 of 2016. These instructions set the conditions for safe use of treated wastewater, and wastewater and requires an approval from MWI (based on the approval of a committee with members from MWI, MoE and the MoA). Crops allowed to be irrigated by treated wastewater are only those listed at Jordanian Standards JS 893/2006 and JS 202 / 2007. The instruction prohibits: use of untreated wastewater in irrigation; use of treated wastewater for drinking the livestock and poultry; and use of treated wastewater in irrigation near freshwater wells and drinking water sources unless after approved studies by MWI. Irrigation of treated wastewater by sprinklers is prohibited except for golf courses,

and inside plant nurseries with mobile sprinklers at nighttime only. The instructions prohibit irrigation with treated wastewater 2 days prior harvesting vegetables, and 2 weeks before harvesting fruits. The instructions also have several public safety conditions including that farmers must be vaccinated with defined vaccines, farmers must work with rubber gloves and change work clothes prior leaving the farm, warning signs must be displayed at the farm informing that treated wastewater is in use at the farm, wastewater collection ponds at the farm must be properly lined and fenced with warning signs.

Implementation arrangements and performance

ACC has technical staff that review loan applications and provide advice to applicants on technical aspects and feasibility. Loan approval processes also require confirmation that appropriate environmental permits are in place. However, the credit loans program does not have clear environmental and social risk screening criteria. ACC has no specialized or dedicated E&S in-house capacity, and ACC does not routinely monitor operations unless there are material incidents reported that affect loan repayment.

The site visits for the preparation of ESSA included a few treated wastewater reuse systems on farms that had been financed with farmers' own funds. Several areas of non-compliance with relevant health and safety requirements for these systems were noted including use of sprinklers for irrigating livestock fodder during daytime, lack of use of PPEs by workers, absence of warning signs regarding the use of treated wastewater, and treated wastewater collection ponds are only lined, without fencing or warning signs installation. This suggests weak enforcement of regulatory requirements.

Findings

The number of grants awarded under the program will depend on the nature of investments demanded, the estimate is around 1400 over the 4.5 years. ACC has technical capabilities to advise farmers on climate smart water initiatives however environmental, health and safety and social risks are not routinely considered in its credit or grant programs and there is no monitoring of performance. The ESSA recommends that ACC assign at least one E&S focal point who is provided training and is able to support the existing technical team in screening and monitoring beneficiary operations provided under the PforR. All grants provided need to be confirmed for regulatory compliance, in particular to comply with requirements for reuse of treated wastewater.

5 CHAPTER V – MANAGEMENT SYSTEMS ASSESSMENT (NARC)

NARC is the successor of the National Center for Agriculture Research and Extension (NCARE) following the issuance of bylaw no. (42) for the year (2018), which is a modified bylaw of the National Center for Agricultural Research and Extension, read with bylaw no. (42) for the year (1993). The new bylaw was issued while accompanied by renaming the Center from the "National Center for Agricultural Research and Extension" to the "National Agricultural Research Center". NARC is considered as the scientific arm of the Ministry of Agriculture and the only specialized governmental agricultural research institution at the national level, to constitute a national umbrella for applied agricultural research and governmental agricultural consultations.

The center aims to employ the results of agricultural research derived locally or quoted from other sources for the purpose of increasing agricultural production, both plant and animal, and raising and improving its efficiency, preserving, and optimizing agricultural natural resources, and serving development purposes of agricultural and ecological balance. As specified by article (5) of the bylaw (42) for the year (1993) and its amendments, NARC has the following objectives:

1. Determining the priorities of the national agricultural scientific research in cooperation with the relevant authorities, which serve agricultural development purposes.
2. Devise agricultural technology appropriate to local conditions and adopt it to achieve exploitation optimization of productive resources.
3. Disseminate transferred, adapted, or developed agricultural techniques to the relevant authorities.
4. Developing the skills of workers in the agricultural sector and holding training courses and conferences and specialized workshops.
5. Cooperating with local, Arab, and international institutions to implement agricultural research programs, providing consultancy and technical services in the agricultural field.
6. Conducting field studies and surveys of plant and animal biodiversity with the aim of preserving them from extinction and storing plant seeds in the National Bank of Seed in the center and supervising it.
7. Supervising the National Agricultural Information Library

The Center is organized into two main branches: Research and Administration. The Research branch consists of eleven research directorates: Water and Soil, Horticulture, Field Crop, Plant Protection, Livestock, Economic and Social Studies, Environment and Climate Change, Biodiversity, Bee, Biotechnology, Laboratories. The Administration branch is organized in five units: Institutional Development and Knowledge Transfer, Agricultural Consultation and Training Center, Intellectual Property Right Protection, International Cooperation and Public Relations, the Director General Office. In addition, NARC has eight main regional centers (Ramtha, Mafraq, Mshaqqar, Rubbah, Shobak, Deir Alla, Tafileh, Wadi Araba) and central one in Amman. Each regional center has specific "research stations" and each station is tasked with specific research topics depending on the geographical area in which they are located.

Under the program NARC will receive support to develop software applications and early warning systems (sub-result area 1.2). Furthermore, Technical Assistance will be provided - as required- under the IPF component to the Directorate of Training and Awareness of Farmers in the MOA as well as NARC, with close involvement of ACC to maximize water use efficiency. It is mentionable that under the IPF component, the program will provide the required expertise to support the incorporation of environmental and social aspects in strategic plans and technical studies which might be undertaken under the program. Implementing these activities by NARC is not expected to cause negative environmental and social effects, thus no environmental and social system requirements should be in place for implementing this intervention.

6 CHAPTER VI – PROGRAM GRIEVANCE MECHANISMS

The program will be implemented by MOA, ACC, and NARC. At MOA, complaints handling falls under the Internal Control Directorate- Administrative Control Division. The Administrative Control Division has four staff, including the Director. The Division receives and handles complaints from external stakeholders, the public, as well as from the Ministry's staff. The current GM system at MOA is described and assessed in terms of its ability to serve as a program GM, GMs for ACC and NARC have not yet been assessed.

