



The World Bank

Exploring High Value, Socially-Inclusive, And Water Efficient Agriculture in Jordan

Project Information Document/ Identification/Concept Stage (PID)

Concept Stage | Date Prepared/Updated: 17-Oct-2019 | Report No: PIDC184223

**BASIC INFORMATION****A. Basic Project Data**

Project ID	Parent Project ID (if any)	Environmental and Social Risk Classification Moderate	Project Name
P170476			Exploring High Value, Socially- Inclusive, And Water Efficient Agriculture in Jordan
Region	Country	Date PID Prepared	Estimated Date of Approval
MIDDLE EAST AND	Jordan	17-Oct-2019	
Financing Instrument Investment Project Financing	Borrower(s) FAO	Implementing Agency FAO	

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	0.50
Total Financing	0.50
Financing Gap	0.00

DETAILS**Non-World Bank Group Financing**

Trust Funds	0.50
MNA VPU Free-standing Trust Funds	0.50

B. Introduction and Context

Country Context

Jordan is an upper middle-income country with a population of 10 million and a GDP estimated around US\$4,000 per capita in 2018. During the past fifteen years Jordan faced a series of external shocks that directly affected the economy and society. The global financial crisis in 2009, high volatility of energy and food import prices, and successive wars in neighboring Iraq and Syria led to a dampening effect on the economy, triggered unprecedented influx of refugees, and disrupted vital trade routes.



Overall Jordan has proven remarkably resilient. The economy has generated low headcount poverty coupled with low inflation and a credible exchange rate regime. Jordan has managed a unique balancing act in the region in terms of maintaining domestic stability despite the persistence of conflict on its doorstep.

However, the shocks hampered the economy's ability to grow (only 2.4% growth in 2009-18) and to generate the large number of jobs it needs for its growing population. Jordan's population grows at about 2.6% annually. It has doubled in the last two decades, and 1.3 million refugees live in Jordan today. Weak economic growth is reflected in elevated unemployment indicators. Unemployment patterns consistently show marginalization of females, youth and university graduates in Jordan's labor market. Youth unemployment is estimated 34 percent.

Compared to countries of similar characteristics and income levels, Jordan enjoys relatively high

human development indicators. The population's access to education and health services is amongst the highest in the region. However, access is being eroded by uneven quality and the commitment to equal access does not always translate into equality of opportunity. A range of barriers related to gender, geography, and origin, among others, translate into social exclusion.

Women face particular obstacles and disincentives to economic participation. Inequality based on gender is widely documented. One driver is reflected in the country's justice/legal system and relates to the legal status of women in disputes and the embedding of family power differentials in legal processes. A second driver relates to the very low levels of female participation in the labor force and in the country's political system and relates to the interaction of cultural factors with market distortions which discourage female participation in a variety of spheres. Even within the MENA region, where countries have some of the world's lowest female labor force participation rates, Jordan's participation rate lies in the bottom half, below the regional average of 25 percent. In 2014, the female labor force participation rate in Jordan was about a fifth of that of males (12.6 percent versus 59.7 percent). Despite many efforts directed toward enhancing women's role in the society and in the economy, there has been little actual progress in women's economic participation. In 2011, women represented less than 20 percent of the total labor force in Jordan.

Jordan is primarily a service economy with a significant dependence on the public sector.

There is very little heavy industry, as the only raw materials available in Jordan are phosphates and potash, which are processed for use as fertilizers.⁷ Other leading sectors included, transport and communication, financial services, real estate, construction, tourism, and the agri-food sector.

Sectoral and Institutional Context

Approximately 20 to 25 % of Jordan's active population are involved in the agriculture and food sector. While the primary agriculture share of the national income is relatively small (4.5 percent of Gross Domestic Product (GDP), the agri-food sector accounts for 25-30 % GDP when indirect contributions are accounted for. One quarter of total agricultural exports are vegetables and fruits, which are mainly exported to other



countries in the MENA region (Economist Intelligence Unit 2015). In contrast, other crops (excluding vegetables and fruits) constitute the highest share of agricultural imports, making up 91 percent of all agricultural products imported. Agriculture has almost doubled its contribution to GDP between 2000 and 2015 driven by increase in domestic demand.