Uptake Channels: MOA has various uptake channels available to program beneficiaries:

a. Complaints received through the governmental platform "Bekhedmetkom" (At your service): The "At Your Service" platform is a centralized system (Bekhedmetkom) that is directly responsible for managing and tracking citizen'' complaints with all government agencies. Almost 89 government agencies are linked to the platform (including MOA, ACC, and NARC) and there are liaison officers within such agencies and line ministries who follow up and handle complaints, queries, and suggestions received electronically according to their own GM standard operating procedures. The management and maintenance of the system is supervised by a specialized unit under the Prime Ministry. The "At your service" was developed in 2018, when the gateway was approved as the official governmental electronic platform for GM. the MoA joined the platform in late 2019.

"At your service" is an established and functional national GM platform, its use is mandatory, enforced and monitored by the Government. As of January 2021, 160,000 grievances were received through the platform, and 98 percent were resolved. The satisfaction rate was 70 percent on average. Its uptake channels include an online form and a toll-free National Call center, thus ensuring accessibility to a wide range of people, including technologically illiterate persons. The online platform is user-friendly in terms of accessibility, selection of entities, and submitting feedback/complaint. Each case (inquiry, suggestion, or complaint) receives a serial number and is trackable, complainants may track the status of their case. Once complaints are received, online notifications are emailed to a designated focal point in each governmental entity (usually ministry) who is responsible for preparing a response and uploading to the system.

MOA is among the governmental institutions that are listed at the e-government website, described below. MOA has a designated liaison officer who is in charge of receiving and handling the complaints, queries, and suggestions received in coordination with the different relevant internal directorates of the Ministry. In 2021, the Ministry received 264 complaints compared to 289 in the year 2020. The MOA also received 67 complaints in the first quarter of 2022.

b. Complaints received in person through the Public Service Desk: this "help desk" is located at the entrance of the MOA and receives complaints from the public, documents the complaints electronically, and then transfers them to Administrative Control for handling. In 2021, the help desk received only two complaints.

c. Hotline: The Ministry also operates a hotline with a dedicated extension number (06-5686151 ext. 225). The officer in charge receives and handles complaints with the relevant directorates inside the Ministry. No data is available on the number of complaints received through this channel.

d. Other uptake channels include:

i. Walk-in: complainants are required to write the complaint and it is transferred to the Administrative Control Division.
ii. Complaints' box located at the entrance of the ministry: The Help Desk is in charge checking the complaints box and dispatching the complaints received to the Administrative Control Division.
iii. Complaints received through the Minister of the Secretary General's offices
iv. Complaints received through the Ministry's website where there is an electronic "queries form" which most of the time is used for lodging complaints and queries.
v. **Complaints received through the Agricultural Directorates in the field:** These are normally resolved at local level but for difficult cases they are transferred to the Secretary General Office at the central MoA for handling.

e. Community Level GM- Conflict Resolution Mechanisms:

It is important to have conflict resolution mechanisms and systems at the local, first level where concerns regarding the project normally occur. The program could benefit from existing judicial and community dispute resolution mechanisms to handle and resolve potential conflicts or grievances within or between affected communities. A village or community level committee could be established from community prominent and trusted persons to act as the first level of GM. A process should also be developed and put in place for resolving disputes relating to resource use restrictions (Hafirs and earthen dams) that may arise between or among affected communities, and grievances that may arise from members of communities who are dissatisfied with the eligibility criteria (approval for RWH schemes), community planning measures, or actual implementation.

When cases cannot be resolved at the local level or when parties are dissatisfied with the resolution, they could transfer it to the next level which is the Administrative Governor (Hakim Idari) who could look into the dispute and act as an escalation body (before it is escalated to the central MoA). However, all grievances should be documented.

Sorting, Processing, and Acknowledgement

The Ministry has developed complaint handling procedure consistent with applicable laws and regulations (Civil Service Bureau By-law, Internal Control Regulation No. 3/2011, all other instructions and recommendations issued by MoA management) in dealing with complaints received from MoA staff and internal technical directorates. However, this set of procedures are not detailed and are not known by the relevant staff. There are no written procedures to handle complaints received by the public.

There is not one central database where all complaints are logged and categorized. However, most complaints are received through At Your Service and these complaints are logged and categorized electronically under headings such as complaint, query, compliment. The complaints are then print out and sent to the relevant directorate for handling and feedback. Once the feedback is received and is acceptable, they log it into the system to be sent to the complainant, meaning complaints and feedback (resolution) are kept electronically within the platform.

Complaints received in person through the Public Service Desk: this "help desk" documents the complaints electronically, and then transfers them to Administrative Control for handling. Once resolved, the complainant is informed of the resolution and complaints are closed. All other complaints received through the other channels are registered manually.

Complaints related to Labor in agriculture: All complaints related to the labor in the agriculture sector are handled through the Plant Production, Animal Production Directorates, and the Ministry of Labor. At the MOA level, the Plant Production Directorate issues at the beginning of each year the list of agricultural activities and related labor needs. Complaints from agricultural workers are often received through the Ministry's hotline and referred to one of these two directorates. The MoL operates an on-line workers complaints platform called "Hamaya.jo" where workers in all sectors could lodge their complaints in different areas: lay-off, child labor, foreign labor, etc.

Complaints related to Sexual Exploitation and Abuse or Sexual Harassment. The Ministry does not have any procedures to handle such complaints. It is noted that such complaints are not or very rarely reported, and this would not happen through the normal uptake channels.

Acknowledge, Investigate, and Act

The Administrative Control Division handles complaints received from external stakeholders (the public and others) and those related to staff and internal technical directorates at the Ministry. This Division often forms an investigation committee to study and resolve complaints received. They also practice close follow-up on the complaint resolution procedures and ensure that all received complaints are resolved, the complainant is informed of the decision, and the complaint is closed in files. Most complaints received are resolved within 2 days or a maximum of 16 days (the later are often resolved with external entities)

Depending on the uptake channel, complainants who submitted their complaints through the different uptake channel are usually informed of the resolution of their complaints. Complaints received through the At Your Service platforms and the Help desk are closed electronically once the complainant is informed of the decision. For complaints received through other avenues, the complainant is informed of the resolution through the phone or in case he follows up on his complaint.

In terms of the nature of complaints, MOA the most recurrent complaints are received from livestock owners who may present fake livestock numbers to obtain subsidized fodder. In this case, the Administrative Control Division receives the complaint and investigates the case with the relevant internal directorates of the Ministry. Once the investigation is complete, they inform the complainant of the results of the investigation and the resolution and complaint is closed.