This growth was mainly driven by increasing labor productivity and rising yields for some crops, particularly fruits and vegetables. Structural changes within the sector have also contributed to growth by moving agricultural production towards high value crops, such as fruits and vegetables. Yet, there is still a potential for increasing sector performance, as foreseen in the agricultural development strategy, by further structural change, increasing productivity, and, perhaps most importantly, by improving linkages between production and marketing. In addition to improving local markets, Jordan can also capitalize on its free trade agreements with major partners, such as United States of America and the European Union.

Jordan's Economic Growth Plan 2018-2022 also emphasizes agriculture as a major growth engine with a second National Strategy for Agricultural Development (NSAD) for the period 2016 to 2025 key goals of NSAD include increasing agriculture's share of GDP by at least 17 percent, increasing agriculture's share of exports by 33 percent, and increasing irrigation efficiency by expanding the area of land irrigated by drip irrigation (Ministry of Agriculture 2016).

Jordan's agriculture is currently the largest user of water. While farmers irrigate less than 10% of the total agricultural land, agricultural water requirements represent around 60% of total national water needs. Jordan is the second water-stressed country in the world—making water and irrigation efficiency an utmost priority. Jordan's system of subsidies affects the use of irrigation water, which necessitates strict rationing to allocate the remaining water resources.

The country is almost entirely semi-arid, or arid, receiving an annual rainfall of less than 200mm per annum on 91.4% of the total land area. The steady population growth caused in part by the refugees' influx has aggravated the problem. The current domestic supply capacity is around 126 liters per capita annually significantly below the global average of 500 m³

Climate change is expected to exacerbate challenges facing Jordan's natural resource endowment in years to come. With annual precipitations decreasing at a rate of 1.2mm per year and temperatures increasing by 0.03 degrees per year, Jordan will most likely experience extended periods of droughts which will affect the agriculture sector and leave the country to deal with serious and complex environmental and socio-economic problems.

The Government sees high-tech, water-efficient agriculture as a priority for Jordan, and in partnership with private operators and non-governmental organizations, aims to bolster job creation, reduce poverty, and foster women participation in the workforce and entrepreneurship.

Jordan scores well on the Enabling Business of Agriculture. However, leveraging domestic and international public sources to crowd in private investment into the agriculture and food sector will be essential to



achieving to Government's goals. In this context, the development of new commercially viable and environmentally sustainable agriculture business development models is essential.

Against that backdrop, Jordan is well positioned to maximize the economic, social and environment benefits of advanced agriculture technologies. Hydroponics, or called "climate in a box," allows farmers to grow crops faster than traditional field-based agriculture. Moreover, hydroponics can be fueled by solar energy and its crops can be grown in a pesticide free environment. The development and expansion of commercially viable business models based on hydroponic farm systems has huge potential in Jordan. These farming systems are not dependent on large volumes of water or land availability. Hydroponic farming systems also provide job opportunities that are skilled and semi-skilled and offer accessible investment and entrepreneurship opportunities for women, youth, and other marginalized groups. The farming systems can be implemented in both rural and urban areas, do not require large expanse of lands, farms can be established closer to markets (providing fresh food) and allows farmers to produce all year round.

Relationship to CPF

The project would contribute to pillars 1 and 2 of Jordan's Country Partnership Framework: Pillar 1-- Improved Economic Opportunities for Jordanians and Refugees) and Pillar 2--Improved Management of Water and Energy).

The project would also contribute to MENA region's cross-cutting priorities on new technologies, private investment, gender and youth inclusion and empowerment, and climate change. It would support MFD approach by creating a model for socially-inclusive, market-driven investments that small and medium enterprises may follow. The project would also contribute to Renewing the Social Contract pillar of the MENA Strategy.

The project would help develop a sustainable model for jobs and income in poorest rural areas and as well investments opportunities for various types of investors and entrepreneurs along the agri-food value chain, hence contributing to poverty alleviation and shared prosperity, and social stability and parts of Jordan that have little alternative economic opportunities. By promoting water-efficient agriculture and efficient use of land, the proposed model would also help diffuse potential tensions around scarce natural resources in highly populated areas. By promoting the inclusion and active participation of women, youth, and where relevant refugees and host communities, the proposed model would also contribute to strengthening social cohesion.

C. Project Development Objective(s)

Proposed Development Objective(s)

The Project Development Objective (PDO) to pilot an environmentally sustainable, commercially viable and socially inclusive hydroponic agriculture business model in the Jordan Valley area.