Provide Response to the Complainant

Depending on the uptake channel, complainants who submitted their complaints through the different uptake channel are usually informed of the resolution of their complaints. Complaints received through the At Your Service platforms and the Help desk are closed electronically once the complainant is informed of the decision. For complaints received through other avenues, the complainant is informed of the resolution through the phone or in case he follows up on his complaint.

Escalation:
the MOA does not have a formalized procedure for escalation but rather a "Grievance Committee" which handles the grievances received from the Ministry's employees in case they were not satisfied with the first level of resolution. Some serious complaints are escalated to the General Prosecutor or the Anti-Corruption Commission (following the investigation completed by a specialized committee). In all cases, if the complainant is not satisfied with the resolution, he/she has the possibility to recourse to legal action.

Findings

MOA has an established GM system with assigned responsibilities that is operational and addressing complaints, mainly those received through the Bekhedmetkom service.
However, there are a number of improvements needed for the system to operate as a Program GM.

a. Additional outreach on accessibility of GM channels is needed.
b. Complaints handling at the local level is not clear and there are no known written procedures, including community-based dispute resolution mechanisms
c. Given the risks related to labor and working conditions within beneficiary operations, more outreach regarding available GM channels is required. Established protocols for MOA staff to channel complaints to MOL if noted in the field, are needed.
d. Complaints related to SEA/SH are not captured and there are no procedures to handle such complaints
e. There are no clear written procedures for handling complaints received from the public or service recipients including define timelines, severity levels, escalation, management, etc.
f. There is no one central database for documenting complaints received but documentation is done according to the uptake channels through which complaints have been received

g. Reporting on GM including the number, status of resolution, type of complaint is required.

7 CHAPTER VII –RECOMMENDATIONS

Based on the above assessment, the following measures are proposed under the program activities to address the identified gaps between the national and sub-national environmental and social management systems and the core principles of Policy on Program-for-Results Financing. These measures ensure adequate mitigation of environmental and social impacts and risks associated with the investment activities to be supported under the Program. The following table summarizes the proposed ESSA recommendations. The recommendations are either proposed to be included as part of DLI/DLR Verification Protocols, or as part of the Program Action Plan. Recommendations to enhance the capacity of the Delivery Unit that will be financed through the Technical Assistance/IPF Component of the Program are also included:

Table 4. ESSA Recommendations

Sub-Results Area (SRA)	**Disbursement-Linked Indicator (DLI)**	**Verification Protocol** /DLI Definitions	**Program Action Plan**
Sub-Results Area 1.1: Scaling up Climate Smart Water use in Agriculture	DLI1: 1. Adoption of sustainable rainwater harvesting practices	DLI 1.1 The National Agricultural RWH Plan will comprise a cumulative and strategic environmental and social assessment (SESA) on the national agricultural RWH plan, that has been consulted and disclosed, and a Stakeholder Engagement Plan (SEP). DLI 1.1 Evidence that the National Agricultural Plan has a (i) a dedicated section explaining how the findings of the SESA have been incorporated in particular mapping of potential future sites (ii) include a Stakeholder Engagement Plan (iii) discloses targeting criteria and processes for eligibility. DLI 1.3 Disbursement against aggregate storage capacity includes requisite E&S screening conducted, and evidence of approvals from MOE, as appropriate.	MOA to develop E&S screening procedures for site selection and design of individual RWH sites developed including avoiding and minimizing and mitigating land-related impacts and applying the exclusion criteria. MOA to develop ESHS Monitoring Protocol developed encompassing (i) construction and (ii) operations phase and covering environmental aspects; sustainable use of collected water; public and worker health and safety, elite capture, and functioning of site level GRM. MOA to develop and incorporate worker and community health and safety technical specifications to be incorporated into FIDIC standard procurement document for RWH.
Sub-	DLI2: Innovation	DLI 2.2 Extension agent training plan	

Results Area 1.2: Performance of agriculture extension services	and improved performance of crop extension and animal health services	includes modules on the following topics: environment; child labor; gender; OHS and biological control provided by technical experts. Actual training of Master Trainers and farmers on above subjects, including a dedicated module on OHS delivered by qualified professional.	
Sub-Results Area 2.1: Improved integration of agri-food value chains and export	DLI3: Improved public service delivery for value chain development and export promotion		ACC to develop formalized procedure for E&S screening of loan applicants; enhance E&S specifications within grant agreements (including adherence to appropriate technologies treated wastewater use) and safe working conditions and prohibiting child labor;; and assigns, trains E&S focal point to monitor ESHS performance.
Sub-Results Area 2.2: Matching skills supply with demand in agri-food sector	DLI4: On and off farm employment skills improved including women and refugees	Conduct Training Needs Assessment and Outreach Plan for women, refugees and youth, disclose clear eligibility criteria and include ESHS topics and accessibility to GRM	MOA to improve GRM [improvements to be specified in ESSA]
	DLI5: MoA Delivery Capacity Secured		
Other: Labor and Working Conditions including Child Labor			MOA to develop a Child Labor Action Plan with involvement of CSOs and Ministry of Labor, supported with technical assistance from the World Bank, and implement the plan thereafter. relevant regulations
Other: Agricultural Wastes and Pesticide Management			Strategic dialogue between MOA and MOEnv on developing mechanism for tracking, collection and efficient disposal of empty pesticide containers MOA to develop a plan to manage agricultural waste such as manure and wastewater of slaughterhouses MoA develops and implements regular monitoring programs to verify if farmers adhere to requirements of pesticide dosage

		and preharvest interval.
Technical Assistance (DU unit)		Enhance MOA capacity with one Full-time Environmental Health and Safety Specialist and One Full-time Social Inclusion Specialist. Capacity and resourcing will be reviewed annually.

ANNEX 1 - DOCUMENTS

NO.	Document
The World Bank	
1	Program Appraisal Document (P167946)
2	Concept Note - Jordan Electricity Sector Sustainability and Reform Program (P171296)
3	Bank Guide – Program for Results Financing Environmental and Social Systems Assessment
4	Interim Guidance Note To Staff: Environmental and Social Systems Assessment
5	World Bank: Women's Economic Empowerment in Jordan, #179/2020 Report
Government of Jordan	
1	Environment Protection Law No. 6 of 2017
2	Environmental Classification & Licensing Regulation No.69 of 2020
3	Framework Law for Waste Management No. 16 of 2020
4	Regulation of Management of Hazardous Materials and Waste No. 68 of 2020
5	Regulation of Information and Environmental Monitoring for Waste Management No.85 of 2020
6	Labor Law No. 8 of 1996 and its Amendments
7	National Child Labor Survey of 2016
8	Agricultural Workers Regulation No.19 of 2021
9	National Framework to Combat Child Labor 2011
10	Real Estate Law (REL) No. 13 of 2019
11	Jordanian Standards JS 893/2006
12	Jordanian Standards JS 202 / 2007
13	Internal Control Regulation No. 3/2011
14	Real Estate Law No. 13 of 2019
Ministry of Agriculture	
1	Agriculture Law No. 13 of 2015 and its amendments
2	Instructions No. (1) for the year 2022 : Instructions for dealing with pesticides and their residues and licensing agricultural pest control services, public health and warehouses
3	Instructions No. (4) for the year 2022 Instructions for registration, import, circulation and trade in pesticides and vital enemies
4	Animal Production Organization Chart- Role & Responsibilities
5	Plant Production Organization Chart- Role & Responsibilities
6	MOA organization Chart of all departments
7	Government Procurement Regulations No. 8 of 2022
8	Instructions for protecting agricultural land for the year 2022
9	Instructions No. (6) for the year 2021 Instructions for registration, production, import, analysis and sale of agricultural fertilizers and plant growth regulators
10	Directorate of Rural Development and Empowerment of Women - Project to increase the income of poor rural families
11	Agreement No. 8/2021 (Financial Auditor): Purchasing the Services of an External Auditor's Expert
12	Regulation No. 8 of 2022: Government Procurement System

NO.	Document
13	Instructions No. (7) for the year 2021: Instructions for the registration, manufacture, processing, import, trade and circulation of pesticides
14	Instructions and Conditions for Benefiting from the Activities of the Land Reclamation and Agricultural Development Program (2022)
15	MOA extension presentation
16	Instructions for Fishing at Freshwater Bodies No.44 of 2016
17	Jordan Sustainable Agriculture Plan 2022 - 2025
18	Sample of contractor contract template for constructing water harvesting structures at Badia
19	List of Extension Program of Year 2022
20	Sample of Outsource Service Agreement
21	List of Proposed Farmers Field Schools According to Area Needs and Agricultural Pattern
22	Instructions to Benefit from Land Reclamation and Agricultural Development Program of Year 2022
23	Regulation No. (82) for the year (2004
24	Instruction for regulation and Management of Governmental Forestry and Rangelands at Treasury Rangelands No. 1 of 2017
25	Instructions on the Protection of Wildlife and Wild Birds and Regulating its Hunting and Trade No. 2 of 2021
26	Regulation No. (42) for the year (2018)
International Organizations	
1	https://www.ilo.org/beirut/publications/WCMS_556931/lang--en/index.htm
2	http://yris.yira.org/winter-issue/4650
Stakeholders Consultation	
1	Ministry of Agriculture
2	Ministry of Environment
3	National Agriculture Research Center
4	Agriculture Credit Corporation
5	Farmers Union and Farmers
6	Donor Agencies (USAID, USDA, World Food Program, Hashemite Fund for Badia Development
7	International Labor Organization
8	Focus Groups Women's Association: 1. Al Rafeed Women Agricultural Association 2. Jordan Red Crescent Association 3. Al Dkheinat Women Agricultural Association 4. Al Jawhara Charity Association 5. Ard Al Azm 6. Telal Al Mansheyeh Women Association 7. Al Sultani Dam Women Association 8. Disi Basin Villages Women Association 9. National Committee for Women's Affairs 10. Wadi Association

ANNEX 2 - STAKEHOLDER ENGAGEMENT SUMMARIES

1. Consultation with Farmers' Organizations

ESSA team has a consultation session on March 31st 2022, with farmers representing the farmers union, olive mills owners' association, inverters at agriculture section in addition to individual farmers. At this session, ESSA team has presented the scope of ESSA and the objective of this consultation meeting, also World Bank has presented the potential activities that the program may involve in to support the agriculture sector and the GoJ efforts and plans in this regard. The attendees were given the opportunity to comment on the proposed program and to express their opinion on the current challenges that the sector is facing and opportunities that exit to enhance and support the agriculture sector and the farmers. Main issues of discussion were as follows:

No.	Subject	Main Issues and Concerns
1.	Main challenges that farmers and the sector are facing	- Export of agricultural products is a big challenge in the sector climate change has impacted the rain fed crops - Scarcity of water for irrigation Weak financial capacity of farmers. - The extension service is weak and needs to be developed and to be more effective - Lack of interest of Jordanian youth to work as labors in this sector - o Scarcity of available water for irrigation o Fragmentation of agricultural lands and the decrease of size of agricultural lands plots Lack of specialized cooperatives that contribute in developing the sector in extension and marketing Lack of international experience in the sector where traditional farming approaches are still used in the sector. High price of agricultural production inputs o Collaboration with stakeholders representing farmers needs to be enhanced and improved in order to support the sector and the investors. o Water harvesting and utilization of potential and available water resources is unavailable in an effective manner, where many areas that are suitable for water harvesting development are not utilized yet. o Natural pastures are lacking effective water harvesting development and projects. o Prohibition of old Ottoman wells utilization inn in Maan area. o Poor economic situation of the agricultural sector. o Climate change has a significant impact on the sector in Jordan o Current Regulations of the sector are among the

No.	Subject	Main Issues and Concerns
		challenges for farmers o Food security is a challenge in Jordan o Insufficient rainwater harvesting compared with the annual precipitation in Jordan. o Lack of effective agriculture cooperatives Low wholesale prices of vegetables in the Jordanian market o Farmer has no financial capability to recruit local labors - The lack of scientific and effective early warning systems for natural disasters Olive Farmer: o Olive farming is affected by climate change and draught o MoA yet does not allow esatblish farmers associations or cooperatives Water management is a big challenge in the sector o Agriculture waste is a challenge and opportunity .
2	What are the potential solutions or opportunities to support the sector and the farmers	Water Scarcity: o Increase the number of RWH projects at Badia o Jordanian farmer is in need for more efficient technologies Water harvesting projects at the wadi systems must be created and increased, in addition to rainwater collection wells Utilization of shallow aquifers wells must be allowed and increased at Maan area o Introduction of complementary irrigation resources for rain fed olive farms to support production, this approach has been used in the region and was successful. - Extension Services: o Enhance and increase the role and number of farmers field schools o To encourage the establishment of farmers associations that specialized in extension and marketing o Transfer of knowledge and international experience to farmers through conducting visits to other countries o Extension must include meteorological programs that give farmers early warnings for natural disasters - Capacity Building of Agriculture Sector o Support establishment of specialized cooperatives that can train, educate and lead farmers on updated farming techniques o Conduct study tours for farmers to witness successful stories in the region and to enable knowledge transfer