**Key Results**

- Pilot produces 80% productivity capacity by end of project
- 75% pilot workforce is women and/or youth
- 60% skilled and leadership positions held by women and/or youth by end of project
- Pilot improves water efficiency over non-hydroponic systems by 50%

D. Preliminary Description

Activities/Components

Component 1- Operations Management

This component will support the design, acquisition, installation and operations of two types of horticulture production: traditional “protected plastic houses”, and hydroponics. The management of all the production plots will use business models that are designed to foster inclusion of women and youth (e.g. flexible working hours, child care support, focus on skills and leadership development). This will require the contracting of a commercial firm with the technical knowledge of hydroponics, capacity to provide the day to day management support, and the skills to facilitate the delivery of a socially inclusive business model.

Component 2- Awareness raising and information sharing

This component will include the design, organization and implementation of an awareness raising and information sharing activities. The component will specifically focus on sharing the lessons on the social, economic and environmental benefits of the socially inclusive hydroponics production systems. The target audience will be local communities, regional governates, national government and private investors. This will require the contracting of an organization with extensive knowledge of the local communities, connections with governments (local and national) and a network into the relevant sections of the private sector.

Component 3- Project Technical, Safeguards, and Fiduciary Management

This component will provide technical guidance and oversight over the project, as well as project administration, safeguards and fiduciary management, and monitoring and evaluation to ensure satisfactory project implementation. The component will finance: (a) the FAO general management support (indirect) costs; (c) direct costs for technical, fiduciary, and safeguards management and implementation of the project; and (c) monitoring, evaluation and reporting.

Environmental and Social Standards Relevance**E. Relevant Standards**

ESS Standards

Relevance



ESS 1	Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant
ESS 2	Labor and Working Conditions	Relevant
ESS 3	Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4	Community Health and Safety	Relevant
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8	Cultural Heritage	Not Currently Relevant
ESS 9	Financial Intermediaries	Not Currently Relevant

Legal Operational Policies

Safeguard Policies	Triggered	Explanation (Optional)
Projects on International Waterways OP 7.50	No	
Projects in Disputed Areas OP 7.60	No	

Summary of Screening of Environmental and Social Risks and Impacts

The project will support the acquisition, installation and initial operations of a pilot hydroponics farm unit (e.g. computer-based humidity, heat control systems and processing/packing). By design, this pilot project will apply water, soil and energy saving technologies and should be operated in an environmentally-sound manner. No adverse or irreversible impacts such as on biodiversity and habitats, and on cultural heritage are expected; only minor, localized and mitigatable negative impacts might be caused under the project. Such impacts include the production of wastes which are mainly the coco which will form the substrate that will be replaced each three years. Other impact might be related to the potential need for pest management. Although procurement of pesticides is not envisaged under the project, farming is expected to both improve and/or to change cropping patterns to pilot commercially viable, socially-inclusive, and water-efficient agriculture. These changes are expected to include the use of agricultural conditioners and fertilizers. In addition, some remedies and precautions might be required to ensure that pests, if any, are controlled in an integrated- and environmentally-safe manner. Proper measures should also be implemented to ensure that conditioner, fertilizer and pest management materials are properly stored and used to mitigate any potential risks on workers or on community health and safety. To address such potential risks and impacts, an Integrated Pest Management (IPM) plan will be prepared as part of the ESIA. As for social risks and impacts, it is expected that the pilot project will be associated with some risks of misperception and social tensions as a result of only 10-15 working positions which will be available mainly targeting women workers in what has been categorized as a high poverty pocket area where work opportunities are in high demand. It would be



The World Bank

Exploring High Value, Socially- Inclusive, And Water Efficient Agriculture in Jordan

important to ensure transparent and meaningful consultation sessions with a functional grievance redress mechanism for communities.

CONTACT POINT

World Bank

Contact : Timothy D Robertson
Telephone No : 458-4396

Title : Sr Agricultural Spec.
Email :

Contact : Laurent Debroux
Telephone No : 5367+3358 /

Title : Program Coordinator
Email :

Borrower/Client/Recipient

Borrower : FAO
Contact : Nasreddin Hag Elamin
Telephone No : 96265562554

Title : Resident
Email : Nasredin.HagElamin@fao.org

Implementing Agencies

Implementing Agency : FAO
Contact : Nasreddin Hag Elamin
Telephone No : 9623334383

Title : Resident
Email : Nasredin.HagElamin@fao.org

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: <http://www.worldbank.org/projects>