No.	Subject	Main Issues and Concerns
		Water Efficiency o Increase agricultural resilience to climate change by supporting scientific research that develops adaptive farming techniques o Increase and facilitate reuse of treated wastewater for irrigation o Support farmers by providing affordable water saving irrigation systems and devices o Increase utilization of harvesting runoff water at wadi systems that lost by evaporation Value Chain Development o Support establishment of farmers cooperatives that enhance and create cost effective marketing mechanisms o Educate and inform farmers on requirements to enter European markets o To explore more new markets to increase agricultural exports
3	What is the current agriculture labor contractual and HSE conditions	o Seasonality of o Special consideration needs to be given for the applied fees on farmers to insure their labor with social security. - Farmers' capability to provide adequate living conditions for labor is extremely limited New agricultural labor regulation creates more financial burden on farmers to comply with, o The agriculture sector lacks proper OHS control measures at all phases, farming, packaging, transporting, and processing. o Inadequate enforcement, control and monitor the OHS performance in the sector o Welfare conditions for labor is very poor in the sector The level of OHS awareness in the sector is very low o Followup and monitoring on OHS issues in the sector is weak and not effective o Child labor exists in the sector without proper control o Handling of hazardous materials and waste such as pesticides lacks proper control and management measures. o Lack of records and documentation for OHS accidents occurred in the sector, although informal data refers to a high number of accidents.
4-	How OHS and HSE conditions in the sector can be improved	o Apply affordable fees on farmers to include their labor at social security o Formulate a cooperation mechanism between

No.	Subject	Main Issues and Concerns
		MoL and MOA to improve the inspection and monitoring of OHS performance in the sector o Provide specific OHS training for extension agents to build their capacity o Encourage and increase hydroponic farming that reduces OHS risks that labor face in traditional farming activities. o Lacks of specialized OH staff withing MOA organization.

The farmers' meeting was attended by representatives from the following organizations:

Organization
President of the Farmers' Union
Investor
General manager of the Farmers' Union
Association of Olive Press Owners
Farmer
Farmer
Farmer/Investor Olive sector
International Engineering Consulting

2. Consultation with Agricultural Donors

A consultation session with active donors at agriculture sector in Jordan was performed on April 5th 2022 by ESSA team. At this session, ESSA team has presented the scope of ESSA and the objective of this consultation meeting, also World Bank has presented the potential activities that the program may involve in to support the agriculture sector and the GoJ efforts and plans in this regard. The attendees have presented their experience in financing different programs and activities in the agriculture sector, in addition to their feedback on implementing agencies in project execution. Donors also expressed their comments on issues of concern on the proposed activities of the program and how to maximize results of these interventions. Key issues of discussion were as follows:

- For RWH, its recommended to build on what has been achieved of similar projects in the Badia area
- Marketing of agriculture products is one of the main challenges in the sector
- Capacity building and training of MOA staff is one of the top priorities and a vital need in the sector
- RWH programs at Badia must be design to meet the interest of large livestock owners and small livestock owners.
- Misuse of subsidies on livestock fodder that ends in the market for sale
- It is suggested to apply farming practices around RWH in Badia like Hafirs as an added value for program implementation
- There is a need for proper technical selection criteria for recruiting MOA staff
- Collaboration between stakeholders including donors must be enhanced to minimize the current competition mode on achievements.
- Previously performed successful programs must be considered as a lesson learned and replicated.

- Accumulated experience of previous in the sector needs to be considered in program planning and implementation
- Previous study on nomadism in Badia needs to be reviewed by the program to obtain better understanding of the nomads' needs in Badia
- Engagement of communities at Badia in the planning in the program is important for program success.
- Its recommended to encourage farming activities near RWH interventions as an added value of the program.
- Women and child labor needs a lot of attention due to their poor conditions
- Its recommended to make proper focus on owners / farmers of small landowners

Below is the list of donor organizations that attended the consultation meeting:

HFDJB	Hashemite Fund for the Development of the Jordan Badia
WFP	World Food Program
USDA	United States Department of Agriculture
USAID	United States Agency for International Development

3. Consultations with Women's Organizations

A consultation session with women's organizations was held on April 11, 2022. The meeting was led by MOA and World Bank. The meeting started with a presentation by the Ministry of Agriculture (MoA) on the proposed program's outlines and details. This was followed by a brief presentation by the World Bank on the preparation of the ESSA as well as its initial findings. The audience was given the opportunity to express their views and give their insights about the project design. The associations which were present in person and online were very engaged and provided informative input which confirmed the initial findings that were identified by the team working on the ESSA preparation. The main issues raised by the audience during the session were centered around the six areas that are summarized in the Table below. Main issues raised could be summarized as follows:

Topic	Main issues raised
1. What are the main challenges that women are facing in the Jordanian Agriculture sector?	- challenges are linked to the geographic area and we should not generalize. Women in Badia are not encouraged to work in agriculture because their male figures do not approve it. Which is contrary to women in other regions such as the north and south. - social norms are imposing heavily on women economic empowerment. - Women are normally overburdened with daily tasks which leave very little time for them to focus on the training or project. - there is a significant availability of women labor in the north - Climate change is also affecting agriculture and lack of experience affected women led projects as there is no insurance for losses related to harvest - Water scarcity is also a huge challenge - Big apple Agri farms in Shobak are not always very cooperative - there is kind of distribution of roles in the household (men own the livestock, women make dairy products, but men control the income from selling these products) - each region has its own competitive advantages and specific products (products exhibitions should not be established in the same area where products are coming from). - Amman is the main destination for marketing for all products - MoA operates two major exhibitions (7th circle in Amman and Irbid) and depending on the availability of funding a third main exhibition will be done for the southern region of the country. - Products should be exchanged between the different regions - create a "registry" for women working the agriculture sector because the published numbers are far from reality - Keys for Sustainable Development developed an application "From My Country- من بلدي", which is free and available to all to use for marketing their products. The application is connected to Talabat application - There is no "product diversification" culture among women and farmers - some governorates are receiving a significant amount of donor financial support while others don't (inequal regional support) - we need "creativity for sustainability" in initiatives targeting women - there is a need for a permanent exhibition or agricultural fairs in the south for product marketing (however, this is the responsibility of municipalities) - need for a veterinary clinic especially in the south where animal wealth is concentrated (these clinics are also needed in many other places). There are already two veterinary hospitals (Jawa and

Topic	Main issues raised
	Tafilah) and other mobile vet clinics - "Farmers Field Schools" of the MoA is very successful and raises the awareness of the farmers and employers regarding his agricultural activities - support the "Agricultural Risk Fund" which supports farmers facing natural risks (frost, drought, etc.) - put the focus on the "added value" of products
2. (households, earth dams, Hafirs)? How can we improve the selection criteria and approval process?	- Water scarcity is a huge challenge and household rainwater harvesting projects are very important - some sites were badly selected or badly designed, that's why when implementing RWH schemes one should look at 1. Precipitation average and 2. Required studies should be conducted before site selection (geological and hydrological) - RWH at household (HH) level is very important for women in agriculture (house garden) - some regions like northern Shouneh in Irbid (north) also witness flash floods which should also be captured and used - RWH schemes are very important in Ghor region - Officials negligence for regions and farmers needs - well exploitation and authorization are very complicated and there are lots of requirements by the Ministry of Water which force illegal connections on water network - RWH is coordinated with the Ministry of Water and site selection is being done according to specific studies and criteria
3. What are the training needs for women? Main gaps in existing training initiatives?	- training programs do not focus on the full value chain of the product but only covers one component of this chain. - Problem of sustainability of training programs (training should be followed by other support for marketing, operation, etc. - training should always be supervised and monitored to generate results and trained individuals. Supervisors of training should be provided - problem in duplication of training topics - training should be followed by a project to implement what she learned - the proposed program will support the hiring of 300 new extension agents who will train farmers on very specific needs and topics - "Farmers Field Schools" of the MoA is very successful and should be maintained - We don't need "training for the sake of training" but the real need is "training for employment" - training under the proposed program will be implemented through local CBOs and within their

Topic	Main issues raised
	area of expertise (extra bonus for securing new jobs for the trainees) - agriculture engineers are being registered as "workers" and not as an agricultural engineer in order to pay the lowest wage (job exploitation) - best type of training is "on the job training" - No real understanding of purposes of training programs (value chain training is absent). The proposed program will not be able to support such interventions focusing on value chain and export markets. However, these needs are already covered under the Strategy for Sustainable Agriculture (2022-2025 - one solution could be choosing production chains to create job opportunities (olive oil and wheat) - clear selection and targeting criteria should be developed under the proposed project for - implement project in a certain geographic area and they replicate - "Social Investment"- clear and realistic selection criteria for women to be trained or employed - training needs: ▪ advanced training (food manufacturing according to modern and scientific standards) ▪ availability of training materials and equipment ▪ provide "counselling" before start of the training to ensure ownership and continuity in training program ▪ packaging methods and types ▪ online registration for a specific training should be avoided because many women do not even own a phone ▪ provide transportation ▪ marketing and networking (online marketing and attending exhibitions and fairs) ▪ create product competitiveness ▪ train women on financial feasibility and management of their own projects ▪ seasonal training ▪ Train women on project financial management
4. Women and working conditions in the agricultural sector?	- there is no protection for women working in the agriculture sector (health insurance, social security, transportation, availability of PPE) - very low wages for women contrary to men - Inequality of pay between women and men and between women and foreign labor

Topic	Main issues raised
	- No fixed salary but daily wages for daily work - It is well known that the labor in agriculture is not very well controlled or managed but there is a recent by-law that for agricultural workers. The problem with the by law that it was issued but was never enacted or enforced on the ground. The new by law was faced with strong criticism by farmers and owners of agricultural activities. - women are not aware of their rights. There is an urgent need to implement awareness activities for women about their working rights (Al Rafeed Women Association implemented awareness activities for 300 women about their work rights in Irbid) - one suggestion is that donors should put a financing conditionality to enforce the by law for agricultural workers - In the "poverty pockets" most workers in the agricultural sector are very poor and already registered in the National Aid Fund- NAF (the national social safety net) and in case the new by-law is enacted, and they are registered in the Jordanian social security they will lose their monthly allocation from NAF. Hence, some workers do not want to be covered under the new by-law and prefer receiving a monthly salary from NAF. - Work incidents or injuries are not covered (once the woman encountered an incident e.g., being bitten by snakes she will be immediately laid off without being offered any compensation even for medical care) - ESCWA is has implemented successful projects for women in the south (Ma'an) and providing safe spaces for their children to enable women to work
5. What are the best outreach and communication strategies and methods for engaging women in agriculture? How about complaints handling mechanisms?	- there is weak outreach to women in agriculture (all types of women: the farmer, the worker, the engineer, etc.) - designing outreach and communication strategies and methods should be done according to the special conditions of each geographic region - social media platforms are one of the best communication tools (Facebook, Instagram, and Tik Tok) - Focus groups - Field visits and face to face meetings - women agricultural associations - Agricultural Directorates in the governorates - for complaints, existing uptake channels should be more publicized - "Workers committees" are very helpful and could defend workers' rights

Topic	Main issues raised
	- promote “Hemaya platform”- protection platform of the Ministry of LAbor
6. What are the occupational health and safety risks that women face in the agricultural sector? How can they be managed? What are the other E&S risks and impacts?	- Work incidents and injuries during work (bites by snakes and others) - Work incidents injuries are not covered (once the woman encountered an incident, she will be immediately laid off without being offered any compensation not even medical care) - No PPE provided in any form - Sexual Harassment (ILO Convention 190) - One suggestion is to train one member of the “workers committee” to become H&S officer to assist other workers

Jordan Rural Employment and Agri Food Transformation Project (REAP)
Civil Society Consultation
Gender and Women Focus Group
April 11, 2022 (12- 2:00 pm)

Objective

The World Bank is in the process of preparing a potential program for results (PforR) with the Jordanian Ministry of Agriculture (MoA). ***The objective of the program*** is to strengthen climate resilience of farm households and the competitiveness of selected Agri-food value chains. As part of preparing for this potential program, the World Bank engages with the different potential stakeholders under the project to get their feedback and insights, and to benefit from their expertise and perspectives to be considered in project design.

The World Bank team who is conducting the environmental and social systems assessment (ESSA) is organizing a "***women focus group***" to engage with women's associations active in the Jordanian agricultural sector to listen to their experience and knowledge working in the sector, including any challenges and opportunities for enhancing the project's interventions as well as improving the environmental and social performance of the program. Findings of the session and main highlights will be used to inform the project and the ESSA's preparation. The planned interventions of the program include, but not limited to, rainwater harvesting structures- RWH (household, earth dams and Hafirs), pesticide use, and management, occupational health and safety aspects related to workers in the agriculture sector, gender issues, and child labor.

Session details
Date: Monday, 11 April 2022
Time: 12- 2:00 pm
Venue: In person and Virtual (Intercontinental Hotel)
Moderation: Ministry of Agriculture (MoA) and World Bank
Translation: Available

Agenda

The following agenda will be used to guide the session:

Item	Objective/ Guiding Questions	Duration	Responsibility
Opening Remarks	Welcoming notes Purpose of the session Participants *tour de table*	10 minutes	WB and MoA
Overview on the project objectives/interventions/ design	Presentation on project design.	10 minutes	MoA/WB

Item	Objective/ Guiding Questions	Duration	Responsibility
Brief ESSA Presentation	ESSA objectives and initial findings	10 minutes	WB
Open discussion	• What are the main issues facing women in the agricultural sector? How could the project better integrate the gender/women's needs into the project design? • Rainwater harvesting- RWH (household, and Hafirs)- what do you think of such interventions? How to improve the approval process? • Training needs for women? Main gaps in existing training initiatives? • Women and working conditions in the agricultural sector? • How can the project improve access of women to project benefits? • Do you have previous experience or lessons learned from similar projects? Can you share with us this experience? How can this help the government enhance the current Project design? • In your view, what are the best outreach and engagement methods to be considered for women under the project? Communication and information disclosure strategies and tools? • What about existing complaints handling system? Are women facing any challenges to lodge their complaints? How could it be improved? Are you recommending specific uptake channels for women to be considered for women? • How about E&S risks and impacts? Do you think they are well addressed under the project? Other risks and impacts? • Any other issues you want to raise?	1h30 minutes	WB/ MoA

CSOs List

The following CSOs were invited

Name of CSO	Area of Expertise
Al Rafeed Women Agricultural Association	Irbid Bani Kenanah- Plastic houses, planting, env. Rest house (all recycled materials), rural tourism, training, youth and rural women training, domestic waste sorting, plastic and material recycling,
Jordan Red Crescent Association	Ajloun Women training on food industry (+marketing skills), agri and land planting, range landing tahreej watani project (safe spaces) Most activities with the MoA Dar Abu Abdallah: RWH (Jordanian and Syrians)
Al Dkheinat Women Agricultural Association	Salt- Sbeihi Sustainable agri, agri cooperative, derma culture, eco-system restoration
Al Jawhara Charity Association	Jarba Village- Ma'an badia ESCWA (irrigation network and plastic houses) RWH, food production (sun dried tomato, jams, wild herbs, Partners for Good (rehab of agri facilities, training, etc.)
Ard Al Azm	Jerash Awareness, knowledge transfer (olive oil), training for women on OO, aquaponic, decoration plants
Telal Al Mansheyeh Women Association	Irbid, northern Jordan Valley UNDP: aromatic plants (+training on soap, sewing, packaging) BDC helped them Training for women
Al Sultani Dam Women Association	Qatraneh, Karak Women empowerment in agri, well construction for RWH and others Food industry (dairy)
Disi Basin Villages Women Association	
Al Mdawara Women Association	Ma'an Women empowerment (no resources but recently with UNICEF starting food)- labor in Agri- provide female labor to big Agri companies- wild plants for investment
The Hashemite Fund for Development of Jordan Badia	Improve socio-economic conditions of Badia residents by building the capacities of local communities
National Committee for Women's Affairs	Women political, economic, and social empowerment GBV
Wadi Association	
Keys	Amman Women eco empowerment Families' empowerment in Ajloun + Envi garden (Madaba) Planting Jothour public garden
Nabeela Hshoush (farmer and activist)	Southern Ghor, Jordan Valley Pepare lands, training, Women labor in Agri
Ministry of Agriculture (MoA)	Rural Development and Women Empowerment Directorate
Jordanian Cooperatives Corp (JCC)	

Consultation on the Draft ESSA and Findings
May 9 2022

On May 9th, the Ministry of Agriculture (MoA) and the World Bank invited stakeholders to a follow-up consultation session, to present the initial findings and recommendations of the ESSA. The session will also provide a briefing for stakeholders who didn't attend previous consultations.

The ESSA team had the pleasure to engage and meet with some of stakeholders during previous consultations during the preparation of the ESSA, and insights and experiences enriched and guided the assessment. The ESSA team committed to share the results and recommendations of the ESSA with these stakeholders. The session will also provide a briefing for stakeholders who didn't attend previous consultations. The executive summary of the ESSA in English and Arabic was provided in advance of the session.

The main points that were raised during the consultation session are summarized as follows:

Points raised
- It was expected to see the CSOs part of the dialogue between the MoA and the MoL - Need to demonstrate how you are proposing to address the gaps identified - Water scarcity and RWH interventions are of great importance - it is necessary to include the CSOs, cooperatives, and farmers in implementation in addition to ACC and NARC - Need to focus on "training" which is building on the MoA's experience of last year - the P4R instrument focuses on results but the MoA has limited resources and would need to access the project's financing ASAP before showing results. But we also encourage results-based financing as a new financing tool
- The project's benefits will be maximized if there would be a partnership between MoA and MoLA (Ministry of Local Administration) especially in relation to planning for food security - Need to have long term planning at municipal level
- Social conflict: To avoid social conflict, it is very important Not to target the same beneficiaries and locations for RWH interventions who are already benefiting from other programs (by other ministries or other initiatives) - Social cohesion: between Jordanians and Syrians and the level of discontent among those beneficiaries who were not targeted and who are normally the most vulnerable - Workers under Cash-for-work programs enjoy full rights and benefits while the permanent workers of the Ministry do not have the same rights (upgrade these workers or give them the same level of rights and benefits) - Please adjust some terms used (e.g. the MoA lacks) because it is a bit strong and unrealistic - Agricultural hazardous waste should be managed in coordination with MoLA because there is part on solid waste - Pesticides: particularly important because we are talking about plant wealth but also animal wealth and in this case, we need to talk about the use of "antibiotics" on animals which could affect human health
- we agree with gaps identified - Some farmers might work in "unorganized land" or "treasury land" but should be encouraged to continue with their agricultural activity - Hazardous agricultural waste: southern Badia is a very fertile (vegetables) area, but pesticides containers are thrown everywhere without proper disposal or treatment - New agricultural activity in new lands that contain "original plants" which could be impacted

by such activity - RWH is especially important, and MoA implemented RWH at household levels and should be increased. Renewable energy could also be introduced
The main problem with the programs' implementation in general is that there is no proper follow-up. It might be a promising idea to cooperate with municipalities which could oversee the implementation. Other parties could also be involved in monitoring and supervision (Ministry of Social Development, cooperatives in governorates) to avoid the same association benefiting from several initiatives and financing. Women cooperatives are successful in implementation.
- To maximize the benefits of the project, the MoA should determine the locations for implementation and that is why the Agricultural Directorates would play a significant role in this. - Associations will submit proposals but we need to ensure that these projects' proposals will be accepted and approved and that's why we need the MoA's help with this.
- Are the specific features for each geographic location going to be considered when selecting locations for interventions? For example, Al Mdawarah area is far from the center. In addition, there are big agricultural companies in the area
- The Center is in Mafraq, the biggest governorate in Jordan and floating on a sea of fresh ground water. And this should be taken into consideration under the program - There is a high rate of unemployment in Mafraq and so this should be taken into consideration - Be more inclusive in the program's implementation (youth)
- Vulnerable groups: to increase their access to project's benefits is to consider land ownership by women as one of the criteria for approval - Simplification of proposals' submission documentation and process would increase beneficiaries' participation - Pesticides: attention should be given to impact on groundwater
- the MoA has boldly launched in 2021-2022 employment and training opportunities to encourage and incentivize farmers, NGOs, and CSOs - Farmers' compensation: we should create an incentivized system to encourage the farmers to invest in environmentally friendly activities, soil improvement, reduce the use of pesticides, biodiversity, etc. Which will contribute to the success of the program - Water scarcity: water resources differ from one place to another and so RWH structures would be different - Importance of "ecological restoration" - Refugees' inclusion as part of the ecology of the specific locations - Put the "community collective knowledge" at the service of the program
It might be a good idea to create a platform with all existing data, suggestions, ideas, needed forms, ESSA work, features for each location, etc. related to the program and accessible to all CSOs and NGOs. A database for the program
- the new by-law related to agricultural workers should be activated and enforced and create Workers Syndicate to support the MoL in conducting enforcement procedures and the required inspection for farms and farmers and processing workers' grievances - Small holders: almost forgotten- problem of "elite capture" and none of them benefited from the solar projects in the Jordan Valley - Consider the extensive experience of some farmers in "labor management" in agriculture and include them as "trainers" for others (and the same with women)
- What is the role of NARC? It is important to have them on board - Strategic EIA: RSCN has extensive experience in this regard
- Need to focus on women and property, because only 18% of landowners in Jordan are women (in this case decision will remain in the hands of men). The solution is to assign a

percentage of women-owned lands when selecting farms or agricultural land for project implementation - Regarding value chain: there is a need to focus on marketing the agricultural products inside and outside Jordan. The solution is to leverage import and export companies and other stakeholders in the private sector to create and implement marketing plans on producers' behalf - For sub-grants, they should be implemented on a cooperative level (group) rather than individual to maximize the impact - On capacity building, the short-term approach (number of working days) will not yield the expected long-term results. The solution is to rely on mentorship and coaching
- Dialogues proposed: it is completely technical with MoL and MoEnv. and defining roles and responsibilities. As for dialogue with civil society, it is part of it and will be maintained during the program's implementation. There are no individual projects - Role of municipalities: they are considered as stakeholders in the program but will not have a role in the implementation - Multiple targeting for beneficiaries: the project will be under the Projects' Directorate at MoA along with the rest of projects of the ministry to avoid multiple targeting for the same beneficiaries - Non- targeted groups: they will benefit from Farmers' Field Schools and training - Experience with agricultural associations has been going well so far - Workers under cash-for-work projects have better working conditions because they work under specific projects and for a short period. Workers of MoA won't be able to get the same benefits, but they obtain all their rights according to the law - Pesticides: We will take into consideration the ESSA's findings and recommendations into consideration - Elite capture: we work with everyone and with the Farmers Union - Local knowledge: we pay attention to this especially regarding RWH interventions - Original plants: this program does not include expansion in new areas - Labor inspection: we will have a strategic dialogue with MoL

Attending organizations:

- Specific Association for Women in Agriculture
- Qudorat Center for Social Development
- FAO
- Al Jawhara Association- Southern Badia
- Pioneers Center for Development
- Disi Villages Women Association
- Al Mdawarah Women Association
- Qudorat Center for Social Development
- Ex. Director of Wadi Association
- Al Dkheinat Women Association
- Activist /Agricultural Workers Committee
- RSCN (Royal Society for the Conservation of Nature)
- Bridge Building Association

[i] Raed Al-Tabini, Khalid Al-Khalidi, and Mustafa Al-Shudiefat, "Livestock, Medicinal Plants and Rangeland Viability in Jordan's Badia: Through the Lens of Traditional and Local Knowledge," *Pastoralism: Research, Policy and Practice* 2, no. 1 (May 9, 2012): 4, https://doi.org/10.1186/2041-7136-2-4.

[ii] Abu Zanat, Mekdadi, and Tabbaa, "Production Systems of Small Ruminants in the Middle Badia of Jordan."